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ATOMIC AND IONIC EMISSION LINES BELOW
2000 ANGSTROMS - HYDROGEN THROUGH
KRYPTON

Raymond L. Kelly, et al

Naval Research Laboratory
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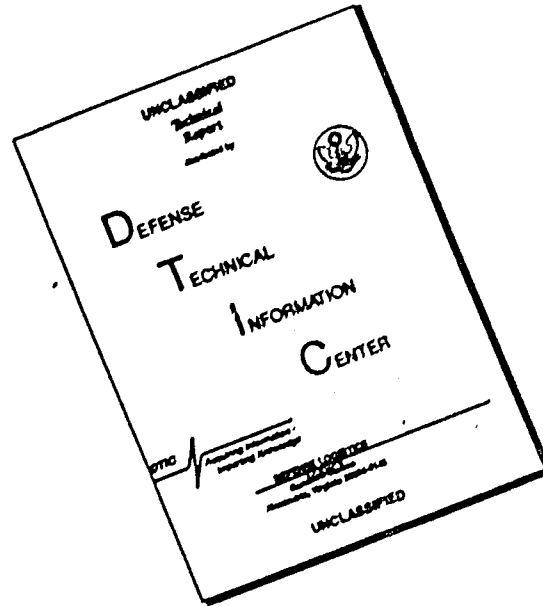
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<p>A critical tabulation of observed spectral lines below 2000 Angstroms has been prepared from the published literature up to May 1972. It is intended principally as an aid to those physicists and astronomers who deal with the spectra of highly stripped atoms. This report includes the first 36 elements, from hydrogen (including deuterium) through krypton. The tabulation is divided into two main sections: the emission lines by spectrum, and a finding list. The entries for each element give the ionization species, ground state term, and ionization potential, as well as the best values of vacuum wavelength, intensity, and classification. A list of the pertinent reference sources is appended at the end.</p>			

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Deuterium						
Helium						
Lithium						
Beryllium						
Boron						
Carbon						
Nitrogen						
Oxygen						
Fluorine						
Neon						
Sodium						
Magnesium						
Aluminum						
Silicon						
Phosphorous						
Sulfur						
Chlorine						
Argon						
Potassium						
Calcium						
Scandium						
Titanium						
Vanadium						
Chromium						
Manganese						
Iron						
Cobalt						
Nickel						
Copper						
Zinc						
Gallium						
Germanium						
Arsenic						
Selenium						
Bromine						
Krypton						

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Atomic and Ionic Emission Lines Below 2000 Angstroms

Hydrogen Through Krypton

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CONTENTS

Abstract	iv
Problem Status	iv
Authorization	iv
INTRODUCTION	v
ARRANGEMENT OF THE TABLES	v
Ground State and Ionization Potential	v
Wavelengths	v
Intensity	vi
Multiplet Numbers	vi
Classification	vi
References	vii
PREPARATION OF THE TABLES	vii
ACKNOWLEDGMENTS	vii
IONIZATION POTENTIAL CHART	viii
PERIODIC CHART OF THE ELEMENTS	x
ISOELECTRONIC SEQUENCE NOMOGRAPH	xi
SECTION I – Emission Lines by Spectrum	1
SECTION II – Finding List	713
REFERENCES	983

ABSTRACT

A critical tabulation of observed spectral lines below 2000 Angstroms has been prepared from the published literature up to May 1972. It is intended principally as an aid to those physicists and astronomers who deal with the spectra of highly stripped atoms. This report includes the first 36 elements, from hydrogen (including deuterium) through krypton. The tabulation is divided into two main sections: the emission lines by spectrum, and a finding list. The entries for each element give the ionization species, ground state term, and ionization potential, as well as the best values of vacuum wavelength, intensity, and classification. A list of the pertinent references is appended at the end.

Problem Status

This is a final report on one phase of the problem.

Authorization

NRL Problem N01-33
Project RR 011-07-41-5072

Manuscript submitted May 16, 1973.

ATOMIC AND IONIC EMISSION LINES BELOW 2000 ANGSTROMS

Hydrogen Through Krypton

INTRODUCTION

This report is a critical tabulation of 34,700 spectral lines below 2000 angstroms prepared primarily from information in the literature published up to May 1972, and from a few publications after that date. It is intended as an aid to those researchers who deal with the spectra of highly stripped atoms. This report includes spectra of atoms and ions for the first 36 elements, from hydrogen (including deuterium) through krypton. It adds to, revises, and supersedes a previous report* which covered only the first 18 elements.

In most cases, only those lines which have been observed are listed in the tables. Notable exceptions are the lines of the hydrogenic atoms, for which few observations have been reported for elements beyond oxygen. Further, even in the case of some observed lines, the wavelengths given are those predicted from a comprehensive analysis of the spectrum rather than the measured values (Ar II is an example). Additional lines have been predicted by one of us (RLK) from unpublished extrapolations along isoelectronic sequences. Some unobserved weak lines in multiplets have also been included for completeness. Such predicted values of wavelength are marked by the symbol P following the wavelength.

ARRANGEMENT OF THE TABLES

The tabulation is divided into two main sections. Section I lists the lines by spectrum, and Section II is the finding list of all the lines listed in Section I, plus the K_{α} x-ray lines of the elements from carbon through krypton.

The entries in Section I are arranged by element (ordered by atomic number), with subdivision into the first spectrum, second spectrum, etc. Within each spectrum, the lines are arranged in order of

increasing wavelength. This means that in a multiplet with several lines, those lines may not be listed consecutively.

Ground State and Ionization Potential

The ground configuration and ground-state term description are given for each stage of ionization, whether spectra below 2000 angstroms have been observed or not. The ionization potentials are listed in electron volts (eV) and in reciprocal centimeter (cm^{-1}) and have been obtained from Moore's* critical survey or from the comprehensive compilation by Kelly and Harrison.† The values which are based on extrapolation rather than observation are enclosed in square brackets. The conversion factor between eV and cm^{-1} is $0.000123981 \text{ eV} = 1 \text{ cm}^{-1}$.

Wavelengths

The vacuum wavelengths are given as they are reported in the reference listed first for each line. Where more than one publication reports the wavelength of the same line, the decision as to which to retain was based primarily on the senior author's judgement of the best value. This judgement was based on consideration of the date of publication, on probable accuracy from the type of instrumentation used and the wavelength standards employed, on the spectroscopic source used, and on the comparison of the observations with the wavelengths predicted from the best known values of energy levels.

The accuracy of the wavelength varies with the date of observation (because of the wavelength standards) and also with the wavelength range covered, the type of source, etc. As a general guide, lines measured since 1960 and with wavelengths reported

*R. L. Kelly, "Atomic Emission Lines Below 2000 Angstroms: Hydrogen Through Argon," NRL Report 6648, Feb. 1969.

*C. E. Moore, Report NSRDS-NBS34, Nat. Bureau of Standards, Washington, D.C. 20234 (Sept. 1970).

†R. L. Kelly and D. E. Harrison, *Atomic Data* 3, 177-93 (1971).

to a tenth of a milliangstrom have an uncertainty less than 2 milliangstroms; all other lines reported since 1940 have uncertainties of two or three in the last figure given.

Wavelength standards recommended in 1962 by Commission 14 of the International Astronomical Union (reference H4) are indicated with the symbol ST following the wavelength. Those provided by Minnhagen (Ref. M16) and Persson (Ref. M14), as well as others proposed in Si, Ge, and Ti, are marked st. The letter P following a wavelength means that that wavelength has been predicted. The vacuum wavenumber has been omitted since it can be obtained by a simple inversion of the vacuum wavelength.

Intensity

Only a single intensity is given for each line, selected where possible from the source in which the particular spectrum was reported as most prominent. The listed intensities have been normalized (by the senior author) to a maximum of 1000 for convenience in comparing the different references. The normalization procedure was usually a linear transformation of the intensities reported by the original authors, but logarithmic transformations have also been used. There continues to be a need for a single, consistently used intensity scale. The normalization to 1000 in this report was adopted as a compromise between the long-standing scale extending from 00 to 10 and some later publications with maximum intensities of 100,000, or even more.

As always, the comparison of intensities presents a most vexing problem, particularly when one reference overlaps another. In most publications, the intensities are visual estimates of emulsion blackening. These intensities are significant only over a limited range of wavelengths for a particular source operated in some particular way. For various reasons, intensities given by different observers are seldom compatible. The intensity figures, which must always be regarded as rather imprecise, have the following meaning: when two lines in a narrow wavelength region are reported with different intensities by the same observer, the one with the larger number is generally the more intense.

A few descriptive symbols are used, most of them being listed with the intensity value. The symbols have the following connotations:

- A Autoionizing; upper state above the ionization limit.
- b Blend of two or more lines
- J Diffuse
- f Forbidden by electric dipole selection rules
- g Ground term
- h Hazy
- P (following λ) Predicted wavelength
- r Reversed
- ST Standard Line (recommended)
- st Standard Line (proposed)
- w Wide

Multiplet Numbers

The multiplet numbers assigned by C. E. Moore (Refs. M18-M23) are given following the wavelength. Some lines missing from the multiplet tables are added, but overlapping lines with the same wavelength in a multiplet have not been listed twice.

Classification

The classifications of the transitions are given in the usual form, with the lower state listed first. They are divided into columns showing configuration, term, and J-value.

Configuration—The configurations are given in enough detail to be self-explanatory. In general, those parts of the configuration which are given represent electrons outside the next lower closed shell.

Term—The symbol *g* is used to denote the ground term. Otherwise, the term designation is given in a notation which follows that of Cowan and Andrew,* presented below in symbolic form for the two-electron case.

Type of Coupling	Description	Notation
LS	$\{(\ell_1 \ell_2)L, (s_1 s_2)S\}J$	$2S+1L_J$
LK	$\{(\ell_1 \ell_2)L, s_1\}K, s_2\}J$	$L[K]_J$
jK	$\{(\ell_1 s_1)j_1, \ell_2\}K, s_2\}J$	$j_1 [K]_J$
jj	$\{(\ell_1 s_1)j_1, (\ell_2 s_2)j_2\}J$	$(j_1 j_2)_J$

J-Value—The J-values are given in separate columns to avoid the use of subscripts.

Additionally, the various terms in complex spectra are frequently indicated by the use of lower case letters a, b, c, (for low-lying terms of even parity) or

*R. D. Cowan and K. L. Andrew, *J. Opt. Soc. Am.* 55, 502-516 (1965).

z,y,x....(for low-lying terms of odd parity). These symbols have been retained even though they have not been used consistently by the various authors, and they have significance only when referred to the complete set of energy levels given in the original reference.

In general, the primary references for notation and classification of the observed spectra are the fine publications of C. E. Moore (Refs. M18-M23), although much of "Atomic Energy Levels" (M22) is now out of date. In all cases, the wavelength of the transition was compared with that predicted from the known energy levels to verify the classification.* Questionable classifications are indicated by a question mark following the term description.

We have departed from older notation in not using primes, double primes, etc., to indicate those configurations which have, as parent terms, excited states of the next higher ion. Instead, the parent terms are given where they are known and where they are not immediately obvious.

References

References (appearing at the end of this report) are given with each spectral line to allow the reader to refer to the original publication. Where three references are given, the first reference is the one from which the wavelength was taken, the second relates to the intensity, while the third relates to the classification. Fewer than three references indicates either that the intensity or the classification is unknown or that the same reference was used for two or three of the above items (since reference numbers are not repeated in the reference column). In every case, the first reference refers to the wavelength.

The references are listed with a letter and a number, rather than the three-digit numbers used in the previous report. With this change, we hoped to make it easier for the user to locate a specific publication by knowing its author.

PREPARATION OF THE TABLES

The data were assembled from the literature and punched onto cards. Duplications were removed and disagreements were resolved by comparing the observed spectra with the spectra predicted from the atomic energy levels. The use of punched

*These lengthy calculations were all carried out at the Naval Postgraduate School. The "best" classification was determined by the agreement, in the judgment of the senior author, between observed and predicted wavelengths.

cards at this stage offers the advantages that an error on a card can be corrected without introducing new errors and that the cards can be read onto magnetic tape for convenience in handling and listing.

The information was set in print at the Government Printing Office on the Linotron, an automatic photocomposition machine which produces, directly from magnetic tapes, photographic negatives for making printing plates. The large number of page formats required to keep this volume fairly compact made it necessary to write a complex edit code which produced a tape to drive the Linotron directly as described by Scott.* The punched card information was copied onto magnetic tape from which, after sorting, it was run through a special computer editing code which wrote another tape (containing the original data plus editing information) which then served as the input for the Linotron. The writing and running of the edit code constituted the chief contribution to this report by the junior author.

ACKNOWLEDGMENTS

Many spectroscopists have contributed preprints of their work for inclusion in these tables. It is a pleasure to thank L. Cohen, A. M. Crooker, A. K. Dupree, B. Edlén, B. C. Fawcett, V. Kaufman, A. G. Shensone, R. Velasco, and M. D. Williams for their numerous contributions. It is a special privilege to acknowledge the continued support and encouragement of both Dr. R. C. Elton of the Naval Research Laboratory and Dr. G. Oertel of the National Aeronautics and Space Administration. This extended data compilation could not have been completed had it not been for the careful programming of Miss Sarah Jaite.

The senior author would also like to point out that the handsome appearance of this volume is the result of the very fine capability and thoroughness demonstrated by the junior author, Dr. Palumbo. The programming for the edit code was nontrivial, requiring continued cross checking and searches for internal consistency. Many minor errors were detected in these searches. If additional errors are found, particularly errors in judgement, they are the responsibility of the senior author and should be reported to him.

This report resulted from a joint undertaking of the Naval Postgraduate School and the Naval Research Laboratory, with supplementary financial support from the National Aeronautics and Space Administration.

*D. K. Scott, Circular No. 121, U.S. Naval Observatory, Washington, D.C. (1968).

IONIZATION POTENTIALS (eV), BOTH THEORETICAL AND EXPERIMENTAL, FOR Z = 1 TO Z = 36

SPECTRUM NUMBER

Element Z	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
H	1	13.598											
He	2	24.587	54.416										
Li	3	5.392	75.638	122.51									
Be	4	9.322	18.211	153.593	217.713								
B	5	8.299	25.154	37.930	259.368	340.217							
C	6	11.260	24.383	47.887	64.492	192.077	489.983						
N	7	14.534	29.601	47.448	77.742	97.867	552.057	667.029					
O	8	13.618	35.116	54.934	77.412	113.856	138.116	739.315	871.390				
F	9	17.422	34.970	62.707	87.138	114.24	157.161	185.182	953.886	1103.09			
Ne	10	21.564	40.962	63.45	97.11	126.21	157.93	207.27	219.09	1195.797	1362.16		
Na	11	5.139	47.286	71.64	98.91	138.39	172.15	208.47	264.18	299.87	1465.091	1648.66	
Mg	12	7.646	15.035	80.543	109.74	141.26	186.50	224.94	265.90	327.95	367.53	1761.802	1962.61
Al	13	5.986	18.828	28.447	119.99	153.71	190.47	241.43	284.59	330.21	398.57	442.07	2085.983
Si	14	8.151	16.345	33.492	45.141	166.77	205.05	246.52	303.17	351.10	401.43	476.06	523.50
P	15	10.486	9.725	30.18	51.37	65.023	220.43	263.22	309.41	371.73	424.50	479.57	560.41
S	16	10.360	23.33	34.83	47.304	(72.74)	88.049	280.93	328.23	379.10	447.09	504.78	564.65
Cl	17	12.967	23.81	39.61	53.46	67.6	(96.98)	114.193	348.78	400.05	455.62	529.26	591.97
Ar	18	15.759	27.629	40.74	59.81	75.02	91.007	124.319	143.46	422.44	478.68	538.95	618.24
K	19	4.341	31.625	45.72	60.91	(82.66)	(99.89)	117.56	154.86	175.814	503.44	564.13	629.09
Ca	20	6.113	11.871	50.908	67.10	84.41	(108.78)	127.7	167.24	188.54	211.270	591.25	656.39
Sc	21	6.54	12.30	24.76	73.47	91.66	111.1	(137)	158.7	180.02	225.32	249.832	89
Ti	22	6.82	13.58	27.491	43.266	99.20	119.36	140.8	168.5	(193)	215.91	265.25	291.497
V	23	6.74	14.65	29.310	46.767	(65.23)	128.12	150.17	173.7	(204)	(230)	255.04	306.25
Cr	24	6.766	16.50	30.96	(49.1)	(71)	90.56	161.1	(124.2)	209.8	(242)	(270)	(297)
Mn	25	7.435	15.640	33.667	(53)	(73)	(97)	119.27	(196.2)	(221.4)	(248.5)	(283)	(313)
Fe	26	7.870	16.18	30.651	(56)	(77)	(101)	(126)	151.06	235.04	262.1	290.4	(328)
Co	27	7.86	17.06	33.50	(58)	(81)	(105)	(133)	(159)	186.13	276.7	305	(335)
Ni	28	7.635	18.168	36.17	(59)	(82)	(110)	(136)	(165)	(195)	224.5	321.2	(352)
Cu	29	7.726	20.292	36.83	55.18	(85)	(111)	(141)	(170)	(201)	(234)	266	(370)
Zn	30	9.394	17.964	39.722	(63)	(87)	(114)	(144)	(176)	(207)	(241)	(276)	(311)
Ga	31	5.999	20.51	30.71	64.2	(90)	(117)	(147)	(179)	(214)	(248)	(284)	(321)
Ge	32	7.899	15.934	34.22	45.71	93.5	(120)	(151)	(183)	(217)	(255)	(291)	(330)
As	33	9.81	18.633	28.351	50.13	62.63	127.6	(154)	(187)	(222)	(259)	(300)	(338)
Se	34	9.752	21.19	30.826	42.944	(68.3)	81.70	155.4	(191)	(227)	(264)	(304)	(347)
Br	35	11.814	21.8	35.9	(48)	(59.7)	(88.6)	(101)	192.8	(232)	(270)	(310)	(352)
Kr	36	13.999	24.359	36.95	(53)	(65)	(78.5)	(111.0)	(123)	230.9	(275)	(316)	(358)

RAYMOND L. KELLY AND DON E. HARRISON, ATOMIC DATA 3, 177-93 (1971)

Element	Z	XXVII	XXVIII	XXIX	XXX	XXXI	XXXII	XXXIII	XXXIV	XXXV	XXXVI
Co	27	[10011]									
Ni	28	[10288]	[10775]								
Cu	29	[2585]	[11062]	[11566]							
Zn	30	(2647)	[2780]	[11864]	[12387]						
Ga	31	(2668)	(2840)	[2982]	[12695]	[13238]					
Ge	32	(2723)	(2863)	(3041)	[3192]	[13556]	[14117]				
As	33	(2768)	(2920)	(3065)	(3248)	[3409]	[14445]	[15026]			
Se	34	(2798)	(2965)	(3123)	(3274)	(3463)	[3633]	[15365]	[15964]		
Br	35	(2855)	(2997)	(3170)	(3334)	(3490)	(3684)	[3865]	[16313]	[16933]	
Kr	36	[2953]	(3056)	(3203)	(3381)	(3551)	(3712)	(3912)	[4105]	[17292]	[17931]

Element	Z	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV	XXVI
S	14	2673.11												
P	15	2816.943	3069.76											
<p>13.598 - OBSERVED (13.598) - EXTRAPOLATION BASED ON HARTREE-FOCK CALCULATIONS [13.598] - EXTRAPOLATION INCLUDING RELATIVISTIC CORRECTION</p>														
S	16	707.14	1323.836	3494.10										
Cl	17	749.74	809.39	3658.425	3946.19									
Ar	18	755.73	854.75	[918]	4120.788	4426.11								
K	19	787.13	861.77	(966)	[1034]	4610.955	4933.93							
Ca	20	816.61	895.12	(974)	(1085)	[1157]	5129.045	5469.74						
Sc	21	829.79	926.00	(1009)	(1094)	(1210)	[1288]	[5675]	[6033.6]					
Ti	22	861.33	940.36	(1042)	(1131)	(1220)	(1342)	[1425]	[6249]	[6625.6]				
V	23	895.58	974.02	(1058)	(1165)	(1259)	(1353)	(1482)	[1569]	[6851]	[7245.9]			
Cr	24	384.30	1010.64	(1093)	(1182)	(1295)	(1394)	(1493)	(1627)	[1720]	[7482]	[7984.5]		
Mn	25	(404)	435.3	1136.2	(1220)	(1313)	(1431)	(1536)	(1640)	(1780)	[1879]	[8141]	[8571.5]	
Fe	26	(391)	(456)	489.5	1266.1	(1353)	(1451)	(1575)	(1685)	(1794)	(1940)	[2045]	[8828]	[9177.2]
Co	27	(409)	(442)	(512)	546.8	1403.0	(1493)	(1596)	(1725)	(1841)	(1955)	(2106)	[2218]	[9544]
Ni	28	(426)	(461)	(496)	(570)	607.2	1546.9	(1639)	(1747)	(1882)	(2003)	(2123)	(2279)	[2398]
Cu	29	(435)	(479)	(517)	(554)	(632)	(671)	1697.9	(1793)	(1905)	(2045)	(2173)	(2298)	(2460)
Zn	30	(454)	(489)	(536)	(575)	(614)	(697)	[737.8]	1855.9	(1952)	(2070)	(2216)	(2350)	(2479)
Ga	31	(475)	(510)	(546)	(596)	(637)	(677)	(765)	[808]	[2020]	(2120)	(2242)	(2393)	(2533)
Ge	32	(409)	(533)	(568)	(607)	(658)	(701)	(744)	(836)	[881]	[2192]	(2294)	(2421)	(2577)
As	33	(421)	(462)	(594)	(630)	(670)	(724)	(769)	(813)	(910)	[953]	[2372]	(2474)	(2606)
Se	34	(431)	(475)	(519)	(657)	(695)	(736)	(793)	(839)	(886)	(987)	[1037]	[2558]	(2261)
Br	35	(441)	(486)	(533)	(579)	(724)	(762)	(806)	(864)	(913)	(561)	(1068)	[1120]	[2752]
Kr	36	(451)	(497)	(545)	(593)	(642)	(794)	(833)	(870)	(939)	(989)	(1039)	(1151)	[1206]

PERIODIC CHART OF THE ELEMENTS

I A	II A	III B	IV B	V B	VI B	VII B	VIII					IX	X	III B	IV A	V A	VI A	VII A	INERT GASES
H 1																			He 2
Li 3	Be 4													B 5	C 6	N 7	O 8	F 9	Ne 10
Na 11	Mg 12													Al 13	Si 14	P 15	S 16	Cl 17	Ar 18
K 19	Ca 20	Sc 21	Ti 22	V 23	Cr 24	Mn 25	Fe 26	Co 27	Ni 28	Cu 29	Zn 30	Ga 31	Ge 32	As 33	Se 34	Br 35	Kr 36		
Rb 37	Sr 38	Y 39	Zr 40	Nb 41	Mo 42	Tc 43	Ru 44	Rh 45	Pd 46	Ag 47	Cd 48	In 49	Sn 50	Sb 51	Te 52	I 53	Xe 54		
Cs 55	Ba 56	La 57	Hf 72	Ta 73	W 74	Re 75	Os 76	Ir 77	Pt 78	Au 79	Hg 80	Tl 81	Pb 82	Bi 83	Po 84	At 85	Rn 86		
Fr 87	Ka 88	Ac 89																	

Lanthanum Series

Ce 58	Pr 59	Nd 60	Pm 61	Sm 62	Eu 63	Gd 64	Tb 65	Dy 66	Ho 67	Er 68	Tm 69	Yb 70	Lu 71
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Actinium Series

Th 90	Pa 91	U 92	Np 93	Pu 94	Am 95	Cm 96	Bk 97	Cf 98
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ELEMENT		ISOELECTRONIC SEQUENCE
H •		• Kr I
He •		• Br I
Li •		• Se I
Be •		• As I
B •		• Ge I
C •		• Ga I
N •		• Zn I
O •		• Cu I
F •		• Ni I
Ne •		• Co I
Na •		• Fe I
Mg •		• Mn I
Al •		• Cr I
Si •		• V I
P •		• Ti I
S •		• Sc I
Cl •		• Ca I
Ar •		• K I
K •		• Ar I
Ca •	SPECTRUM NO.	• Cl I
Sc •	I •	• S I
Ti •	II •	• P I
V •	III •	• Si I
Cr •	IV •	• Al I
Mn •	V •	• Mg I
Fe •	VI •	• Na I
Co •	VII •	• Ne I
Ni •	VIII •	• F I
Cu •	IX •	• O I
Zn •	X •	• N I
Ga •	XI •	• C I
Ge •	XII •	• B I
As •	XIII •	• Be I
Se •	XIV •	• Li I
Br •	XV •	• He I
Kr •	XVI •	• H I
	XVII •	
	XVIII •	
	XIX •	
	XX •	
	XXI •	
	XXII •	
	XXIII •	
	XXIV •	
	XXV •	
	XXVI •	
	XXVII •	
	XXVIII •	
	XXIX •	
	XXX •	
	XXXI •	
	XXXII •	
	XXXIII •	
	XXXIV •	
	XXXV •	
	XXXVI •	

Nomograph for determining spectrum number in an isoelectronic sequence. The example indicated by the dashed line shows that Ca XVI is isoelectronic with B I.

SECTION I

Emission Lines by Spectrum

HYDROGEN I (H^{0+}), $Z = 1$
 Ground State $1s\ ^2S_{1/2}$ (1 electron)
 Ionization Potential: $109\ 678.764\ \text{cm}^{-1}$; $13.598\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
H I	914.576 P	2	17	$1s - 18p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	914.919 P	2	16	$1s - 17p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	915.329 P	2	15	$1s - 16p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	915.824 P	3	14	$1s - 15p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	916.429 P	3	13	$1s - 14p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	917.181 P	4	12	$1s - 13p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	918.129 P	5	11	$1s - 12p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	919.351 P	7	10	$1s - 11p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	920.963 P	9	9	$1s - 10p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	923.150 P	10	8	$1s - 9p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	926.226 P	20	7	$1s - 8p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	930.748 P	30	6	$1s - 7p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	937.803 P	40	5	$1s - 6p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	949.743 P	70	4	$1s - 5p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	972.537 P	130	3	$1s - 4p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	1025.722 P	300	2	$1s - 3p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	1215.668 P	670	1	$1s - 2p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{3}{2}$	G2,M23
H I	1215.674 P	330	1	$1s - 2p$	$g^2S - ^2p^o$	$\frac{1}{2} - \frac{1}{2}$	G2,M23

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DEUTERIUM I (D^{0+}), $Z = 1$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential $109\ 708.608\ \text{cm}^{-1}$; $13.602\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
D I	925.974 P		7	$1s - 8p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{7}{2}$	G2
D I	930.495 P		6	$1s - 7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{7}{2}$	G2
D I	937.548 P	40	5	$1s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{7}{2}$	G2, K8
D I	949.485 P	70	4	$1s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{7}{2}$	G2, K8
D I	972.272 P	140	3	$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{7}{2}$	G2, K8
D I	1025.443 P	320	2	$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{7}{2}$	G2, K8
D I	1215.339 P	1000	1	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{7}{2}$	G2, K8

HELIUM I (He⁰⁺), Z = 2
Ground State 1s² ¹S₀ (2 electrons)
Ionization Potential 198 310.76 cm⁻¹; 24 587 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
He I	320.392	20 -A		1s2p - 2p ²	³ P° - ³ P	2 - 2	M4
He I	505.5001	4		1s ² - 1s15p	g ¹ S - ¹ P°	0 - 1	M4
He I	505.6840	6		1s ² - 1s14p	g ¹ S - ¹ P°	0 - 1	M4
He I	505.9122	8		1s ² - 1s13p	g ¹ S - ¹ P°	0 - 1	M4
He I	506.2000	10		1s ² - 1s12p	g ¹ S - ¹ P°	0 - 1	M4
He I	506.5702	15		1s ² - 1s11p	g ¹ S - ¹ P°	0 - 1	M4
He I	507.0576	20	10	1s ² - 1s10p	g ¹ S - ¹ P°	0 - 1	M4
He I	507.7178	30	9	1s ² - 1s9p	g ¹ S - ¹ P°	0 - 1	M4
He I	508.6431	40	8	1s ² - 1s8p	g ¹ S - ¹ P°	0 - 1	M4
He I	509.9979	50	7	1s ² - 1s7p	g ¹ S - ¹ P°	0 - 1	M4
He I	510.2586	f		1s ² - 1s7s	g ¹ S - ¹ S	0 - 0	M4
He I	512.0982	70	6	1s ² - 1s6p	g ¹ S - ¹ P°	0 - 1	M4
He I	512.5153	f		1s ² - 1s6s	g ¹ S - ¹ S	0 - 0	M4
He I	515.6165	100	5	1s ² - 1s5p	g ¹ S - ¹ P°	0 - 1	M4
He I	516.3592	f		1s ² - 1s5s	g ¹ S - ¹ S	0 - 0	M4
He I	522.2128	160	4	1s ² - 1s4p	g ¹ S - ¹ P°	0 - 1	M4
He I	523.7238	f		1s ² - 1s4s	g ¹ S - ¹ S	0 - 0	M4
He I	537.0296	400	3	1s ² - 1s3p	g ¹ S - ¹ P°	0 - 1	M4
He I	537.3309	f		1s ² - 1s3d	g ¹ S - ¹ D	0 - 2	M4
He I	538.8956	f		1s ² - 1s3p	g ¹ S - ³ P°	0 - 1	M4
He I	540.9354	f		1s ² - 1s3s	g ¹ S - ¹ S	0 - 0	M4
He I	584.3340	1000	2	1s ² - 1s2p	g ¹ S - ¹ P°	0 - 1	M4
He I	591.4117	40	1	1s ² - 1s2p	g ¹ S - ³ P°	0 - 1	M4
He I	601.4041	f		1s ² - 1s2s	g ¹ S - ¹ S	0 - 0	M4
He I	625.6	f		1s ² - 1s2s	g ¹ S - ³ S	0 - 1	K8

HELIUM II (He¹⁺), Z = 2
Ground State 1s ²S_{1/2} (1 electron)
Ionization Potential 438 908.854 cm⁻¹; 54.416 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
He II	229.431 P	5	11	1s - 12p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	229.735 P	6	10	1s - 11p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	230.139 P	9	9	1s - 10p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	230.686 P	12	8	1s - 9p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	231.454 P	17	7	1s - 8p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	232.584 P	24	6	1s - 7p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	234.347 P	40	5	1s - 6p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	237.331 P	70	4	1s - 5p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	243.027 P	130	3	1s - 4p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	256.317 P	320	2	1s - 3p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	303.781	665	1	1s - 2p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	303.786	335	1	1s - 2p	g ² S - ² P°	1/2 - 3/2	G2, M23
He II	949.301 P	9	19	2p - 10d	² P° - ² D	1/2 - 3/2	G2, M23
He II	949.354 P	17	19	2p - 10d	² P° - ² D	1/2 - 3/2	G2, M23
He II	958.670 P	13	18	2p - 9d	² P° - ² D	1/2 - 3/2	G2, M23
He II	958.724 P	22	18	2p - 9d	² P° - ² D	1/2 - 3/2	G2, M23
He II	972.083 P	18	17	2p - 8d	² P° - ² D	1/2 - 3/2	G2, M23
He II	972.138 P	32	17	2p - 8d	² P° - ² D	1/2 - 3/2	G2, M23
He II	992.334 P	27	16	2p - 7d	² P° - ² D	1/2 - 3/2	G2, M23
He II	992.391 P	48	16	2p - 7d	² P° - ² D	1/2 - 3/2	G2, M23

He II

He II

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
He II	1025.241 P	42	15	2p - 6d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G2, M23
He II	1025.302 P	77	15	2p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G2, M23
He II	1084.908 P	73	14	2p - 5d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G2, M23
He II	1084.975 P	132	14	2p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G2, M23
He II	1215.088 P	143	13	2p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G2, M23
He II	1215.171 P	260	13	2p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G2, M23
He II	1215.175 P	30	13	2p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G2, M23
He II	1640.332 P	333	12	2p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G2, M23
He II	1640.474 P	600	12	2p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G2, M23
He II	1640.490 P	70	12	2p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G2, M23

LITHIUM I (Li^{0+}), $Z = 3$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential $43\ 487.150\ \text{cm}^{-1}$; $5.392\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Li I	1425.11	-A		$1s\ 2s\ 2p - 1s\ 2p\ 5p$	$4P^\circ - 4P$		K8
Li I	1491.87	-A		$1s\ 2s\ 2p - 1s\ 2p\ 4p$	$4P^\circ - 4P$		K8
Li I	1674.76	-A		$1s\ 2s\ 2p - 1s\ 2p\ 3p$	$4P^\circ - 4P$		K8
Li I	1901.50	-A		$1s\ 2s\ 2p - 1s\ 2s\ 6s$	$4P^\circ - 4S$		K8
Li I	1980.59	-A		$1s\ 2s\ 2p - 1s\ 2s\ 5s$	$4P^\circ - 4S$		K8

LITHIUM II (Li^{1+}), $Z = 3$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $610\ 079.0\ \text{cm}^{-1}$; $75.638\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Li II	171.582	100	3	$1s^2 - 1s\ 4p$	$g^1S - 1P^\circ$	0 - 1	E3, M23
Li II	178.015	100	2	$1s^2 - 1s\ 3p$	$g^1S - 1P^\circ$	0 - 1	E3, M23
Li II	199.282	300	1	$1s^2 - 1s\ 2p$	$g^1S - 1P^\circ$	0 - 1	E3, M23
Li II	210.1	f		$1s^2 - 1s\ 2s$	$g^1S - 3S$	0 - 1	K8
Li II	944.73	5		$1s\ 2s - 1s\ 4p$	$3S - 3P^\circ$	1 - 2	P5
Li II	1017.88	5		$1s\ 2p - 1s\ 5d$	$3P^\circ - 3D$	2 - 3	P5
Li II	1131.884	15		$1s\ 2p - 1s\ 4d$	$3P^\circ - 3D$	2 - 3	P5
Li II	1166.63	5		$1s\ 2p - 1s\ 4s$	$3P^\circ - 3S$	2 - 1	P5
Li II	1198.082	700		$1s\ 2s - 1s\ 3p$	$3S - 3P^\circ$	1 - 2	P5
Li II	1237.287	10		$1s\ 2p - 1s\ 4d$	$1P^\circ - 1D$	1 - 2	P5
Li II	1253.324	5		$1s\ 2p - 1s\ 4s$	$1P^\circ - 1S$	1 - 0	P5
Li II	1420.891	60		$1s\ 2s - 1s\ 3p$	$1S - 1P^\circ$	0 - 1	P5
Li II	1492.931	60		$1s\ 2p - 1s\ 3d$	$3P^\circ - 3D$	1 - 2	H5
Li II	1492.973	100		$1s\ 2p - 1s\ 3d$	$3P^\circ - 3D$	2 - 3	H5
Li II	1493.036	20		$1s\ 2p - 1s\ 3d$	$3P^\circ - 3D$	0 - 1	H5
Li II	1653.076	60		$1s\ 2p - 1s\ 3s$	$3P^\circ - 3S$	1 - 1	H5
Li II	1653.132	100		$1s\ 2p - 1s\ 3s$	$3P^\circ - 3S$	2 - 1	H5
Li II	1653.212	20		$1s\ 2p - 1s\ 3s$	$3P^\circ - 3S$	0 - 1	H5
Li II	1681.667	400		$1s\ 2p - 1s\ 3d$	$1P^\circ - 1D$	1 - 2	P5
Li II	1755.331	100		$1s\ 2p - 1s\ 3s$	$1P^\circ - 1S$	1 - 0	H5, W2

LITHIUM III (Li^{2+}), $Z = 3$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential $987\ 660.945\ \text{cm}^{-1}$; $122.451\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Li III	102.856 P			$1s - 8p$	$g^2S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	G2
Li III	103.359 P			$1s - 7p$	$g^2S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	G2
Li III	104.142 P			$1s - 6p$	$g^2S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	G2
Li III	105.468 P			$1s - 5p$	$g^2S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	G2
Li III	107.999 P	10		$1s - 4p$	$g^2S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	G2, K8

Li III

Li III

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Li III	113.905	P	30	1s - 3p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Li III	134.998	P	100	1s - 2p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Li III	441.00	P		2 - 7			G2
Li III	455.63	P		2 - 6			G2
Li III	482.14	P		2 - 5			G2
Li III	540.00	P		2 - 4			G2
Li III	728.98	P		2 - 3			G2
Li III	1060.41	P		3 - 8			G2
Li III	1116.33	P		3 - 7			G2
Li III	1215.05	P		3 - 6			G2
Li III	1423.88	P		3 - 5			G2

BERYLLIUM I (Be^{0+}), $Z = 4$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential $75\ 192.07\ \text{cm}^{-1}$; $9.322\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Be I	1426.117	125		$2s^2 - 2s\ 5p$	$g^1S - ^1P^o$	0 - 1	J3
Be I	1491.765	250		$2s^2 - 2s\ 4p$	$g^1S - ^1P^o$	0 - 1	J3
Be I	1661.478	1000		$2s^2 - 2s\ 3p$	$g^1S - ^1P^o$	0 - 1	J3
Be I	1907.16	100		$2s\ 2p - 2s\ 12d$	$^3P^o - ^3D$	2 - 3	J3, P7
Be I	1912.53	100		$2s\ 2p - 2s\ 11d$	$^3P^o - ^3D$	2 - 3	J3, P7
Be I	1919.80	200		$2s\ 2p - 2s\ 10d$	$^3P^o - ^3D$	2 - 3	J3, P7
Be I	1929.71	300		$2s\ 2p - 2s\ 9d$	$^3P^o - ^3D$	2 - 3	J3, P7
Be I	1943.72	500		$2s\ 2p - 2s\ 8d$	$^3P^o - ^3D$	2 - 3	J3, P7
Be I	1956.67	100		$2s\ 2p - 2s\ 8s$	$^3P^o - ^3S$	2 - 1	J3, P7
Be I	1964.63	900		$2s\ 2p - 2s\ 7d$	$^3P^o - ^3D$	2 - 3	J3, P7
Be I	1985.17	300		$2s\ 2p - 2s\ 7s$	$^3P^o - ^3S$	2 - 1	J3, P7
Be I	1997.95	100		$2s\ 2p - 2s\ 6d$	$^3P^o - ^3D$	0 - 1	J3, P7
Be I	1997.98	300		$2s\ 2p - 2s\ 6d$	$^3P^o - ^3D$	1 - 2	J3, P7
Be I	1998.07	600		$2s\ 2p - 2s\ 6d$	$^3P^o - ^3D$	2 - 3	J3, P7

BERYLLIUM II (Be^{1+}), $Z = 4$
 Ground State $1s^2 2s\ ^2S_{1/2}$ (3 electrons)
 Ionization Potential $146\ 882.86\ \text{cm}^{-1}$; $18.211\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Be II	725.71	100		$2s - 7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P7
Be II	743.58	300		$2s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P7
Be II	775.362	400		$2s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	J2, P7
Be II	842.025	500	2	$2s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	J2, P7
Be II	842.031	250	2	$2s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	J2, P7
Be II	925.20	100		$2p - 8d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P7
Be II	943.481	30		$2p - 7d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	J2, P7
Be II	943.540	70		$2p - 7d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	J2, P7
Be II	949.75	100		$2p - 7s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P7
Be II	973.213	150		$2p - 6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	J2, P7
Be II	973.276	350		$2p - 6d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	J2, P7
Be II	983.984	50		$2p - 6s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	J2, P7
Be II	984.048	150		$2p - 6s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	J2, P7
Be II	1026.890	200		$2p - 5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	J2, P7
Be II	1026.959	400		$2p - 5d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	J2, P7
Be II	1036.299	550	1	$2s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	J2, P7
Be II	1036.319	250	1	$2s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	J2, P7
Be II	1048.147	200		$2p - 5s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	J2, P7
Be II	1048.220	400		$2p - 5s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	J2, P7
Be II	1142.956	250		$2p - 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	J2, P7
Be II	1143.639	500		$2p - 4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	J2, P7
Be II	1197.094	330	5	$2p - 4s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	J2, P7
Be II	1197.188	670	5	$2p - 4s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	J2, P7
Be II	1512.269	555	4	$2p - 3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	J2, P7
Be II	1512.407	1000	4	$2p - 3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	J2, P7
Be II	1512.419	110	4	$2p - 3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	J2, P7
Be II	1776.100	500	3	$2p - 3s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	J2, P7
Be II	1776.307	1000	3	$2p - 3s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	J2, P7

BERYLLIUM III (Be^{2+}), $Z = 4$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $1\ 241\ 259.4\ \text{cm}^{-1}$; $153.893\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Be III	81.83			$1s^2 - 1s7p$	$g^1S - ^1P^o$	0 - 1	R18
Be III	82.38			$1s^2 - 1s6p$	$g^1S - ^1P^o$	0 - 1	R18
Be III	83.20			$1s^2 - 1s5p$	$g^1S - ^1P^o$	0 - 1	R18
Be III	84.758	100		$1s^2 - 1s4p$	$g^1S - ^1P^o$	0 - 1	E6, R18
Be III	88.314	330		$1s^2 - 1s3p$	$g^1S - ^1P^o$	0 - 1	E6, R18
Be III	100.2552	1000		$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	S26, E6, R18
Be III	101.7			$1s^2 - 1s2p$	$g^1S - ^2P^o$	0 - 1	K8
Be III	104.5		f	$1s^2 - 1s2s$	$g^1S - ^2S$	0 - 1	K8

BERYLLIUM IV (Be^{3+}), $Z = 4$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential $1\ 756\ 018.68\ \text{cm}^{-1}$; $217.713\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Be IV	58.574	P		$1s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Be IV	59.320	P		$1s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Be IV	60.743	P	10	$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, T13
Be IV	64.065	P	30	$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, T13
Be IV	75.928	P	100	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, T13
Be IV	248.04	P		2 - 7			G2
Be IV	256.27	P		2 - 6			G2
Be IV	271.18	P		2 - 5			G2
Be IV	303.72	P		2 - 4			G2
Be IV	410.01	P		2 - 3			G2
Be IV	596.44	P		3 - 8			G2
Be IV	627.90	P		3 - 7			G2
Be IV	683.42	P		3 - 6			G2
Be IV	800.88	P		3 - 5			G2
Be IV	1171.56	P		3 - 4			G2

BORON I (B^{0+}), $Z = 5$
 Ground State $1s^2 2s^2 2p^2 P_{1/2}^o$ (5 electrons)
 Ionization Potential $66\,928.10\text{ cm}^{-1}$; 8.298 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
B I	1378.646	10 -A		$2s^3 2p - 2s 2p^2$	$g^3 P^o - ^3 P$	$\frac{1}{2} - \frac{3}{2}$	G20
B I	1378.868	20 -A		$2s^3 2p - 2s 2p^2$	$g^3 P^o - ^3 P$	$\frac{1}{2} - \frac{1}{2}$	G20
B I	1378.932	40 -A		$2s^3 2p - 2s 2p^2$	$g^3 P^o - ^3 P$	$\frac{3}{2} - \frac{3}{2}$	G20
B I	1379.157	10 -A		$2s^3 2p - 2s 2p^2$	$g^3 P^o - ^3 P$	$\frac{3}{2} - \frac{1}{2}$	G20
B I	1465.548	30 -A		$2s 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{1}{2} - \frac{3}{2}$	G20
B I	1465.709	40 -A		$2s 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{3}{2}$	G20
B I	1465.837	20 -A		$2s 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{1}{2}$	G20
B I	1525.48	1		$2p - 9s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	C6
B I	1525.84	1		$2p - 9s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	C6
B I	1533.86	1d		$2p - 8d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	C6
B I	1534.22	1d		$2p - 8d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	C6
B I	1546.550	20		$2p - 7d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	G20
B I	1546.800	30		$2p - 7d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	G20
B I	1558.70	5		$2p - 7s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	C6
B I	1559.07	10		$2p - 7s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	C6
B I	1566.292	10		$2p - 6d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	G20
B I	1566.675	20		$2p - 6d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	G20
B I	1573.301	30		$2s^3 2p - 2s 2p^2$	$g^3 P^o - ^3 S$	$\frac{1}{2} - \frac{1}{2}$	G20
B I	1573.678	50		$2s^3 2p - 2s 2p^2$	$g^3 P^o - ^3 S$	$\frac{3}{2} - \frac{1}{2}$	G20
B I	1600.455	70		$2p - 5d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	G20
B I	1600.727	120		$2p - 5d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	G20
B I	1610.36	1		$2p - 6s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	C6
B I	1610.75	1		$2p - 6s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	C6
B I	1662.605	50		$2p - 5s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	G20
B I	1663.035	100		$2p - 5s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	G20
B I	1666.869	150		$2p - 4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	G20
B I	1667.291	200		$2p - 4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	G20
B I	1817.858	150		$2p - 4s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	G20
B I	1818.373	200		$2p - 4s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	G20
B I	1825.911	300		$2p - 3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	G20
B I	1826.413	300		$2p - 3d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	G20

BORON II (B^{1+}), $Z = 5$
 Ground State $1s^2 2s^2 ^1 S_0$ (4 electrons)
 Ionization Potential $202\,887.4\text{ cm}^{-1}$; 25.154 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
B II	631.8			$2s 2p - 2p 3p$	$^3 P^o - ^3 P$	2 - 2	O2
B II	641.5			$2s 2p - 2p 3p$	$^3 P^o - ^3 S$	2 - 1	O2
B II	652.0			$2s 2p - 2p 3p$	$^3 P^o - ^3 D$	2 - 3	O2
B II	693.947	200	2	$2s^2 - 2s 3p$	$g^1 S - ^1 P^o$	0 - 1	O2
B II	731.357	100		$2s 2p - 2s 4d$	$^3 P^o - ^3 D$	1 - 2	E3
B II	731.442	100		$2s 2p - 2s 4d$	$^3 P^o - ^3 D$	2 - 3	E3
B II	770.8	-A		$2s 2p - 2p 3p$	$^1 P^o - ^1 S$	1 - 0	O2
B II	808.7			$2s 2p - 2p 3p$	$^1 P^o - ^1 D$	1 - 2	O2
B II	864.08	10		$2s 2p - 2p 3p$	$^1 P^o - ^1 P$	1 - 1	E3
B II	882.543	300		$2s 2p - 2s 3d$	$^3 P^o - ^3 D$	1 - 2	O2

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
B II	882.681	300		2s 2p - 2s 3d	$^3P^o - ^3D$	2-3	O2
B II	978.938	10		2s 2p - 2s 4d	$^1P^o - ^1D$	1-2	O2
B II	984.673	100		2p ² - 2p 3d	$^3P^o - ^3D^o$	2-3	O2
B II	1048.70	1		2p ² - 2p 3d	$^1D - ^1D^o$	2-	O2
B II	1081.875	300		2s 2p - 2s 3s	$^3P^o - ^3S$	1-1	O2
B II	1082.073	300		2s 2p - 2s 3s	$^3P^o - ^3S$	2-1	O2
B II	1208.36	1		2p ² - 2p 3s	$^3P^o - ^3P^o$	1-2	O2
B II	1208.546	40		2p ² - 2p 3s	$^3P^o - ^3P^o$	2-2	O2
B II	1208.825	10		2p ² - 2p 3s	$^3P^o - ^3P^o$	2-	O2
B II	1230.160	300		2s 2p - 2s 3d	$^1P^o - ^1D$	1-2	O2
B II	1362.461	600	1	2s ² - 2s 2p	$g^1S - ^1P^o$	0-1	O2
B II	1378.18	1		2p ² - 2s 4f	$^1D - ^1F^o$	2-3	O2
B II	1607.76	10		2s 2p - 2s 3s	$^1P^o - ^1S$	1-0	O2
B II	1623.582	450	3	2s 2p - 2p ²	$^3P^o - ^3P$	1-2	O2
B II	1623.771	300	3	2s 2p - 2p ²	$^3P^o - ^3P$	0-1	O2
B II	1624.018	600	3	2s 2p - 2p ²	$^3P^o - ^3P$	2-2	O2
B II	1624.16	400	3	2s 2p - 2p ²	$^3P^o - ^3P$	1-0	E3
B II	1624.340	450	3	2s 2p - 2p ²	$^3P^o - ^3P$	2-1	O2
B II	1842.811	300		2s 2p - 2p ²	$^1P^o - ^1S$	1-0	O2
B II	1926.65	10		2s 3s - 2p 3s	$^3S - ^3P^o$	1-2	O2
B II	1927.45	1		2s 3s - 2p 3s	$^3S - ^3P^o$	1-1	O2
B II	1927.78	1		2s 3s - 2p 3s	$^3S - ^3P^o$	1-0	O2
B II	1937.2	1		2s 3p - 2p 3p	$^3P^o - ^3P$	2-2	O2

BORON III (B^{2+}), $Z = 5$
 Ground State $1s^2 2s^2 S_{1/2}$ (3 electrons)
 Ionization Potential $305\,931.1\text{ cm}^{-1}$; 37.930 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
B III	376.330	100		2s - 5p	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	411.804	300		2s - 4p	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	434.561			2p - 6d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	434.625	100		2p - 6d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	O1
B III	458.645			2p - 5d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	458.716	100		2p - 5d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	O1
B III	510.768	200		2p - 4d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	510.854	300		2p - 4d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	O1
B III	518.238	450		2s - 3p	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	518.265	250		2s - 3p	$g^2S - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	O1
B III	528.245	10		2p - 4s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	O1
B III	677.000	500		2p - 3d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	677.143	600		2p - 3d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	O1
B III	758.476	100		2p - 3s	$^3P^o - ^3S$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	758.668	200		2p - 3s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{5}{2}$	O1
B III	1421.41	1		3d - 5f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{7}{2}$	O1
B III	1596.66	1		3s - 4p	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	1953.495	16		3p - 4d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	O1
B III	1953.827	40		3p - 4d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	O1

BORON IV (B^{3+}), $Z = 5$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $2\ 092\ 001.4\ \text{cm}^{-1}$; $259.368\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
B IV	48.939			$1s^2 - 1s6p$	$g^1S - ^1P^o$	0 - 1	T12
B IV	49.4549			$1s^2 - 1s5p$	$g^1S - ^1P^o$	0 - 1	S26, T12
B IV	50.4347	100		$1s^2 - 1s4p$	$g^1S - ^1P^o$	0 - 1	S26, E6, T12
B IV	52.6853	330		$1s^2 - 1s3p$	$g^1S - ^1P^o$	0 - 1	S26, E6, T12
B IV	60.3144	1000		$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	S26, E6, T12
B IV	61.088			$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	T12
B IV	62.44	f		$1s^2 - 1s2s$	$g^1S - ^2S$	0 - 1	K8

BORON V (B^{4+}), $Z = 5$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential $2\ 744\ 107.7\ \text{cm}^{-1}$; $340.217\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
B V	37.483	P		$1s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
B V	37.960	P		$1s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
B V	38.871	P	10	$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
B V	40.996	P	30	$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
B V	48.587	P	100	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
B V	158.73	P		2 - 7			G2
B V	163.99	P		2 - 6			G2
B V	173.54	P		2 - 5			G2
B V	194.36	P		2 - 4			G2
B V	262.37	P		2 - 3			G2
B V	381.70	P		3 - 8			G2
B V	401.83	P		3 - 7			G2
B V	427.36	P		3 - 6			G2
B V	512.53	P		3 - 5			G2
B V	726.73	P		4 - 9			G2
B V	749.74	P		3 - 4			G2
B V	777.57	P		4 - 8			G2
B V	865.93	P		4 - 7			G2
B V	1049.72	P		4 - 6			G2
B V	1214.99	P		5 - 10			G2
B V	1318.05	P		5 - 9			G2
B V	1495.38	P		5 - 8			G2
B V	1619.92	P		4 - 5			G2
B V	1860.56	P		5 - 7			G2

CARBON I (C⁰⁺), Z = 6
 Ground State 1s²2s²2p² ³P₀ (6 electrons)
 Ionization Potential 90 820.42 cm⁻¹; 11.260 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
C I	945.191	20 -A	31	2s ² 2p ² - 2s 2p ³	g ³ P - ³ S ^o	0 - 1	J4,E3
C I	945.338	50 -A	31	2s ² 2p ² - 2s 2p ³	g ³ P - ³ S ^o	1 - 1	J4,E3
C I	945.579	75 -A	31	2s ² 2p ² - 2s 2p ³	g ³ P - ³ S ^o	2 - 1	J4,E3
C I	1112.058	10	30.01	2p ² - 2p 11d	g ³ P - ³ D ^o	2 - 3	J4,E3
C I	1114.457	50	30	2p ² - 2p 10d	g ³ P - ³ D ^o	2 - 3	J4,E3
C I	1117.531	20		2p ² - 2p 9d	g ³ P - ³ P ^o	2 - 2	J4,J6
C I	1117.724	50	29	2p ² - 2p 9d	g ³ P - ³ D ^o	2 - 3	J4,J6
C I	1118.180	50		2p ² - 2p 9d	g ³ P - ³ F ^o	1 - 2	J4,E3
C I	1122.098	20	28	2p ² - 2p 8d	g ³ P - ³ P ^o	2 - 2	J4,E3
C I	1122.260	50	27.01	2p ² - 2p 9s	g ³ P - ¹ F ^o	2 - 1	J4,J6
C I	1122.328	100	27	2p ² - 2p 8d	g ³ P - ³ D ^o	2 - 3	J4,J6
C I	1122.447	20	27	2p ² - 2p 8d	g ³ P - ³ D ^o	0 - 1	J4,J6
C I	1122.725	50	26.03	2p ² - 2p 9s	g ³ P - ³ P ^o	1 - 1	J4,J6
C I	1122.794	20		2p ² - 2p 8d	g ³ P - ³ F ^o	1 - 2	J4,E3
C I	1123.107	20		2p ² - 2p 8d	g ³ P - ³ F ^o	2 - 3	J4,J6
C I	1128.252	50	26	2p ² - 2p 7d	g ³ P - ³ P ^o	1 - 0	J4,J6
C I	1128.586	20	25.01	2p ² - 2p 8s	g ³ P - ¹ P ^o	1 - 1	J4,J6
C I	1128.752	100	26	2p ² - 2p 7d	g ³ P - ³ P ^o	2 - 2	J4,J6
C I	1128.817	P	25	2p ² - 2p 7d	g ³ P - ³ D ^o	1 - 2	J4
C I	1128.903	20	25.02	2p ² - 2p 7d	g ³ P - ¹ F ^o	2 - 3	J4,J6
C I	1129.030	100	25.01	2p ² - 2p 8s	g ³ P - ¹ P ^o	2 - 1	J4,J6
C I	1129.135	200	25	2p ² - 2p 7d	g ³ P - ³ D ^o	2 - 3	J4,J6
C I	1129.161	P	25	2p ² - 2p 7d	g ³ P - ³ D ^o	2 - 2	J4
C I	1129.196	P	25	2p ² - 2p 7d	g ³ P - ³ D ^o	0 - 1	J4
C I	1129.405	20	25	2p ² - 2p 7d	g ³ P - ³ D ^o	1 - 1	J4,J6
C I	1129.624	50	24	2p ² - 2p 7d	g ³ P - ³ F ^o	1 - 2	J4,J6
C I	1129.749	20	25	2p ² - 2p 7d	g ³ P - ³ D ^o	2 - 1	J4,J6
C I	1129.924	50	24	2p ² - 2p /d	g ³ P - ³ F ^o	2 - 3	J4,J6
C I	1130.171	20	23.01	2p ² - 2p 7d	g ³ P - ¹ D ^o	1 - 2	J4,J6
C I	1138.383	20	23	2p ² - 2p 6d	g ³ P - ³ P ^o	0 - 1	J4,J6
C I	1138.557	30	23	2p ² - 2p 6d	g ³ P - ³ P ^o	1 - 0	J4,J6
C I	1138.557	20	23	2p ² - 2p 6d	g ³ P - ³ P ^o	1 - 1	J4,J6
C I	1138.946	50	23	2p ² - 2p 6d	g ³ P - ³ P ^o	2 - 1	J4,J6
C I	1139.093	100	23	2p ² - 2p 6d	g ³ P - ³ P ^o	2 - 2	J4,J6
C I	1139.300	20	22.01	2p ² - 2p 7s	g ³ P - ¹ P ^o	1 - 1	J4,J6
C I	1139.426	50	22.02	2p ² - 2p 6d	g ³ P - ¹ F ^o	2 - 3	J4,J6
C I	1139.514	20	22	2p ² - 2p 6d	g ³ P - ³ D ^o	1 - 2	J4,J6
C I	1139.650	20	22.01	2p ² - 2p 7s	g ³ P - ¹ P ^o	2 - 1	J4,J6
C I	1139.766	70	21.01	2p ² - 2p 7s	g ³ P - ³ P ^o	1 - 2	J4,J6
C I	1139.792	70	22	2p ² - 2p 6d	g ³ P - ³ D ^o	0 - 1	J4,J6
C I	1139.812	150	22	2p ² - 2p 6d	g ³ P - ³ D ^o	2 - 3	J4,J6
C I	1139.865	50	22	2p ² - 2p 6d	g ³ P - ³ D ^o	2 - 2	J4,J6
C I	1140.005	50	22	2p ² - 2p 6d	g ³ P - ³ D ^o	1 - 1	J4,J6
C I	1140.223	20	21.01	2p ² - 2p 7s	g ³ P - ³ P ^o	1 - 1	J4,J6
C I	1140.357	100	21	2p ² - 2p 6d	g ³ P - ³ F ^o	1 - 2	J4,J6
C I	1140.574	20	21.01	2p ² - 2p 7s	g ³ P - ³ P ^o	2 - 1	J4,J6
C I	1140.641	150	21	2p ² - 2p 6d	g ³ P - ³ F ^o	2 - 3	J4,J6
C I	1141.327	20	20	2p ² - 2p 6d	g ³ P - ¹ D ^o	1 - 2	J4,J6
C I	1141.678	20	20	2p ² - 2p 6d	g ³ P - ¹ D ^o	2 - 2	J4,J6
C I	1155.809	50	19	2p ² - 2p 5d	g ³ P - ³ P ^o	0 - 1	J4,J6
C I	1156.028	150	19	2p ² - 2p 5d	g ³ P - ³ P ^o	1 - 1	J4,J6
C I	1156.199	20	19	2p ² - 2p 5d	g ³ P - ³ P ^o	1 - 2	J4,J6
C I	1156.389	100	19	2p ² - 2p 5d	g ³ P - ³ P ^o	2 - 1	J4,J6
C I	1156.560	200	19	2p ² - 2p 5d	g ³ P - ³ P ^o	2 - 2	J4,J6
C I	1156.765	20	18.01	2p ² - 2p 5d	g ³ P - ¹ P ^o	2 - 1	J4,J6
C I	1157.186	20	17	2p ² - 2p 6s	g ³ P - ¹ P ^o	0 - 1	J4,J6
C I	1157.330	50	18	2p ² - 2p 5d	g ³ P - ¹ F ^o	2 - 3	J4,J6
C I	1157.405	150	17	2p ² - 2p 6s	g ³ P - ¹ P ^o	1 - 1	J4,J6
C I	1157.770	350	16	2p ² - 2p 5d	g ³ P - ³ D ^o	1 - 2	J4,J6
C I	1157.910	730	16	2p ² - 2p 5d	g ³ P - ³ D ^o	0 - 1	J4,J6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C I	1158.019	750	16	2p ² - 2p 5d	g ³ P - ³ D°	2-3	J4, J6
C I	1158.132	400	16	2p ² - 2p 5d	g ³ P - ³ D°	2-2	J4, J6
C I	1158.324	100	15.01	2p ² - 2p 6s	g ³ P - ³ P°	0-1	J4, J6
C I	1158.397	100	15.01	2p ² - 2p 6s	g ³ P - ³ P°	2-2	J4, J6
C I	1158.492	20	16	2p ² - 2p 5d	g ³ P - ³ D°	2-1	J4, J6
C I	1158.674	100	15.01	2p ² - 2p 6s	g ³ P - ³ P°	1-0	J4, J6
C I	1158.732	100	15	2p ² - 2p 5d	g ³ P - ³ F°	1-2	J4, J6
C I	1158.907	50	15.01	2p ² - 2p 6s	g ³ P - ³ P°	2-1	J4, J6
C I	1158.967	200	15	2p ² - 2p 5d	g ³ P - ³ F°	2-3	J4, J6
C I	1188.833	200	14	2p ² - 2p 4d	g ³ P - ³ P°	0-1	J4, J6
C I	1188.992	500	14	2p ² - 2p 4d	g ³ P - ³ P°	1-0	J4, J6
C I	1189.065	200	14	2p ² - 2p 4d	g ³ P - ³ P°	1-1	J4, J6
C I	1189.249	250	14	2p ² - 2p 4d	g ³ P - ³ P°	1-2	J4, J6
C I	1189.447	500	14	2p ² - 2p 4d	g ³ P - ³ P°	2-1	J4, J6
C I	1189.631	700	14	2p ² - 2p 4d	g ³ P - ³ P°	2-2	J4, J6
C I	1190.021	35	13.01	2p ² - 2p 4d	g ³ P - ¹ P°	0-1	J4, J6
C I	1190.253	35	13.01	2p ² - 2p 4d	g ³ P - ¹ P°	1-1	J4, J6
C I	1191.838	120	13	2p ² - 2p 4d	g ³ P - ¹ F°	2-3	J4, J6
C I	1192.218	70	12	2p ² - 2p 5s	g ³ P - ¹ P°	0-1	J4, J6
C I	1192.451	120	12	2p ² - 2p 5s	g ³ P - ¹ P°	1-1	J4, J6
C I	1193.009	700	11	2p ² - 2p 4d	g ³ P - ³ D°	1-2	J4, J6
C I	1193.031	300	11	2p ² - 2p 4d	g ³ P - ³ D°	0-1	J4, J6
C I	1193.240	850	11	2p ² - 2p 4d	g ³ P - ³ D°	2-3	J4, J6
C I	1193.264	150	11	2p ² - 2p 4d	g ³ P - ³ D°	1-1	J4, J6
C I	1193.393	350	11	2p ² - 2p 4d	g ³ P - ³ D°	2-2	J4, J6
C I	1193.679	500	9.02	2p ² - 2p 5s	g ³ P - ³ P°	1-2	J4, J6
C I	1193.996	120	9.02	2p ² - 2p 5s	g ³ P - ³ P°	0-1	J4, J6
C I	1194.064	350	9.02	2p ² - 2p 5s	g ³ P - ³ P°	2-2	J4, J6
C I	1194.229	120	9.02	2p ² - 2p 5s	g ³ P - ³ P°	1-1	J4, J6
C I	1194.301	120	10	2p ² - 2p 4d	g ³ P - ³ F°	1-2	J4, J6
C I	1194.406	200	9.02	2p ² - 2p 5s	g ³ P - ³ P°	1-0	J4, J6
C I	1194.488	350	10	2p ² - 2p 4d	g ³ P - ³ F°	2-3	J4, J6
C I	1194.615	250	9.02	2p ² - 2p 5s	g ³ P - ³ P°	2-1	J4, J6
C I	1253.467	50		2p ² - 2p 11d	¹ D - ¹ F°	2-3	J4, E3
C I	1253.541	100		2p ² - 2p 11d	¹ D - ³ D°	2-2	J4, E3
C I	1256.498	200		2p ² - 2p 10d	¹ D - ¹ F°	2-3	J4, E3
C I	1260.613	200	59	2p ² - 2p 9d	¹ D - ¹ F°	2-3	J4, E3
C I	1260.736	250	9	2p ² - 2p 3d	g ³ P - ³ P°	0-1	J4, J6
C I	1260.927	200	9	2p ² - 2p 3d	g ³ P - ³ P°	1-0	J4, J6
C I	1260.996	150	9	2p ² - 2p 3d	g ³ P - ³ P°	1-1	J4, J6
C I	1261.122	250	9	2p ² - 2p 3d	g ³ P - ³ P°	1-2	J4, J6
C I	1261.426	250	9	2p ² - 2p 3d	g ³ P - ³ P°	2-1	J4, J6
C I	1261.552	500	9	2p ² - 2p 3d	g ³ P - ³ P°	2-2	J4, J6
C I	1266.270	20	58.01	2p ² - 2p 8d	¹ D - ¹ P°	2-1	J4, J6
C I	1266.419	100	58	2p ² - 2p 8d	¹ D - ¹ F°	2-3	J4, J6
C I	1267.596	50	57	2p ² - 2p 8d	¹ D - ³ F°	2-3	J4, J6
C I	1274.109	50	8	2p ² - 2p 3d	g ³ P - ¹ F°	2-3	J4, J6
C I	1274.756	20	56	2p ² - 2p 7d	¹ D - ¹ P°	2-1	J4, J6
C I	1274.984	150	55	2p ² - 2p 7d	¹ D - ¹ F°	2-3	J4, J6
C I	1276.287	50		2p ² - 2p 7d	¹ D - ³ F°	2-3	J4, J6
C I	1276.483	100		2p ² - 2p 4s	g ³ P - ¹ P°	0-1	J4, J6
C I	1276.750	200		2p ² - 2p 4s	g ³ P - ¹ P°	1-1	J4, J6
C I	1277.245	300	7	2p ² - 2p 3d	g ³ P - ³ D°	0-1	J4, J6
C I	1277.282	700	7	2p ² - 2p 3d	g ³ P - ³ D°	1-2	J4, J6
C I	1277.513	100	7	2p ² - 2p 3d	g ³ P - ³ D°	1-1	J4, J6
C I	1277.550	1000	7	2p ² - 2p 3d	g ³ P - ³ D°	2-3	J4, J6
C I	1277.723	250	7	2p ² - 2p 3d	g ³ P - ³ D°	2-2	J4, J6
C I	1277.954	70	7	2p ² - 2p 3d	g ³ P - ³ D°	2-1	J4, J6
C I	1279.056	100	6	2p ² - 2p 3d	g ³ P - ³ F°	1-2	J4, J6
C I	1279.229	150	6	2p ² - 2p 3d	g ³ P - ³ F°	2-3	J4, J6
C I	1279.498	70	6	2p ² - 2p 3d	g ³ P - ³ F°	2-2	J4, J6
C I	1279.890	250	5	2p ² - 2p 4s	g ³ P - ³ P°	1-2	J4, J6
C I	1280.135	200	5	2p ² - 2p 4s	g ³ P - ³ P°	0-1	J4, J6
C I	1280.333	700	5	2p ² - 2p 4s	g ³ P - ³ P°	2-2	J4, J6
C I	1280.404	75	5	2p ² - 2p 4s	g ³ P - ³ P°	1-1	J4, J6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C I	1280.597	200	5	$2p^2 - 2p\ 4s$	$g^2P - ^2P^o$	1-0	J4,J6
C I	1280.847	250	5	$2p^2 - 2p\ 4s$	$g^2P - ^2P^o$	2-1	J4,J6
C I	1288.037	200	54	$2p^2 - 2p\ 6d$	$^1D - ^1F^o$	2-1	J4,J6
C I	1288.422	500	53	$2p^2 - 2p\ 6d$	$^1D - ^1F^o$	2-3	J4,J6
C I	1288.710	100	52	$2p^2 - 2p\ 7s$	$^1D - ^1P^o$	2-1	J4,J6
C I	1288.917	100	51.02	$2p^2 - 2p\ 6d$	$^1D - ^3D^o$	2-3	J4,J6
C I	1289.891	<0	51.01	$2p^2 - 2p\ 7s$	$^1D - ^3P^o$	2-1	J4,J6
C I	1289.977	300	51	$2p^2 - 2p\ 6d$	$^1D - ^3F^o$	2-3	J4,J6
C I	1291.304	100	50	$2p^2 - 2p\ 6d$	$^1D - ^1D^o$	2-2	J4,J6
C I	1310.637	200	49	$2p^2 - 2p\ 5d$	$^1D - ^1P^o$	2-1	J4,J6
C I	1311.363	1000	48	$2p^2 - 2p\ 5d$	$^1D - ^1F^o$	2-3	J4,J6
C I	1311.924	200	47	$2p^2 - 2p\ 6s$	$^1D - ^1P^o$	2-1	J4,J6
C I	1312.247	100	46	$2p^2 - 2p\ 5d$	$^1D - ^3D^o$	2-3	J4,J6
C I	1313.387	100	45.01	$2p^2 - 2p\ 6s$	$^1D - ^3P^o$	2-1	J4,J6
C I	1313.464	300	45	$2p^2 - 2p\ 5d$	$^1D - ^3F^o$	2-3	J4,J6
C I	1315.918	200	44	$2p^2 - 2p\ 5d$	$^1D - ^1D^o$	2-2	J4,J6
C I	1328.8332 ST	150	4	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	0-1	H4,J6,J4
C I	1329.0863 ST	150	4	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	1-0	H4,E3,J4
C I	1329.1001 ST	200	4	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	1-2	H4,J6,J4
C I	1329.1230 ST	110	4	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	1-1	H4,J6,J4
C I	1329.5775 ST	600	4	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	2-2	H4,J6,J4
C I	1329.6005 ST	200	4	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	2-1	H4,J6,J4
C I	1354.288	500	43	$2p^2 - 2p\ 4d$	$^1D - ^1P^o$	2-1	J4,J6
C I	1355.844	750	42	$2p^2 - 2p\ 4d$	$^1D - ^1F^o$	2-3	J4,J6
C I	1357.134	300	41	$2p^2 - 2p\ 5s$	$^1D - ^1P^o$	2-1	J4,J6
C I	1357.659	100	40.01	$2p^2 - 2p\ 4d$	$^1D - ^3D^o$	2-3	J4,J6
C I	1359.275	200	40	$2p^2 - 2p\ 4d$	$^1D - ^3F^o$	2-3	J4,J6
C I	1359.438	50	39.01	$2p^2 - 2p\ 5s$	$^1D - ^3P^o$	2-1	J4,J6
C I	1364.164	600	39	$2p^2 - 2p\ 4d$	$^1D - ^1D^o$	2-2	J4,J6
C I	1431.597	100 -A	65	$2s\ 2p^2 - 2s\ 2p^2 (^4P) 3s$	$^4S^o - ^4P$	2-3	J4,J6
C I	1432.105	75 -A	65	$2s\ 2p^2 - 2s\ 2p^2 (^4P) 3s$	$^4S^o - ^4P$	2-2	J4,S13
C I	1432.530	50 -A	65	$2s\ 2p^2 - 2s\ 2p^2 (^4P) 3s$	$^4S^o - ^4P$	2-1	J4,S13
C I	1459.0317 st	300	38	$2p^2 - 2p\ 3d$	$^1D - ^1P^o$	2-1	K7,J6,J4
C I	1463.3360 st	600	37	$2p^2 - 2p\ 3d$	$^1D - ^1F^o$	2-3	K7,J6,J4
C I	1467.402	350	36	$2p^2 - 2p\ 4s$	$^1D - ^1P^o$	2-1	J4,J6
C I	1467.877	30	35.01	$2p^2 - 2p\ 3d$	$^1D - ^3D^o$	2-3	J4,J6
C I	1468.410	100	35.01	$2p^2 - 2p\ 3d$	$^1D - ^3D^o$	2-1	J4,J6
C I	1470.094	100	35	$2p^2 - 2p\ 3d$	$^1D - ^3F^o$	2-3	J4,J6
C I	1472.231	60	34.01	$2p^2 - 2p\ 4s$	$^1D - ^3P^o$	2-1	J4,J6
C I	1481.7635 st	450	34	$2p^2 - 2p\ 3d$	$^1D - ^1D^o$	2-2	K7,J6,J4
C I	1492.738	60	64.08	$2p^2 - 2p\ 7d$	$^1S - ^1P^o$	0-1	J4,J6
C I	1493.273	10	64.07	$2p^2 - 2p\ 8s$	$^1S - ^1P^o$	0-1	J4,J6
C I	1494.532	25		$2p^2 - 2p\ 7d$	$^1S - ^3D^o$	0-1	J4,J6
C I	1510.668	25	64.05	$2p^2 - 2p\ 6d$	$^1S - ^3P^o$	0-1	J4,J6
C I	1510.981	100	64.04	$2p^2 - 2p\ 6d$	$^1S - ^1P^o$	0-1	J4,J6
C I	1511.907	25	64.03	$2p^2 - 2p\ 7s$	$^1S - ^1P^o$	0-1	J4,J6
C I	1513.150	50	64.02	$2p^2 - 2p\ 6d$	$^1S - ^3D^o$	0-1	J4,J6
C I	1541.510	40	64.01	$2p^2 - 2p\ 5d$	$^1S - ^3P^o$	0-1	J4,J6
C I	1542.1766 st	160	64	$2p^2 - 2p\ 5d$	$^1S - ^1P^o$	0-1	K7,J6,J4
C I	1543.960	60	63.04	$2p^2 - 2p\ 6s$	$^1S - ^1P^o$	0-1	J4,J6
C I	1545.249	40	63.03	$2p^2 - 2p\ 5d$	$^1S - ^3D^o$	0-1	J4,J6
C I	1560.3095 st	250	3	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^3D^o$	0-1	K7,J6,J4
C I	1560.6832 st	500	3	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	1-2	K7,J6,J4
C I	1560.7079 st	200	3	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	1-1	K7,J6,J4
C I	1561.3407 st	200	3	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	2-2	K7,J6,J4
C I	1561.367 P		3	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^3D^o$	2-1	J4
C I	1561.4382 st	1000	3	$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^3D^o$	2-3	K7,J6,J4
C I	1602.9715 st	200	63	$2p^2 - 2p\ 4d$	$^1S - ^1P^o$	0-1	K7,J6,J4
C I	1606.960	50	62.04	$2p^2 - 2p\ 5s$	$^1S - ^1P^o$	0-1	J4,J6
C I	1608.438	70	62.03	$2p^2 - 2p\ 4d$	$^1S - ^3D^o$	0-1	J4,J6
C I	1656.2665 st	350	2	$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	1-2	K7,J6,J4
C I	1656.9282 st	300	2	$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	0-1	K7,J6,J4
C I	1657.0078 st	1000	2	$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	2-2	K7,J6,J4
C I	1657.3797 st	300	2	$2p^2 - 2p\ 3s$	$g^2P - ^3P^o$	1-1	K7,J6,J4
C I	1657.9070 st	300	2	$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	1-0	K7,J6,J4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C I	1658.1222 st	350	2	2p ² - 2p3s	g ³ P - ³ P°	2 - 1	K7,J6,J4
C I	1751.8277 st	800	62	2p ² - 2p3d	¹ S - ¹ P°	0 - 1	K7,J6,J4
C I	1763.909	120	61.06	2p ² - 2p4s	¹ S - ¹ P°	0 - 1	J4,J6
C I	1765.366	50	61.05	2p ² - 2p3d	¹ S - ³ D°	0 - 1	J4,J6
C I	1930.9054 st	1000	33	2p ² - 2p3s	¹ D - ¹ P°	2 - 1	K7,J6,J4
C I	1993.620	50	32	2p ² - 2p3s	¹ D - ³ P°	2 - 1	J4,J6

CARBON II (C¹⁺), Z = 6
 Ground State 1s²2s²2p ²P_{1/2}° (5 electrons)
 Ionization Potential 196 664.7 cm⁻¹; 24.383 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C II?	425.326	10					E3
C II?	437.102	100d					E3
C II	438.824 P	-A	6.09	2s ² 2p - 2s2p(³ P°)5p	g ² P° - ² P	1/2 - 1/2	G10
C II	438.897 P	100 -A	6.09	2s ² 2p - 2s2p(³ P°)5p	g ² P° - ² P	3/2 - 3/2	G10,E3
C II	461.120	100d -A	6.08	2s ² 2p - 2s2p(³ P°)4p	g ² P° - ² D	3/2 - 3/2	G10,E3
C II	466.352 P	10 -A	6.07	2s ² 2p - 2s2p(³ P°)4p	g ² P° - ² P	1/2 - 3/2	G10,E3
C II	466.407 P	100 -A	6.07	2s ² 2p - 2s2p(³ P°)4p	g ² P° - ² P	1/2 - 1/2	G10,E3
C II	466.491 P	200 -A	6.07	2s ² 2p - 2s2p(³ P°)4p	g ² P° - ² P	3/2 - 3/2	G10,E3
C II	466.547 P	10 -A	6.07	2s ² 2p - 2s2p(³ P°)4p	g ² P° - ² P	3/2 - 1/2	G10,E3
C II	516.652	10d -A	9.09	2s2p ² - 2s2p(³ P°)6d	⁴ P - ⁴ P°	3/2 - 3/2	E3
C II	517.07	100d -A	9.08	2s2p ² - 2s2p(³ P°)6d	⁴ P - ⁴ D°	3/2 - 3/2	E3
C II	530.274 P	300	6.06	2s ² 2p - 2s2p(³ P°)3p	g ² P° - ² D	1/2 - 3/2	G10,E3
C II	530.359 P	400	6.06	2s ² 2p - 2s2p(³ P°)3p	g ² P° - ² D	3/2 - 3/2	G10,E3
C II	530.454 P		6.06	2s ² 2p - 2s2p(³ P°)3p	g ² P° - ² D	3/2 - 3/2	G10
C II	531.721 P	5 -A	9.07	2s2p ² - 2s2p(³ P°)5d	⁴ P - ⁴ P°	1/2 - 3/2	G10,E3
C II	531.742 P	5 -A	9.07	2s2p ² - 2s2p(³ P°)5d	⁴ P - ¹ P°	3/2 - 1/2	G10,E3
C II	531.917	100d -A	9.07	2s2p ² - 2s2p(³ P°)5d	⁴ P - ⁴ P°	3/2 - 3/2	G10,E3
C II	532.659 P	100 -A	9.06	2s2p ² - 2s2p(³ P°)5d	⁴ P - ⁴ D°	3/2 - 3/2	G10,E3
C II	532.705 P	200 -A	9.06	2s2p ² - 2s2p(³ P°)5d	⁴ P - ⁴ D°	3/2 - 3/2	G10,E3
C II?	533.935	100d					E3
C II	543.257	200d	6.05	2p - 6d	g ² P° - ² D	1/2 - 3/2	G10,E3
C II	543.444	300d	6.05	2p - 6d	g ² P° - ² D	3/2 - 3/2	G10,E3
C II	547.140 P	-A	9.05	2s2p ² - 2s2p(³ P°)5s	⁴ P - ⁴ P°	1/2 - 3/2	G10,E3
C II	547.153	10 -A	9.05	2s2p ² - 2s2p(³ P°)5s	⁴ P - ⁴ P°	3/2 - 3/2	G10,E3
C II	547.277	5 -A	9.05	2s2p ² - 2s2p(³ P°)5s	⁴ P - ⁴ P°	3/2 - 1/2	G10,E3
C II	547.291	5 -A	9.05	2s2p ² - 2s2p(³ P°)5s	⁴ P - ⁴ P°	3/2 - 3/2	G10,E3
C II	549.3195 ST	300	6.04	2s ² 2p - 2s2p(³ P°)3p	g ² P° - ² P	1/2 - 3/2	H4,E3,G10
C II	549.3785 ST	400	6.04	2s ² 2p - 2s2p(³ P°)3p	g ² P° - ² P	1/2 - 1/2	H4,E3,G10
C II	549.5110 ST	500	6.04	2s ² 2p - 2s2p(³ P°)3p	g ² P° - ² P	3/2 - 3/2	H4,E3,G10
C II	549.5700 ST	300	6.04	2s ² 2p - 2s2p(³ P°)3p	g ² P° - ² P	3/2 - 1/2	H4,E3,G10
C II	551.874	10	6.03	2p - 6s	g ² P° - ² S	3/2 - 1/2	G10,E3
C II	560.2394 ST	400	6.02	2p - 5d	g ² P° - ² D	1/2 - 3/2	H4,E3,G10
C II	560.4367 ST	500	6.02	2p - 5d	g ² P° - ² D	3/2 - 3/2	H4,E3,G10
C II	560.4386 ST	40	6.02	2p - 5d	g ² P° - ² D	3/2 - 3/2	H4,E3,G10
C II	562.338	150 -A	9.04	2s2p ² - 2s2p(³ P°)4c	⁴ P - ⁴ P°	1/2 - 3/2	G10,E3
C II	562.367	150 -A	9.04	2s2p ² - 2s2p(³ P°)4d	⁴ P - ⁴ P°	3/2 - 1/2	G10,E3
C II	562.473	150 -A	9.04	2s2p ² - 2s2p(³ P°)4d	⁴ P - ⁴ P°	3/2 - 3/2	G10,E3
C II	562.497	150 -A	9.04	2s2p ² - 2s2p(³ P°)4d	⁴ P - ⁴ P°	3/2 - 3/2	G10,E3
C II	562.562	300 -A	9.04	2s2p ² - 2s2p(³ P°)4d	⁴ P - ⁴ P°	3/2 - 3/2	G10,E3
C II	564.565	40 -A	9.03	2s2p ² - 2s2p(³ P°)4d	⁴ P - ⁴ D°	1/2 - 3/2	G10,E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C II	564.582	40 -A	9.03	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$4P - 4D^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	564.608	100 -A	9.03	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$4P - 4D^o$	$\frac{3}{2} - \frac{3}{2}$	G10, E3
C II	564.635	50 -A	9.03	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$4P - 4D^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	564.663	200 -A	9.03	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$4P - 4D^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	564.698	40 -A	9.03	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$4P - 4D^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	576.8748	100	6.01	$2p - 5s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	H3, E3, G10
C II	577.0859	200	6.01	$2p - 5s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{3}{2}$	H3, E3, G10
C II	594.8000 ST	600	6	$2p - 4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	595.0219 ST	700	6	$2p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	H4, E3, G10
C II	595.0245 ST	70	6	$2p - 4d$	$g^2P^o - ^2D$	$\frac{5}{2} - \frac{7}{2}$	H4, E3, G10
C II	600.251	100 -A	9.02	$2s 2p^2 - 2s 2p(^3P^o) 4s$	$4P - 4P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	600.337 P	100 -A	9.02	$2s 2p^2 - 2s 2p(^3P^o) 4s$	$4P - 4P^o$	$\frac{3}{2} - \frac{3}{2}$	G10, E3
C II	600.353	300 -A	9.02	$2s 2p^2 - 2s 2p(^3P^o) 4s$	$4P - 4P^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	600.503	100 -A	9.02	$2s 2p^2 - 2s 2p(^3P^o) 4s$	$4P - 4P^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	600.518	100 -A	9.02	$2s 2p^2 - 2s 2p(^3P^o) 4s$	$4P - 4P^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	635.9945 ST	300	5.01	$2p - 4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	636.2511 ST	400	5.01	$2p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{3}{2}$	H4, E3, G10
C II	641.593	250 -A	9.01	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4P^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	641.627	250 -A	9.01	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4P^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	641.771	300 -A	9.01	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4P^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	641.800	300 -A	9.01	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4P^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	641.888	650 -A	9.01	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4P^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	651.211	150	9	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4D^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	651.234	150	9	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4D^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	651.269	400	9	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4D^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	651.304 P	300	9	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4D^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	651.345	800	9	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4D^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	651.389 P	150	9	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$4P - 4D^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	686.416	120 -A	12.08	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	686.488	80 -A	12.08	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	687.0526 ST	800	5	$2p - 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	687.3453 ST	1000	5	$2p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	H4, E3, G10
C II	687.3521 ST	110	5	$2p - 3d$	$g^2P^o - ^2D$	$\frac{5}{2} - \frac{7}{2}$	H4, E3, G10
C II	794.964	10 -A	13.05	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E3
C II	795.134	100 -A	13.05	$2s 2p^2 - 2s 2p(^3P^o) 4d$	$^2S - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	E3
C II	799.660	500 -A	12.06	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	799.928 P	25 -A	12.06	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	799.944	350 -A	12.06	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	806.384	500	8	$2s 2p^2 - 2s 2p(^3P^o) 3s$	$4P - 4P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	806.533	200	8	$2s 2p^2 - 2s 2p(^3P^o) 3s$	$4P - 4P^o$	$\frac{3}{2} - \frac{3}{2}$	G10, E3
C II	806.568	500	8	$2s 2p^2 - 2s 2p(^3P^o) 3s$	$4P - 4P^o$	$\frac{5}{2} - \frac{5}{2}$	G10, E3
C II	806.676	250	8	$2s 2p^2 - 2s 2p(^3P^o) 3s$	$4P - 4P^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	806.686	150	8	$2s 2p^2 - 2s 2p(^3P^o) 3s$	$4P - 4P^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	806.830	300	8	$2s 2p^2 - 2s 2p(^3P^o) 3s$	$4P - 4P^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	806.860	300	8	$2s 2p^2 - 2s 2p(^3P^o) 3s$	$4P - 4P^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	809.677	400 -A	12.05	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	809.693 P	30 -A	12.05	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2D - ^2D^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	809.747 P	30 -A	12.05	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2D - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	809.764	300 -A	12.05	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	858.0918 ST	500	4	$2p - 3s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	858.5590 ST	900	4	$2p - 3s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{3}{2}$	H4, E3, G10
C II	903.6235 ST	600	3	$2s^2 2p - 2s 2p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	903.9616 ST	800	3	$2s^2 2p - 2s 2p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	H4, E3, G10
C II	904.1416 ST	1000	3	$2s^2 2p - 2s 2p^2$	$g^2P^o - ^2P$	$\frac{5}{2} - \frac{7}{2}$	H4, E3, G10
C II	904.4801 ST	600	3	$2s^2 2p - 2s 2p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	945.977	100 -A	13.04	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	946.198	200 -A	13.04	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^2S - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	G10, E3
C II	1009.858	400	7	$2s 2p^2 - 2p^2$	$^2P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	1010.083	600	7	$2s 2p^2 - 2p^2$	$^2P - ^4S^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	1010.371	1000	7	$2s 2p^2 - 2p^2$	$^2P - ^4S^o$	$\frac{5}{2} - \frac{7}{2}$	G10, E3
C II	1036.3367 ST	800	2	$2s^2 2p - 2s 2p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1037.0182 ST	1000	2	$2s^2 2p - 2s 2p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{3}{2}$	H4, E3, G10
C II	1063.285	5	12.01	$2s 2p^2 - 2s^2 4f$	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$	G10, E3
C II	1063.313	5	12.01	$2s 2p^2 - 2s^2 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	G10, E3
C II	1065.8913 ST	700	12	$2s 2p^2 - 2p^2$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C II	1065.9199 ST	100	12	$2s 2p^2 - 2p^4$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	1066.1332 ST	500	12	$2s 2p^2 - 2p^4$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	1091.937	160 -A	14.05	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	1092.232	10 -A	14.05	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	1092.431	10 -A	14.05	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	1092.726	200 -A	14.05	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	1138.9358 ST	200 -A	14.04	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^3P - ^3D^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	1139.3317 ST	300 -A	14.04	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^3P - ^3D^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	1139.4730 ST	10 -A	14.04	$2s 2p^2 - 2s 2p(^3P^o) 3d$	$^3P - ^3D^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	1141.6246 ST	300	11.01	$2s 2p^2 - 2s^2 4p$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	1141.6574 ST	30	11.01	$2s 2p^2 - 2s^2 4p$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	1141.7445 ST	200	11.01	$2s 2p^2 - 2s^2 4p$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	H4, E3, G10
C II	1323.8617 ST	30	11	$2s 2p^2 - 2p^3$	$^3D - ^3D^o$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1323.9059 ST	300	11	$2s 2p^2 - 2p^3$	$^3D - ^3D^o$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1323.9513 ST	450	11	$2s 2p^2 - 2p^3$	$^3D - ^3D^o$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1323.9955 ST	30	11	$2s 2p^2 - 2p^3$	$^3D - ^3D^o$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1334.5323 ST	800	1	$2s^2 2p - 2s 2p^2$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1335.6627 ST	100	1	$2s^2 2p - 2s 2p^2$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1335.7077 ST	1000	1	$2s^2 2p - 2s 2p^2$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1726.456	10	14.02	$2s 2p^2 - 2p^3$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	1721.012	100	14.02	$2s 2p^2 - 2p^3$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	1721.682	200	14.02	$2s 2p^2 - 2p^3$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	1722.238	10	14.02	$2s 2p^2 - 2p^3$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G10, E3
C II	1760.3954 ST	450	10	$2s 2p^2 - 2s^2 3p$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1760.4735 ST	100	10	$2s 2p^2 - 2s^2 3p$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1760.8191 ST	300	10	$2s 2p^2 - 2s^2 3p$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	H4, E3, G10
C II	1927.02	5	14.01	$2s 2p^2 - 2s^2 4p$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	J6, K8
C II	1928.30	10	14.01	$2s 2p^2 - 2s^2 4p$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	J6, K8
C II	1987.33	40	19	$2s^2 3p - 2s 2p(^3P^o) 3p$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	G10
C II	1987.76	120	19	$2s^2 3p - 2s 2p(^3P^o) 3p$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	G10
C II	1988.09	80	19	$2s^2 3p - 2s 2p(^3P^o) 3p$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	G10
C II	1988.51	40	19	$2s^2 3p - 2s 2p(^3P^o) 3p$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	G10

CARBON III (C^{2+}), $Z = 6$ Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)Ionization Potential $386\ 241.0\ \text{cm}^{-1}$; $47.887\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C III	265.029	10d -A	7.27	$2s 2p - 2p(^3P^o) 7p$	$^3P^o - ^3P$	2 - 2	E3
C III	265.287	10d -A	7.26	$2s 2p - 2p(^3P^o) 7p$	$^3P^o - ^3D$	2 - 3	E3
C III	270.324	10d	3.09	$2s^2 - 2s 8p$	$g^1S - ^1P^o$	0 - 1	E3
C III	270.583	100d -A	7.25	$2s 2p - 2p(^3P^o) 6p$	$^3P^o - ^3P$	2 - 2	E3
C III	271.014	100d -A	7.24	$2s 2p - 2p(^3P^o) 6p$	$^3P^o - ^3D$	2 - 3	E3
C III	274.051	200d	3.08	$2s^2 - 2s 7p$	$g^1S - ^1P^o$	0 - 1	E3
C III	280.043	300	3.07	$2s^2 - 2s 6p$	$g^1S - ^1P^o$	0 - 1	E3
C III	280.522	200d -A	7.23	$2s 2p - 2p(^3P^o) 5p$	$^3P^o - ^3P$	2 - 2	E3
C III	281.390	200 -A	7.22	$2s 2p - 2p(^3P^o) 5p$	$^3P^o - ^3D$	2 - 3	E3
C III	288.423	10	3.05	$2s^2 - 2p 3d$	$g^1S - ^1P^o$	0 - 1	M20
C III	291.3261	500	3.03	$2s^2 - 2s 5p$	$g^1S - ^1P^o$	0 - 1	E6, E3
C III	301.206	200	7.21	$2s 2p - 2p(^3P^o) 4p$	$^3P^o - ^3P$	0 - 1	E3
C III	301.243	300	7.21	$2s 2p - 2p(^3P^o) 4p$	$^3P^o - ^3P$	2 - 2	E3
C III	301.279	100	7.21	$2s 2p - 2p(^3P^o) 4p$	$^3P^o - ^3P$	2 - 1	E3
C III	303.432	400d	7.20	$2s 2p - 2p(^3P^o) 4p$	$^3P^o - ^3D$	2 - 3	E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C III	303.468	100	7.20	$2s2p - 2p(^2P^o)4p$	$^3P^o - ^3D$	2-2	E3
C III	313.1697	700	3	$2s^2 - 2s4p$	$g^1S - ^1P^o$	0-1	E6, E3
C III	315.157	10d	7.19	$2s2p - 2s9d$	$^3P^o - ^3D$	2-3	E3
C III	314.41	100d	7.18	$2s2p - 2s8d$	$^3P^o - ^3D$	2-3	E3
C III	319.29	300d	7.16	$2s2p - 2s7d$	$^3P^o - ^3D$	2-3	E3
C III	321.372	10d	7.15	$2s2p - 2s7s$	$^3P^o - ^3S$	2-1	E3
C III	322.5741	800	2.03	$2s^2 - 2p(^2P^o)3s$	$g^1S - ^1P^o$	0-1	E6, E3
C III	325.570	100d - A	11.13	$2s2p - 2p5p$	$^1P^o - ^1D$	1-2	E3
C III	327.112	400d	7.13	$2s2p - 2s6d$	$^3P^o - ^3D$	1-2	E3
C III	327.176	400d	7.13	$2s2p - 2s6d$	$^3P^o - ^3D$	2-3	E3
C III	327.784	100 - A	11.12	$2s2p - 2p(^2P^o)5p$	$^1P^o - ^1P$	1-1	E3
C III	330.617	100	7.12	$2s2p - 2s6s$	$^3P^o - ^3S$	1-1	E3
C III	330.687	100	7.12	$2s2p - 2s6s$	$^3P^o - ^3S$	2-1	E3
C III	341.143	500	7.10	$2s2p - 2s5d$	$^3P^o - ^3D$	0-1	E3
C III	341.79	600	7.10	$2s2p - 2s5d$	$^3P^o - ^3D$	1-2	E3
C III	341.242	700	7.10	$2s2p - 2s5d$	$^3P^o - ^3D$	2-3	E3
C III	347.777	300	7.08	$2s2p - 2s5s$	$^3P^o - ^3S$	1-1	E3
C III	347.854	390	7.08	$2s2p - 2s5s$	$^3P^o - ^3S$	2-1	E3
C III	350.132	10d - A	11.27	$2p^2 - 2p(^2P^o)6d$	$^3P - ^3P^o$	2-2	E3
C III	350.35	200d - A	11.26	$2p^2 - 2p(^2P^o)6d$	$^3P - ^3D^o$	2-3	E3
C III	353.000	300d	11.11	$2s2p - 2p(^2P^o)4p$	$^1P^o - ^1D$	1-2	E3
C III	358.740	400	11.10	$2s2p - 2p(^2P^o)4p$	$^1P^o - ^1P$	1-1	E3
C III	360.557	600	7.05	$2s2p - 2p(^2P^o)3p$	$^3P^o - ^3P$	1-2	E3
C III	360.623	700	7.05	$2s2p - 2p(^2P^o)3p$	$^3P^o - ^3P$	2-2	E3
C III	360.675	500	7.05	$2s2p - 2p(^2P^o)3p$	$^3P^o - ^3P$	2-1	E3
C III	363.7538	400	7.04	$2s2p - 2p(^2P^o)3p$	$^3P^o - ^3S$	0-1	B8, E3
C III	363.7852	500	7.04	$2s2p - 2p(^2P^o)3p$	$^3P^o - ^3S$	1-1	B8, E3
C III	363.8598	600	7.04	$2s2p - 2p(^2P^o)3p$	$^3P^o - ^3S$	2-1	B8, E3
C III	365.778	100d - A	11.25	$2p^2 - 2p(^2P^o)5d$	$^3P - ^3P^o$	2-2	E3
C III	366.19	400d - A	11.24	$2p^2 - 2p(^2P^o)5d$	$^3P - ^3D^o$	2-3	E3
C III	369.415	500	7.02	$2s2p - 2p(^2P^o)3p$	$^3P^o - ^3D$	2-3	E3
C III	369.472	200	7.02	$2s2p - 2p(^2P^o)3p$	$^3P^o - ^3D$	2-2	E3
C III	371.694	1000	7	$2s2p - 2s4d$	$^3P^o - ^3D$	1-2	E3
C III	371.747	1000	7	$2s2p - 2s4d$	$^3P^o - ^3D$	2-3	E3
C III	371.784	800	7	$2s2p - 2s4d$	$^3P^o - ^3D$	2-2	E3
C III	379.065	100 - A	11.43	$2p^2 - 2p(^2P^o)5d$	$^1D - ^1D^o$	2-2	E3
C III	379.254	10d	11.09	$2s2p - 2s7d$	$^1P^o - ^1D$	1-2	E3
C III	385.043 P		2.01	$2s^2 - 2s3p$	$g^1S - ^3P^o$	0-1	M20
C III	386.2028	850	2	$2s^2 - 2s3p$	$g^1S - ^1P^o$	0-1	E6, E3
C III	388.9687	500	6.02	$2s2p - 2s4s$	$^3P^o - ^3S$	0-1	E6, E3
C III	389.0045	600	6.02	$2s2p - 2s4s$	$^3P^o - ^3S$	1-1	E6, E3
C III	389.0898	700	6.02	$2s2p - 2s4s$	$^3P^o - ^3S$	2-1	E6, E3
C III	390.055	300	11.08	$2s2p - 2s6d$	$^1P^o - ^1D$	1-2	E3
C III	398.42	200d - A	11.23	$2p^2 - 2p4d$	$^3P - ^3P^o$	2-2	E3
C III	399.612	600d - A	11.22	$2p^2 - 2p(^2P^o)4d$	$^3P - ^3D^o$	1-2	E3
C III	399.688	600d - A	11.22	$2p^2 - 2p(^2P^o)4d$	$^3P - ^3D^o$	2-3	E3
C III	409.325	600	11.07	$2s2p - 2s5d$	$^1P^o - ^1D$	1-2	E3
C III	411.697	10 - A	11.42	$2p^2 - 2p(^2P^o)4d$	$^1D - ^1F^o$	2-3	E3
C III	411.9577	300	11.06	$2s2p - 2p(^2P^o)3p$	$^1P^o - ^1S$	1-0	B8, E3
C III	416.769	500	11.41	$2p^2 - 2p(^2P^o)4d$	$^1D - ^1D^o$	2-2	E3
C III	418.609	200d	11.21	$2p^2 - 2p4s$	$^3P - ^3P^o$	2-2	M20
C III	423.438 P		11.05	$2s2p - 2s5s$	$^1P^o - ^1S$	1-0	M20
C III	433.3391	800	11.04	$2s2p - 2p(^2P^o)3p$	$^1P^o - ^1D$	1-2	E6, E3
C III	450.7338	800	11.03	$2s2p - 2s4d$	$^1P^o - ^1D$	1-2	E6, E3
C III	459.462	900	6	$2s2p - 2s3d$	$^3P^o - ^3D$	0-1	E6, E3
C III	459.521	950	6	$2s2p - 2s3d$	$^3P^o - ^3D$	1-2	E6, E3
C III	459.633	1000	6	$2s2p - 2s3d$	$^3P^o - ^3D$	2-3	E6, E3
C III	460.0487	800	11.02	$2s2p - 2p(^2P^o)3p$	$^1P^o - ^1P$	1-1	E6, E3
C III	468.94	10	11.38	$2p^2 - 2s6f$	$^1D - ^1F^o$	2-3	E3
C III	473.410 P		11.37	$2p^2 - 2s5s$	$^1D - ^1P^o$	2-1	M20
C III	477.6246	300	11.01	$2s2p - 2s4s$	$^1P^o - ^1S$	1-0	B8, E3
C III	483.567	300	11.19	$2p^2 - 2s5p$	$^3P - ^3P^o$	1-0	E3
C III	483.618	400	11.19	$2p^2 - 2s5p$	$^3P - ^3P^o$	1-2	E3
C III	483.733	500	11.19	$2p^2 - 2s5p$	$^3P - ^3P^o$	2-2	E3
C III	492.6500	700	11.36	$2p^2 - 2s5f$	$^1D - ^1F^o$	2-3	E6, E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C III	493.341	500	11.18	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3P^o$	0 - 1	E5
C III	493.364	500	11.18	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3P^o$	1 - 0	E3
C III	493.396	500	11.18	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3P^o$	1 - 1	E3
C III	493.464	500	11.18	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3P^o$	1 - 2	E3
C III	493.519	500	11.18	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3P^o$	2 - 1	E3
C III	493.587	700	11.18	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3P^o$	2 - 2	E3
C III	497.910	100	11.35	$2p^2 - 2p(^3P^o)3d$	$^1D - ^1P^o$	2 - 1	E3
C III	499.425	700	11.17	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3D^o$	0 - 1	E3
C III	499.462	800	11.17	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3D^o$	1 - 2	E3
C III	499.530	900	11.17	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3D^o$	2 - 3	E3
C III	499.583	700	11.17	$2p^2 - 2p(^3P^o)3d$	$^3P - ^3D^o$	2 - 2	E3
C III	505.63	10	11.34	$2p^2 - 2s5p$	$^1D - ^1P^o$	2 - 1	E3
C III	511.5225	1900	11.33	$2p^2 - 2p(^3P^o)3d$	$^1D - ^1F^o$	2 - 3	E6, E3
C III	535.2885	850	11.32	$2p^2 - 2p(^3P^o)3d$	$^1D - ^1D^o$	2 - 2	E6, E3
C III	538.0801	900	5	$2s2p - 2s3s$	$^3P^o - ^3S$	0 - 1	E6, E3
C III	538.1487	950	5	$2s2p - 2s3s$	$^3P^o - ^3S$	1 - 1	E6, E3
C III	538.3120	1000	5	$2s2p - 2s3s$	$^3P^o - ^3S$	2 - 1	E6, E3
C III	554.63	200	11.16	$2p^2 - 2s4p$	$^3P - ^3P^o$	2 - 2	E3
C III	565.5280	700	11.31	$2p^2 - 2s4f$	$^1D - ^1F^o$	2 - 3	E6, E3
C III	566.48	400	11.30	$2p^2 - 2s4p$	$^1D - ^1P^o$	2 - 1	E3
C III	574.2809	1000	11	$2s2p - 2s3d$	$^1P^o - ^1D$	1 - 2	E6, E3
C III	585.261	600	11.15	$2p^2 - 2p(^3P^o)3s$	$^3P - ^3P^o$	1 - 2	E3
C III	585.417	800	11.15	$2p^2 - 2p(^3P^o)3s$	$^3P - ^3P^o$	2 - 2	E3
C III	585.496	500	11.15	$2p^2 - 2p(^3P^o)3s$	$^3P - ^3P^o$	1 - 1	E3
C III	585.608	600	11.15	$2p^2 - 2p(^3P^o)3s$	$^3P - ^3P^o$	1 - 0	E3
C III	585.666	600	11.15	$2p^2 - 2p(^3P^o)3s$	$^3P - ^3P^o$	2 - 1	E3
C III	609.04	400	11.48	$2p^2 - 2p3d$	$^1S - ^1P^o$	0 - 1	E3
C III	609.275	600	11.29	$2p^2 - 2p(^3P^o)3s$	$^1D - ^1P^o$	2 - 1	E3
C III	622.13	200	11.47	$2p^2 - 2s5p$	$^1S - ^1P^o$	0 - 1	E3
C III	690.526	700	10	$2s2p - 2s3s$	$^1P^o - ^1S$	1 - 0	E3
C III	714.879	100	11.45	$2p^2 - 2s4p$	$^1S - ^1P^o$	0 - 1	E3
C III	784.393	300	11.45	$2p^2 - 2p(^3P^o)3s$	$^1S - ^1P^o$	0 - 1	E3
C III	817.950	P	11.14	$2p^2 - 2s3p$	$^3P - ^3P^o$	1 - 1	M20
C III	818.181	P	11.14	$2p^2 - 2s3p$	$^3P - ^3P^o$	2 - 2	M20
C III	884.516	800	11.28	$2p^2 - 2s3p$	$^1D - ^1P^o$	2 - 1	E3
C III	943.218	P	11.56	$2s3s - 2s5p$	$^3S - ^3P^o$	1 - 2	M20
C III	977.020	1000	1	$2s^2 - 2s2f$	$g^1S - ^1P^o$	0 - 1	E6, E3
C III	1040.715	P	11.60	$2s3s - 2s5p$	$^1S - ^1P^o$	0 - 1	M20
C III	1165.698	P	11.76	$2s3p - 2s5d$	$^3P^o - ^3D$	1 - 2	E3
C III	1165.870	P	11.76	$2s3p - 2s5d$	$^3P^o - ^3D$	2 - 3	E3
C III	1174.933	800	4	$2s2p - 2p^2$	$^3P^o - ^3P$	1 - 2	E6, E3
C III	1175.263	700	4	$2s2p - 2p^2$	$^3P^o - ^3P$	0 - 1	E6, E3
C III	1175.590	600	4	$2s2p - 2p^2$	$^3P^o - ^3P$	1 - 1	E6, E3
C III	1175.711	1000	4	$2s2p - 2p^2$	$^3P^o - ^3P$	2 - 2	E6, E3
C III	1175.987	700	4	$2s2p - 2p^2$	$^3P^o - ^3P$	1 - 0	E6, E3
C III	1176.370	800	4	$2s2p - 2p^2$	$^3P^o - ^3P$	2 - 1	E6, E3
C III	1247.383	600	9	$2s2p - 2p^2$	$^1P^o - ^1S$	1 - 0	E6, E3
C III	1256.47	100d	11.53	$2s3s - 2s4p$	$^3S - ^3P^o$	1 - 2	E3
C III	1296.33	200d	12.07	$2s3d - 2s5f$	$^3D - ^3F^o$	3 - 4	E3
C III	1308.70	200	11.44	$2p^2 - 2s3p$	$^1S - ^1P^o$	0 - 1	E3
C III	1329.187	P	11.59	$2s3s - 2s4p$	$^1S - ^1P^o$	0 - 1	M20
C III	1426.22	10	12.05	$2s3d - 2p3d$	$^3D - ^3P^o$	2 - 1	E3
C III	1426.45	400	11.52	$2s3s - 2p(^3P^o)3s$	$^3S - ^3P^o$	1 - 2	E3
C III	1426.80	100	12.05	$2s3d - 2p(^3P^o)3d$	$^3D - ^3P^o$	3 - 2	E3
C III	1427.85	300	11.52	$2s3s - 2p(^3P^o)3s$	$^3S - ^3P^o$	1 - 1	E3
C III	1428.17	200	11.75	$2s3p - 2p(^3P^o)3p$	$^3P^o - ^3P$	2 - 2	E3
C III	1428.50	200	11.52	$2s3s - 2p(^3P^o)3s$	$^3S - ^3P^o$	1 - 0	E3
C III	1428.66	10	11.75	$2s3p - 2p(^3P^o)3p$	$^3P^o - ^3P$	1 - 1	E3
C III	1428.95	100	11.75	$2s3p - 2p(^3P^o)3p$	$^3P^o - ^3P$	2 - 1	E3
C III	1429.10	10	11.75	$2s3p - 2p(^3P^o)3p$	$^3P^o - ^3P$	1 - 0	E3
C III	1477.68	300	12.04	$2s3d - 2p3d$	$^3D - ^3D^o$	3 - 3	E3
C III	1478.05	200	12.04	$2s3d - 2p3d$	$^3D - ^3D^o$	2 - 2	E3
C III	1478.30	100	12.04	$2s3d - 2p3d$	$^3D - ^3D^o$	1 - 1	E3
C III	1531.83	200	11.65	$2s3p - 2s4d$	$^1P^o - ^1D$	1 - 2	E3
C III	1541.115	P	17	$2s3d - 2p3d$	$^1D - ^1F^o$	2 - 3	M20

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C III	1576.48	300	12.03	2s 3d - 2p 3d	$^3D - ^3F^o$	3 - 4	E3
C III	1577.30	200	12.03	2s 3d - 2p 3d	$^3D - ^3F^o$	2 - 3	E3
C III	1577.89	200	12.03	2s 3d - 2p 3d	$^3D - ^3F^o$	1 - 2	E3
C III	1591.44	200	11.58	2s 3s - 2p($^2P^o$)3s	$^1S - ^1P^o$	0 - 1	E3
C III	1620.07	300	11.72	2s 3p - 2s 4d	$^3P^o - ^3D$	2 - 3	E3
C III	1620.33	200	11.72	2s 3p - 2s 4d	$^3P^o - ^3D$	1 - 2	E3
C III	1620.59	10	11.72	2s 3p - 2s 4d	$^3P^o - ^3D$	0 - 1	E3
C III	1620.68	100	11.72	2s 3p - 2s 4d	$^3P^o - ^3D$	2 - 2	E3
C III	1645.03	100	11.64	2s 3p - 2p($^2P^o$)3p	$^1P^o - ^1P$	1 - 1	E3
C III	1779.09	10	16	2s 3d - 2p($^2P^o$)3d	$^1D - ^1D^o$	2 - 2	E3
C III	1894.29	200	11.63	2s 3p - 2s 4s	$^1P^o - ^1S$	1 - 0	E3
C III	1908.734	70	0.01	2s ² - 2s 2p	$g^1S - ^2P^o$	0 - 1	M20, B34
C III	1922.96	300	12.02	2s 3d - 2s 4f	$^3D - ^3F^o$	3 - 4	E3
C III	1923.16	200	12.02	2s 3d - 2s 4f	$^3D - ^3F^o$	2 - 3	E3
C III	1923.34	200	12.02	2s 3d - 2s 4f	$^3D - ^3F^o$	1 - 2	E3
C III	1979.16	100 -A	41	2p($^2P^o$)3d - 2p($^2P^o$)4f	$^3D^o - ^3F$	3 - 4	B8
C III	1979.62	50 -A	41	2p($^2P^o$)3d - 2p 4f	$^3D^o - ^3F$	2 - 3	B8

CARBON IV (C³⁺), Z = 6Ground State 1s²2s $^2S_{1/2}$ (3 electrons)Ionization Potential 520 178.4 cm⁻¹; 64.492 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C IV	196.27	2	5.07	2s - 13p	$g^2S - ^2P^o$	1/2 - 3/2	P12
C IV	196.96	2	5.06	2s - 12p	$g^2S - ^2P^o$	1/2 - 3/2	P12
C IV	197.82	5	5.05	2s - 11p	$g^2S - ^2P^o$	1/2 - 3/2	E3
C IV	199.04	10	5.04	2s - 10p	$g^2S - ^2P^o$	1/2 - 3/2	E3
C IV	200.68	25d	5.03	2s - 9p	$g^2S - ^2P^o$	1/2 - 3/2	E3
C IV	203.057	50d	5.02	2s - 8p	$g^2S - ^2P^o$	1/2 - 3/2	E3
C IV	206.541	150d	5.01	2s - 7p	$g^2S - ^2P^o$	1/2 - 3/2	E3
C IV	212.421	250	5	2s - 6p	$g^2S - ^2P^o$	1/2 - 3/2	E3
C IV	222.791	350	4	2s - 5p	$g^2S - ^2P^o$	1/2 - 3/2	E3
C IV	223.9	2	11.11	2p - 14d	$^2P^o - ^2D$	3/2 - 5/2	P12
C IV	224.5	2	11.10	2p - 13d	$^2P^o - ^2D$	3/2 - 5/2	P12
C IV	225.49	4	11.09	2p - 12d	$^2P^o - ^2D$	3/2 - 5/2	P12
C IV	226.72	6	11.08	2p - 11d	$^2P^o - ^2D$	3/2 - 5/2	P12
C IV	228.27	25d	11.07	2p - 10d	$^2P^o - ^2D$	3/2 - 5/2	E3
C IV	230.43	25d	11.06	2p - 9d	$^2P^o - ^2D$	3/2 - 5/2	E3
C IV	230.9	2	11.05	2p - 9s	$^2P^o - ^2S$	3/2 - 1/2	P12
C IV	233.53	100d	11.04	2p - 8d	$^2P^o - ^2D$	3/2 - 5/2	E3
C IV	234.19	4	11.03	2p - 8s	$^2P^o - ^2S$	3/2 - 1/2	P12
C IV	238.200	100d	11.02	2p - 7d	$^2P^o - ^2D$	1/2 - 3/2	E3
C IV	238.250	150d	11.02	2p - 7d	$^2P^o - ^2D$	3/2 - 5/2	E3
C IV	239.196	25	11.01	2p - 7s	$^2P^o - ^2S$	3/2 - 1/2	E3
C IV	244.907	500	3	2s - 4p	$g^2S - ^2P^o$	1/2 - 3/2	E3
C IV	245.775	200d	11	2p - 6d	$^2P^o - ^2D$	1/2 - 3/2	E3
C IV	245.830	250d	11	2p - 6d	$^2P^o - ^2D$	3/2 - 5/2	E3
C IV	247.357	25	10.01	2p - 6s	$^2P^o - ^2S$	1/2 - 1/2	E3
C IV	247.415	50	10.01	2p - 6s	$^2P^o - ^2S$	3/2 - 1/2	E3
C IV	259.471	300	10	2p - 5d	$^2P^o - ^2D$	1/2 - 3/2	E3
C IV	259.542	350	10	2p - 5d	$^2P^o - ^2D$	3/2 - 5/2	E3
C IV	262.550	150	9.01	2p - 5s	$^2P^o - ^2S$	1/2 - 1/2	E3
C IV	262.624	200	9.01	2p - 5s	$^2P^o - ^2S$	3/2 - 1/2	E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C IV	289.143	450	9	2p - 4d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	E3
C IV	289.230	500	9	2p - 4d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	E3
C IV	296.837	300	8	2p - 4s	$^3P^o - ^3S$	$\frac{1}{2} - \frac{3}{2}$	E3
C IV	296.951	350	8	2p - 4s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{5}{2}$	E3
C IV	367.806	50f	2.01	2s - 3d	$^3S - ^3D$	$\frac{1}{2} - \frac{3}{2}$	E3
C IV	312.422	750	2	2s - 3p	$g^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	E6,E3
C IV	312.453	700	2	2s - 3p	$g^3S - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	E6,E3
C IV	384.032	800	7	2p - 3d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	E6,E3
C IV	384.178	850	7	2p - 3d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	E6,E3
C IV	419.525	650	6	2p - 3s	$^3P^o - ^3S$	$\frac{1}{2} - \frac{3}{2}$	E6,E3
C IV	419.714	700	6	2p - 3s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{5}{2}$	E6,E3
C IV	770.379	25d	1.7	3p - 5d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	E3
C IV	948.098	50	11.12	3s - 4p	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	E3
C IV	948.214	25	11.12	3s - 4p	$^3S - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	E3
C IV	1107.600	50	11.15	3p - 4d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	E3
C IV	1107.933	100	11.15	3p - 4d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	E3
C IV	1168.873	150	11.19	3d - 4f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{5}{2}$	E3
C IV	1168.990	200	11.19	3d - 4f	$^3D - ^3F^o$	$\frac{5}{2} - \frac{7}{2}$	E3
C IV	1198.58	50d	11.18	3d - 4p	$^3D - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	E3
C IV	1230.046	100	11.14	3p - 4s	$^3P^o - ^3S$	$\frac{1}{2} - \frac{3}{2}$	E?
C IV	1230.511	150	11.14	3p - 4s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{5}{2}$	E3
C IV	1548.185	1000	1	2s - 2p	$g^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	M20
C IV	1550.774	950	1	2s - 2p	$g^3S - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	M20

CARBON V (C^{4+}), $Z = 6$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $3\ 162\ 395\ cm^{-1}$; $392.077\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C V	32.064		11	$1s^2 - 1s8p$	$g^1S - ^1P^o$	0 - 1	M20
C V	32.188		10	$1s^2 - 1s7p$	$g^1S - ^1P^o$	0 - 1	M20
C V	32.3998	4	9	$1s^2 - 1s6p$	$g^1S - ^1P^o$	0 - 1	E21
C V	32.7542	10	8	$1s^2 - 1s5p$	$g^1S - ^1P^o$	0 - 1	E21
C V	32.773		7	$1s^2 - 1s5p$	$g^1S - ^3P^o$	0 - 1	M20
C V	33.4257	30	6	$1s^2 - 1s4p$	$g^1S - ^1P^o$	0 - 1	E21
C V	33.463		5	$1s^2 - 1s4p$	$g^1S - ^3P^o$	0 - 1	M20
C V	33.925	3		$1s3s - 2p3s$	$^3S - ^3P^o$	1 - 2	F26
C V	34.022	1		$1s3s - 2p3s$	$^1S - ^1P^o$	0 - 1	F26
C V	34.283	1		$1s2s - 2s2p$	$^1S - ^1P^o$	0 - 1	F26
C V	34.520	2		$1s2s - 2s2p$	$^3S - ^3P^o$	1 - 2	F26
C V	34.598	1		$1s2p - 2p^2$	$^3P^o - ^3P^o$	2 - 2	F26
C V	34.699	2		$1s2p - 2p^2$	$^1P^o - ^1D$	1 - 2	F26
C V	34.9728	100	4	$1s^2 - 1s3p$	$g^1S - ^1P^o$	0 - 1	E21
C V	35.070		3	$1s^2 - 1s3p$	$g^1S - ^3P^o$	0 - 1	M20
C V	40.2680	500	2	$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	E21
C V	40.7306	30	1	$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	E21
C V	41.47	f		$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	K8,A8
C V	138.2 P			$1s2s - 1s10p$	$^3S - ^3P^o$	1 - 2	F20
C V	139.5 P			$1s2s - 1s9p$	$^3S - ^3P^o$	1 - 2	F20
C V	141.27 P			$1s2s - 1s8p$	$^3S - ^3P^o$	1 - 2	F20
C V	143.94			$1s2s - 1s7p$	$^3S - ^3P^o$	1 - 2	F20
C V	147.1 P			$1s2p - 1s10d$	$^3P^o - ^3D$	2 - 3	F20
C V	148.35			$1s2s - 1s6p$	$^3S - ^3P^o$	1 - 2	F20
C V	148.5 P			$1s2p - 1s9d$	$^3P^o - ^3D$	2 - 3	F20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C V	150.51	P		1s2p - 1s8d	$^3P^{\circ} - ^3D$	2-3	F20
C V	153.53			1s2p - 1s7d	$^3P^{\circ} - ^3D$	2-3	F20
C V	156.233		4	1s2s - 1s5p	$^3S - ^3P^{\circ}$	1-2	E21
C V	157.2	P		1s2p - 1s8d	$^1P^{\circ} - ^1D$	1-2	F20
C V	158.374		20	1s2s - 1s6p	$^1S - ^1P^{\circ}$	0-1	M20
C V	158.47			1s2p - 1s6d	$^3P^{\circ} - ^3D$	2-3	F20
C V	160.53	P		1s2p - 1s7d	$^1P^{\circ} - ^1D$	1-2	F20
C V	165.91	P		1s2p - 1s6d	$^1P^{\circ} - ^1D$	1-2	F20
C V	167.218		19	1s2s - 1s5p	$^1S - ^1P^{\circ}$	0-1	M20
C V	167.402	4	24	1s2p - 1s5d	$^3P^{\circ} - ^3D$	2-3	E21
C V	173.281	10	14	1s2s - 1s4p	$^3S - ^3P^{\circ}$	1-2	E21
C V	175.67			1s2p - 1s5d	$^1P^{\circ} - ^1D$	1-2	F20
C V	186.329		18	1s2s - 1s4p	$^1S - ^1P^{\circ}$	0-1	M20
C V	186.697	30	23	1s2p - 1s4d	$^3P^{\circ} - ^3D$	1-2	E21
C V	186.745	30	23	1s2p - 1s4d	$^3P^{\circ} - ^3D$	2-3	E21
C V	197.024	4	26	1s2p - 1s4d	$^1P^{\circ} - ^1D$	1-2	E21
C V	227.192	100	13	1s2s - 1s3p	$^3S - ^3P^{\circ}$	1-2	E21
C V	247.31		17	1s2s - 1s3p	$^1S - ^1P^{\circ}$	0-1	E21
C V	248.661	200	22	1s2p - 1s3d	$^3P^{\circ} - ^3D$	1-2	E21
C V	248.668	10	22	1s2p - 1s3d	$^3P^{\circ} - ^3D$	0-1	E3
C V	248.738	200	22	1s2p - 1s3d	$^3P^{\circ} - ^3D$	2-3	E21
C V	248.744	20	22	1s2p - 1s3d	$^3P^{\circ} - ^3D$	2-2	E3
C V	260.136	4	21	1s2p - 1s3s	$^3P^{\circ} - ^3S$	1-1	E21
C V	260.229	4	21	1s2p - 1s3s	$^3P^{\circ} - ^3S$	2-1	E21
C V	267.267	30	25	1s2p - 1s3d	$^1P^{\circ} - ^1D$	1-2	E21
C V	472.21		29	1s3s - 1s5p	$^3S - ^3P^{\circ}$	1-2	M20
C V	497.09		33	1s3p - 1s5d	$^3P^{\circ} - ^3D$	2-3	M20
C V	506.31		32	1s3p - 1s5s	$^3P^{\circ} - ^3S$	2-1	M20
C V	672.06		28	1s3s - 1s4p	$^3S - ^3P^{\circ}$	1-2	M20
C V	717.58		31	1s3p - 1s4d	$^3P^{\circ} - ^3D$	2-3	M20
C V	748.43		35	1s3d - 1s4f	$^3D - ^3F^{\circ}$	3-4	M20
C V	749.66		36	1s3d - 1s4f	$^1D - ^1F^{\circ}$	2-3	M20
C V	756.87		30	1s3p - 1s4s	$^3P^{\circ} - ^3S$	2-1	M20
C V	760.18		37	1s3p - 1s4d	$^1P^{\circ} - ^1D$	1-2	M20
C V	763.07		34	1s3d - 1s4p	$^3D - ^3P^{\circ}$	3-2	M20
C V	1619.80		38	1s4f - 1s5g	$^3F^{\circ} - ^3G$	4-5	M20

CARBON VI (C^{5+}), $Z = 6$ Ground State $1s\ ^2S_{1/2}$ (1 electron)Ionization Potential $3\ 952\ 061.3\ \text{cm}^{-1}$; 489.983 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C VI	26.026	P	5	1s - 6p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2
C VI	26.357	P	4	1s - 5p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2
C VI	26.990	P	10	1s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, T13
C VI	28.466	P	30	1s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, T13
C VI	33.736	P	100	1s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, T13
C VI	110.22	P		2-7			G2
C VI	113.87	P		2-6			G2
C VI	120.50	P		2-5			G2
C VI	134.95	P		2-4			G2
C VI	182.17	P		2-3			G2

C VI

C VI

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
C VI	265.05	P		3-8			G2
C VI	279.07	F		3-7			G2
C VI	303.70	P		3-6			G2
C VI	355.89	P		3-5			G2
C VI	504.65	P		4-9			G2
C VI	520.6	P		3-4			G2
C VI	539.95	P		4-8			G2
C VI	601.31	P		4-7			G2
C VI	728.93	P		4-6			G2
C VI	843.72	P		5-10			G2
C VI	915.30	P		5-9			G2
C VI	1038.42	P		5-8			G2
C VI	1124.9	P		4-5			G2
C VI	1291.9	P		5-7			G2

NITROGEN I (N⁰⁺), Z = 7
Ground State 1s²2s²2p³ ⁴S_{3/2} (7 electrons)
Ionization Potential 117 225.4 cm⁻¹; 14.534 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N I	857.77	2		2p ² - 2p ² (² P)12d	g ⁴ S° - ⁴ P	½ - ½	K1
N I	858.80	2		2p ² - 2p ² (² P)11d	g ⁴ S° - ⁴ P	½ - ½	K1
N I	859.35	3		2p ² - 2p ² (² P)11d	g ⁴ S° - ⁴ D	½ - ½	X1
N I	859.76	2		2p ² - 2p ² (² P)12s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	860.15	4		2p ² - 2p ² (² P)10d	g ⁴ S° - ⁴ P	½ - ½	K1
N I	860.85	4		2p ² - 2p ² (² P)10d	g ⁴ S° - ⁴ D	½ - ½	K1
N I	861.15	1		2p ² - 2p ² (² P)11s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	862.14	5		2p ² - 2p ² (² P)9d	g ⁴ S° - ⁴ P	½ - ½	K1
N I	862.91	5		2p ² - 2p ² (² P)9d	g ⁴ S° - ⁴ D	½ - ½	K1
N I	863.15	3		2p ² - 2p ² (² P)10s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	864.92	5		2p ² - 2p ² (² F)8d	g ⁴ S° - ⁴ P	½ - ½	K1
N I	865.62	5		2p ² - 2p ² (² F)8d	g ⁴ S° - ⁴ D	½ - ½	K1
N I	865.93	3		2p ² - 2p ² (² F)9s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	868.78	5		2p ² - 2p ² (² F)7d	g ⁴ S° - ⁴ P	½ - ½	K1
N I	869.66	5		2p ² - 2p ² (² F)7d	g ⁴ S° - ⁴ D	½ - ½	K1
N I	870.00	3		2p ² - 2p ² (² F)8s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	870.40	3		2p ² - 2p ² (² F)8s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	871.01	1		2p ² - 2p ² (² F)8s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	875.092	5		2p ² - 2p ² (² F)6d	g ⁴ S° - ⁴ P	½ - ½	W8, K1
N I	875.20	5		2p ² - 2p ² (² F)6d	g ⁴ S° - ⁴ P	½ - ½	K1
N I	875.79	5		2p ² - 2p ² (² F)6d	g ⁴ S° - ⁴ D	½ - ½	K1
N I	876.07	4		2p ² - 2p ² (² F)7s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	876.64	2		2p ² - 2p ² (² F)7s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	876.99	2		2p ² - 2p ² (² F)7s	g ⁴ S° - ⁴ P	½ - ½	K1
N I	885.387	5		2p ² - 2p ² (² F)5d	g ⁴ S° - ² D	½ - ½	E36
N I	885.682	15		2p ² - 2p ² (² F)5d	g ⁴ S° - ⁴ D	½ - ½	E36
N I	885.973	6		2p ² - 2p ² (² F)5d	g ⁴ S° - ⁴ P	½ - ½	E36
N I	886.226	9		2p ² - 2p ² (² F)5d	g ⁴ S° - ⁴ P	½ - ½	E36
N I	886.332	8		2p ² - 2p ² (² F)5d	g ⁴ S° - ⁴ P	½ - ½	E36
N I	886.428	8		2p ² - 2p ² (² F)5d	g ⁴ S° - ² F	½ - ½	E36
N I	886.829	6		2p ² - 2p ² (² F)5d	g ⁴ S° - ⁴ F	½ - ½	E36
N I	887.016	4		2p ² - 2p ² (² F)6s	g ⁴ S° - ² P	½ - ½	E36
N I	887.457	11		2p ² - 2p ² (² F)6s	g ⁴ S° - ⁴ P	½ - ½	E36
N I	888.022	10		2p ² - 2p ² (² F)6s	g ⁴ S° - ⁴ P	½ - ½	E36
N I	888.372	8		2p ² - 2p ² (² F)6s	g ⁴ S° - ⁴ P	½ - ½	E36
N I	905.223	6		2p ² - 2p ² (² F)4d	g ⁴ S° - ² D	½ - ½	E36
N I	905.40	2		2p ² - 2p ² (² F)4d	g ⁴ S° - ² D	½ - ½	K1
N I	905.787	11		2p ² - 2p ² (² F)4d	g ⁴ S° - ⁴ D	½ - ½	E36
N I	905.839	12		2p ² - 2p ² (² F)4d	g ⁴ S° - ⁴ D	½ - ½	E36
N I	905.916	11		2p ² - 2p ² (² F)4d	g ⁴ S° - ⁴ D	½ - ½	F36
N I	906.206	11		2p ² - 2p ² (² F)4d	g ⁴ S° - ⁴ P	½ - ½	E36
N I	906.433	13		2p ² - 2p ² (² F)4d	g ⁴ S° - ⁴ P	½ - ½	E36
N I	906.617	12		2p ² - 2p ² (² F)4d	g ⁴ S° - ⁴ P	½ - ½	E36
N I	906.730	12		2p ² - 2p ² (² F)4d	g ⁴ S° - ² F	½ - ½	E36
N I	907.07	4		2p ² - 2p ² (² F)4d	g ⁴ S° - ² P	½ - ½	K1
N I	907.28	4		2p ² - 2p ² (² F)4d	g ⁴ S° - ² P	½ - ½	K1
N I	907.337	7		2p ² - 2p ² (² F)4d	g ⁴ S° - ⁴ F	½ - ½	E36
N I	908.2332	3		2p ² - 2p ² (² F)5s	g ⁴ S° - ² P	½ - ½	K6
N I	908.7958	1		2p ² - 2p ² (² F)5s	g ⁴ S° - ² P	½ - ½	K6
N I	909.6976 ST	9		2p ² - 2p ² (² F)5s	g ⁴ S° - ⁴ P	½ - ½	H3, K6
N I	910.2765 ST	6		2p ² - 2p ² (² F)5s	g ⁴ S° - ⁴ P	½ - ½	H3, K6
N I	910.6456 ST	5		2p ² - 2p ² (² F)5s	g ⁴ S° - ⁴ P	½ - ½	H3, K6
N I	951.0791	5		2p ² - 2p ² (² F)3d	g ⁴ S° - ² D	½ - ½	K6
N I	951.2947	3		2p ² - 2p ² (² F)3d	g ⁴ S° - ² D	½ - ½	K6
N I	952.3037 ST	18		2p ² - 2p ² (² F)3d	g ⁴ S° - ⁴ D	½ - ½	H3, K6
N I	952.4151 ST	14		2p ² - 2p ² (² F)3d	g ⁴ S° - ⁴ D	½ - ½	H3, K6
N I	952.5231 ST	10		2p ² - 2p ² (² F)3d	g ⁴ S° - ⁴ D	½ - ½	H3, K6
N I	953.4150	25		2p ² - 2p ² (² F)3d	g ⁴ S° - ⁴ P	½ - ½	K6
N I	953.6548	27		2p ² - 2p ² (² F)3d	g ⁴ S° - ⁴ P	½ - ½	K6
N I	953.9698	30		2p ² - 2p ² (² F)3d	g ⁴ S° - ⁴ P	½ - ½	K6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N I	954.1040	30		$2p^3 - 2p^2(^2P)3d$	$g^4S^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	K6
N I	955.2647 ST	4		$2p^3 - 2p^2(^2P)3d$	$g^4S^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	H3, K1
N I	955.4376 ST	4		$2p^3 - 2p^2(^2P)3d$	$g^4S^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	H3, K1
N I	955.5292	3		$2p^3 - 2p^2(^2P)3d$	$g^4S^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K6
N I	955.8814	5		$2p^3 - 2p^2(^2P)3d$	$g^4S^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K6
N I	959.4936	5		$2p^3 - 2p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	K6
N I	960.2017 P			$2p^3 - 2p^2(^2P)4s$	$g^4S^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E6, K8
N I	963.9904 ST	25	3	$2p^3 - 2p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	H4, K6
N I	964.6258 ST	23	3	$2p^3 - 2p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	H4, K6
N I	965.0415 ST	23	3	$2p^3 - 2p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	H4, K6
N I	1028.68	2		$2p^3 - 2p^2(^2P)11d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1029.51	1		$2p^3 - 2p^2(^2P)11d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1030.76	2		$2p^3 - 2p^2(^2P)10d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1031.62	2		$2p^3 - 2p^2(^2P)10d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1032.18	1		$2p^3 - 2p^2(^2P)11s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1033.42	3		$2p^3 - 2p^2(^2P)9d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1033.70	0		$2p^3 - 2p^2(^2P)9d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1034.37	2		$2p^3 - 2p^2(^2P)9d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1034.69	0		$2p^3 - 2p^2(^2P)9d$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1035.00	1		$2p^3 - 2p^2(^2P)10s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1037.37	4		$2p^3 - 2p^2(^2P)8d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1037.73	1		$2p^3 - 2p^2(^2P)8d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1038.31	3		$2p^3 - 2p^2(^2P)8d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1038.90	1		$2p^3 - 2p^2(^2P)9s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1043.02	5		$2p^3 - 2p^2(^2P)7d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1043.58	2		$2p^3 - 2p^2(^2P)7d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1044.06	5		$2p^3 - 2p^2(^2P)7d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1044.65	4		$2p^3 - 2p^2(^2P)8s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1051.90	2		$2p^3 - 2p^2(^2P)6d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1052.07	3		$2p^3 - 2p^2(^2P)6d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1052.18	3		$2p^3 - 2p^2(^2P)6d$	$^3D^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1052.64	2		$2p^3 - 2p^2(^2P)6d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1053.04	3		$2p^3 - 2p^2(^2P)6d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1053.35	5		$2p^3 - 2p^2(^2P)6d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1053.78	3		$2p^3 - 2p^2(^2P)7s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K1
N I	1066.992	10		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1067.308	8		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1067.386	10		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1067.616	15		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1068.477	13		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1068.627	12		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1068.670	11		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1069.110	8		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1069.206	9		$2p^3 - 2p^2(^2P)5d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1069.374	7		$2p^3 - 2p^2(^2P)6s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1069.468	6		$2p^3 - 2p^2(^2P)6s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1069.990	11		$2p^3 - 2p^2(^2P)6s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1095.942	13		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1096.525	11		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1096.749	13		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1097.237	21		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1097.995	8		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1098.097	17		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1098.261	17		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1098.625	12		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1098.759	6		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1098.952	9		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1099.042	8		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1099.150	13		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1099.263	8		$2p^3 - 2p^2(^2P)4d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	E36
N I	1100.3593	50		$2p^3 - 2p^2(^2P)5s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K6
N I	1100.4649	15		$2p^3 - 2p^2(^2P)5s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K6
N I	1101.2910	45		$2p^3 - 2p^2(^2P)5s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	K6
N I	1134.1651	560	2	$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	K6
N I	1134.4147	550	2	$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	K6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N I	1134.9801	780	2	$2s^2 2p^3 - 2s 2p^4$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1139.14	1		$2p^3 - 2p^2(3P)12d$	$3p^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1140.74	2		$2p^3 - 2p^2(3P)12d$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1141.19	1		$2p^3 - 2p^2(3P)13s$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1141.60	2		$2p^3 - 2p^2(3P)11d$	$3p^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1142.70	2		$2p^3 - 2p^2(3P)11d$	$3p^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1143.31	1		$2p^3 - 2p^2(3P)12s$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1143.6458	15		$2p^3 - 2p^2 3s$	$2p^{\circ} - 2S$	$\frac{1}{2} - \frac{1}{2}$	K6
N I	1143.6508	30		$2p^3 - 2p^2 3s$	$3p^{\circ} - 3S$	$\frac{3}{2} - \frac{1}{2}$	K6
N I	1144.16	2		$2p^3 - 2p^2(3P)10d$	$3p^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1145.27	2		$2p^3 - 2p^2(3P)10d$	$2p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1145.90	1		$2p^3 - 2p^2(3P)11s$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1147.66	4		$2p^3 - 2p^2(3P)9d$	$3p^{\circ} - 3D$	$\frac{1}{2} - \frac{3}{2}$	K1
N I	1148.77	4		$2p^3 - 2p^2(3P)9d$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1149.39	2		$2p^3 - 2p^2(3P)10s$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1152.30	4		$2p^3 - 2p^2(3P)8d$	$3p^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1152.63	1		$2p^3 - 2p^2(3P)8d$	$3p^{\circ} - 3D$	$\frac{1}{2} - \frac{3}{2}$	K1
N I	1153.53	4		$2p^3 - 2p^2(3P)8d$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1154.19	3		$2p^3 - 2p^2(3P)9s$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1159.28	4		$2p^3 - 2p^2(3P)7d$	$2p^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1159.8172 P			$2p^3 - 2p^2(3P)3s$	$g^4S^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	E6, K8
N I	1159.84	2		$2p^3 - 2p^2(3P)7d$	$3p^{\circ} - 3D$	$\frac{1}{2} - \frac{3}{2}$	K1
N I	1160.39	3		$2p^3 - 2p^2(3P)7d$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1160.9370 P			$2p^3 - 2p^2(3P)3s$	$g^4S^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	E6, K8
N I	1161.30	2		$2p^3 - 2p^2(3P)8s$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1163.8835	150	7	$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1164.0016	30	7	$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1164.2064	60	7	$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1164.3246	95	7	$2p^3 - 2p^2(3P)3d$	$2D^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1165.5943	40		$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 4D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1165.8358	15		$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 4D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1167.4484	350	6	$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 3F$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1168.2154	50		$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1168.3344	200		$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1168.4167	60	6	$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 2F$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1168.5358	300	6	$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 3F$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1169.6933	80		$2p^3 - 2p^2(3P)3d$	$2D^{\circ} - 4F$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1170.1572	10		$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 4F$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1170.2766	80		$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 4F$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1170.4165	5		$2p^3 - 2p^2(3P)3d$	$2D^{\circ} - 4F$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1170.6743	20		$2p^3 - 2p^2(3P)3d$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{1}{2}$	K6
N I	1171.0834	60		$2p^3 - 2p^2(3P)3d$	$3D^{\circ} - 2P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1171.37	2		$2p^3 - 2p^2(3P)6d$	$2p^{\circ} - 3P$	$\frac{1}{2} - \frac{1}{2}$	K1
N I	1171.60	2		$2p^3 - 2p^2(3P)6d$	$3p^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1172.01	2		$2p^3 - 2p^2(3P)7s$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1172.46	3		$2p^3 - 2p^2(3P)7s$	$2p^{\circ} - 3P$	$\frac{1}{2} - \frac{1}{2}$	K1
N I	1176.5097	300		$2p^3 - 2p^2(3P)4s$	$3D^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1176.6304	120		$2p^3 - 2p^2(3P)4s$	$2D^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1177.6948	320		$2p^3 - 2p^2(3P)4s$	$3D^{\circ} - 3P$	$\frac{3}{2} - \frac{1}{2}$	K6
N I	1188.971	14		$2p^3 - 2p^2(3P)5d$	$3p^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1189.249	14		$2p^3 - 2p^2(3P)5d$	$2p^{\circ} - 3D$	$\frac{1}{2} - \frac{3}{2}$	E36
N I	1190.031	5		$2p^3 - 2p^2(3P)5d$	$2p^{\circ} - 4P$	$\frac{1}{2} - \frac{1}{2}$	E36
N I	1190.494	6		$2p^3 - 2p^2(3P)5d$	$3p^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1190.688	2		$2p^3 - 2p^2(3P)5d$	$3p^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1190.855	6		$2p^3 - 2p^2(3P)5d$	$3p^{\circ} - 2F$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1190.923	8		$2p^3 - 2p^2(3P)5d$	$2p^{\circ} - 3P$	$\frac{1}{2} - \frac{1}{2}$	E36
N I	1191.019	12		$2p^3 - 2p^2(3P)5d$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1191.603	2		$2p^3 - 2p^2(3P)5d$	$3p^{\circ} - 4F$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1191.925	8		$2p^3 - 2p^2(3P)6s$	$3p^{\circ} - 3P$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1192.563	4		$2p^3 - 2p^2(3P)6s$	$3p^{\circ} - 3P$	$\frac{1}{2} - \frac{1}{2}$	E36
N I	1199.5490 ST	1000	1	$2p^3 - 2p^2(3P)3s$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	H4, K6
N I	1200.2238 ST	950	1	$2p^3 - 2p^2(3P)3s$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	H4, K6
N I	1200.7113 ST	700	1	$2p^3 - 2p^2(3P)3s$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{1}{2}$	H4, K6
N I	1225.027	21		$2p^3 - 2p^2(3P)4d$	$3p^{\circ} - 3D$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1225.374	20		$2p^3 - 2p^2(3P)4d$	$3p^{\circ} - 2D$	$\frac{1}{2} - \frac{3}{2}$	E36

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N I	1227.241	7		$2p^3 - 2p^3(^3P)4d$	$^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1227.793	8		$2p^3 - 2p^3(^3P)4d$	$^3P^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1228.414	18		$2p^3 - 2p^3(^3P)4d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E36
N I	1228.790	20		$2p^3 - 2p^3(^3P)4d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1229.174	14		$2p^3 - 2p^3(^3P)4d$	$^3P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	E36
N I	1230.535	7		$2p^3 - 2p^3(^3P)5s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	E36
N I	1231.578	12		$2p^3 - 2p^3(^3P)5s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E36
N I	1233.24	2		$2p^3 - 2p^3(^3P)5s$	$^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1243.1796	550	5	$2p^3 - 2p^3(^1D)3s$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1243.3056	400	5	$2p^3 - 2p^3(^1D)3s$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1310.5401	200	13	$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1310.9429	150	13	$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	K6
N I	1310.9495	25	13	$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1312.87	3		$2p^3 - 2p^3(^3F)3d$	$^3P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1313.08	3		$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	K1
N I	1315.44	3		$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E28
N I	1316.2906	2		$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1318.8224	5		$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	K6
N I	1318.9981	150	12	$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	K6
N I	1319.0048	80	12	$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	K6
N I	1319.6693	50	12	$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	K6
N I	1319.6760	250	12	$2p^3 - 2p^3(^3P)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1326.5639	10	11	$2p^3 - 2p^3(^3P)4s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	K6
N I	1326.5707	50	11	$2p^3 - 2p^3(^3P)4s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1327.9170	25	11	$2p^3 - 2p^3(^3P)4s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	K6
N I	1327.9238	15	11	$2p^3 - 2p^3(^3P)4s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	K6
N I	1411.9318	150	10	$2p^3 - 2p^3(^1D)3s$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	K6
N I	1411.939	30	10	$2p^3 - 2p^3(^1D)3s$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1411.9494	300	10	$2p^3 - 2p^3(^1D)3s$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1492.6254	620	4	$2p^3 - 2p^3(^3P)3s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1492.8195	100	4	$2p^3 - 2p^3(^3P)3s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1494.6751	400	4	$2p^3 - 2p^3(^3F)3s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	K6
N I	1592.66	20		$2s^2 2p^2(^3P)3p - 2s 2p^2(^6S^o)5p$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E28
N I	1742.7189	50	9	$2p^3 - 2p^3(^3P)3s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	K6
N I	1742.7306	350	9	$2p^3 - 2p^3(^3P)3s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	K6
N I	1745.2482	150	9	$2p^3 - 2p^3(^3P)3s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	K6
N I	1745.2600	50	9	$2p^3 - 2p^3(^3P)3s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	K6
N I	1836.712	4	8	$2p^3 - 2p^3(^3P)3s$	$^3P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	W10, K1

NITROGEN II (N^{1+}), $Z = 7$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential $238\ 750.5\ \text{cm}^{-1}$; $29.601\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N II	453.257	20		$2p^3 - 2p5d$	$g^3P - ^3D^o$	1 - 2	E3, E33
N II	453.340	100		$2p^3 - 2p5d$	$g^3P - ^3D^o$	2 - 3	E3, E33
N II	474.493 P	10		$2p^3 - 2p4d$	$g^3P - ^3P^o$	0 - 1	E33, E3
N II	474.546 P	10		$2p^3 - 2p4d$	$g^3P - ^3P^o$	1 - 0	E33, E3
N II	474.602 P	10		$2p^3 - 2p4d$	$g^3P - ^3P^o$	1 - 1	E33, E3
N II	474.706 P	20		$2p^3 - 2p4d$	$g^3P - ^3P^o$	1 - 2	E33, E3
N II	474.787 P	20		$2p^3 - 2p4d$	$g^3P - ^3P^o$	2 - 1	E33, E3
N II	474.891 P	200		$2p^3 - 2p4d$	$g^3P - ^3P^o$	2 - 2	E33, E3
N II	475.647 P	100		$2p^3 - 2p4d$	$g^3P - ^3D^o$	0 - 1	E33, E3
N II	475.658 P	200		$2p^3 - 2p4d$	$g^3P - ^3D^o$	1 - 2	E33, E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N II	475.757 P			2p ² - 2p4d	g ³ P - ³ D°	1 - 1	E33
N II	475.803 P	250		2p ² - 2p4d	g ³ P - ³ D°	2 - 3	E33, E3
N II	475.884 P	100		2p ² - 2p4d	g ³ P - ³ D°	2 - 2	E33, E3
N II	485.849 P	10		2p ² - 2p5d	¹ D - ¹ F°	2 - 3	E33, E3
N II	505.986 P	100 - A		2s2p ² - 2s2p ² (⁴ P)3d	⁴ S° - ⁴ P	2 - 1	E33, E2
N II	506.054 P	200 - A		2s2p ² - 2s2p ² (⁴ P)3d	⁴ S° - ⁴ P	2 - 2	E33, E3
N II	506.153 P	300 - A		2s2p ² - 2s2p ² (⁴ P)3d	⁴ S° - ⁴ P	2 - 3	E33, E3
N II	508.484 P	10		2p ² - 2p4s	g ³ P - ³ P°	1 - 2	E33, E3
N II	508.668 P			2p ² - 2p4s	g ³ P - ³ P°	0 - 1	E33
N II	508.697 P	150		2p ² - 2p4s	g ³ P - ³ P°	2 - 2	E33, E3
N II	508.928 P	10		2p ² - 2p4s	g ³ P - ³ P°	1 - 0	E33, E3
N II	509.006 P	15		2p ² - 2p4s	g ³ P - ³ P°	2 - 1	E33, E3
N II	510.758 P	250		2p ² - 2p4d	¹ D - ¹ F°	2 - 3	E33, E3
N II	513.849 P			2p ² - 2p4d	¹ D - ¹ D°	2 - 2	E33, E3
N II	529.355	250	6	2p ² - 2p3d	g ³ P - ³ P°	0 - 1	E6, E3, E33
N II	529.413	250	6	2p ² - 2p3d	g ³ P - ³ P°	1 - 0	E6, E3, E33
N II	529.491	250	6	2p ² - 2p3d	g ³ P - ³ P°	1 - 1	E6, E3, E33
N II	529.637	250	6	2p ² - 2p3d	g ³ P - ³ P°	1 - 2	E6, E3, E33
N II	529.722	250	6	2p ² - 2p3d	g ³ P - ³ P°	2 - 1	E6, E3, E33
N II	529.867	400	6	2p ² - 2p3d	g ³ P - ³ P°	2 - 2	E6, E3, E33
N II	533.511	350	5	2p ² - 2p3d	g ³ P - ³ D°	0 - 1	E6, E3, E33
N II	533.581	400	5	2p ² - 2p3d	g ³ P - ³ D°	1 - 2	E6, E3, E33
N II	533.650	350	5	2p ² - 2p3d	g ³ P - ³ D°	1 - 1	E6, E3, E33
N II	533.729	500	5	2p ² - 2p3d	g ³ P - ³ D°	2 - 3	E6, E3, E33
N II	533.815	350	5	2p ² - 2p3d	g ³ P - ³ D°	2 - 2	E6, E3, E33
N II	547.818 P	10		2p ² - 2p4s	¹ D - ¹ P°	2 - 1	E33, E3
N II	559.762 P	10		2p ² - 2p4d	¹ S - ¹ P°	0 - 1	E33, E3
N II	572.069 P			2p ² - 2p3d	¹ D - ¹ P°	2 - 1	E33
N II	574.650	500	11	2p ² - 2p3d	¹ D - ¹ F°	2 - 3	E6, E3, E33
N II	582.156	400	10	2p ² - 2p3d	¹ D - ¹ D°	2 - 2	E6, E3, E33
N II	629.167 P	300		2s2p ² - 2s2p ² (⁴ P)3s	⁴ S° - ⁴ P	2 - 3	E33, E3
N II	629.447 P	200		2s2p ² - 2s2p ² (⁴ P)3s	⁴ S° - ⁴ P	2 - 2	E33, E3
N II	629.670 P			2s2p ² - 2s2p ² (⁴ T)3s	⁴ S° - ⁴ P	2 - 1	E33
N II	635.197	400	13	2p ² - 2p3d	¹ S - ¹ P°	0 - 1	E6, E3, E33
N II	644.634	650	4	2s ² 2p ² - 2s2p ²	g ³ P - ³ S°	0 - 1	E6, E3, E33
N II	644.837	750	4	2s ² 2p ² - 2s2p ²	g ³ P - ³ S°	1 - 1	E6, E3, E33
N II	645.178	850	4	2s ² 2p ² - 2s2p ²	g ³ P - ³ S°	2 - 1	E5, E3, E33
N II	660.286	750	9	2s ² 2p ² - 2s2p ²	¹ D - ¹ P°	2 - 1	E6, E3, E33
N II	670.296 P	220		2p ² - 2p3s	g ³ P - ¹ P°	0 - 1	E33, E3
N II	670.515 P	120		2p ² - 2p3s	g ³ P - ¹ P°	1 - 1	E33, E3
N II	670.884 P	100		2p ² - 2p3s	g ³ P - ¹ P°	2 - 1	E33, E3
N II	671.016	500	3	2p ² - 2p3s	g ³ P - ¹ P°	1 - 2	E6, E3, E33
N II	671.386	500	3	2p ² - 2p3s	g ³ P - ³ P°	2 - 2	E6, E3, E33
N II	671.411	650	3	2p ² - 2p3s	g ³ P - ³ P°	0 - 1	E6, E3, E33
N II	671.630	500	3	2p ² - 2p3s	g ³ P - ³ P°	1 - 1	E6, E3, E33
N II	671.773	500	3	2p ² - 2p3s	g ³ P - ³ P°	1 - 0	E6, E3, E33
N II	672.091	500	3	2p ² - 2p3s	g ³ P - ³ P°	2 - 1	E6, E3, E33
N II	745.841	500	12	2s ² 2p ² - 2s2p ²	¹ S - ¹ P°	0 - 1	E6, E3, E33
N II	746.984	650	8	2p ² - 2p3s	¹ D - ¹ P°	2 - 1	E6, E3, E33
N II	748.369 P			2p ² - 2p3s	¹ D - ¹ P°	2 - 1	E6, E33
N II	775.965	1000	7	2s ² 2p ² - 2s2p ²	¹ D - ¹ D°	2 - 2	E6, E3, E33
N II	836.187 P			2s2p ² - 2s2p ² (⁴ P)3s	³ D° - ³ P	3 - 2	E33
N II	836.279 P			2s2p ² - 2s2p ² (⁴ P)3s	³ D° - ³ P	2 - 2	E33
N II	836.289 P			2s2p ² - 2s2p ² (⁴ P)3s	³ D° - ³ P	1 - 2	E33
N II	836.616 P			2s2p ² - 2s2p ² (⁴ P)3s	³ D° - ³ P	2 - 1	E33
N II	836.627 P			2s2p ² - 2s2p ² (⁴ P)3s	³ D° - ³ P	1 - 1	E33
N II	836.837 P			2s2p ² - 2s2p ² (⁴ P)3s	³ D° - ³ P	1 - 0	E33
N II	858.376 P	100		2p ² - 2p3s	¹ S - ¹ P°	0 - 1	E33, E3
N II	860.205 P			2p ² - 2p3s	¹ S - ³ P°	0 - 1	E33
N II	915.612	700	2	2s ² 2p ² - 2s2p ²	g ³ P - ³ P°	0 - 1	E6, E3, E33
N II	915.962	700	2	2s ² 2p ² - 2s2p ²	g ³ P - ³ P°	1 - 0	E6, E3, E33
N II	916.012	800	2	2s ² 2p ² - 2s2p ²	g ³ P - ³ P°	1 - 2	E6, E3, E33
N II	916.020	600	2	2s ² 2p ² - 2s2p ²	g ³ P - ³ P°	1 - 1	E6, E3, E33
N II	916.701	1000	2	2s ² 2p ² - 2s2p ²	g ³ P - ³ P°	2 - 2	E6, E3, E33
N II	916.710	800	2	2s ² 2p ² - 2s2p ²	g ³ P - ³ P°	2 - 1	E6, E3, E33

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N II	1083.990	400	1	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^o$	0 - 1	E6, E3, E33
N II	1084.562	150	1	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^o$	1 - 1	E6, E3, E33
N II	1084.580	750	1	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^o$	1 - 2	E6, E3, E33
N II	1085.529	P	1	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^o$	2 - 1	E6, E33
N II	1085.546	400	1	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^o$	2 - 2	E6, E3, E33
N II	1085.701	1000	1	$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^o$	2 - 3	E6, E3, E33
N II	1275.038	P	300	$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	3 - 2	E33, E3
N II	1275.251	P		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	2 - 2	E33
N II	1275.275	P		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	1 - 2	E33
N II	1276.201	P	200	$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	2 - 1	E33, E3
N II	1276.225	P		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	1 - 1	E33
N II	1276.800	P	100	$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	1 - 0	E33, E3
N II	1343.338	P	200	$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3D$	3 - 3	E33, E3
N II	1343.574	P		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3D$	2 - 3	E33
N II	1345.076	P		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3D$	3 - 2	E33
N II	1345.313	P	100	$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3D$	2 - 2	E33, E3
N II	1345.340	P		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3D$	1 - 2	E33
N II	1346.413	P		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3D$	2 - 1	E33
N II	1346.441	P	10	$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3D$	1 - 1	E33, E3
N II	1627.349	P		$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3P$	1 - 2	E33
N II	1627.376	P	100	$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3P$	2 - 2	E33, E3
N II	1628.896	P		$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3P$	1 - 1	E33
N II	1628.922	P		$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3P$	2 - 1	E33
N II	1629.079	P	100	$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3P$	0 - 1	E33, E3
N II	1629.832	P	10	$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3P$	1 - 0	E33, E3
N II	1675.726	P	150	$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3S$	1 - 1	E33
N II	1675.755	P	300	$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3S$	2 - 1	E33
N II	1675.920	P	100	$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3S$	0 - 1	E33
N II	1725.028	P		$2p 3s - 2p 4p$	$^1P^o - ^1S$	1 - 0	E33
N II	1732.428	P		$2p 3s - 2p 4p$	$^1P^o - ^1S$	1 - 0	E33
N II	1740.310	P	400	$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3D$	2 - 3	E33, E3
N II	1743.197	P	200	$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3D$	1 - 2	E33, E3
N II	1743.228	P		$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3D$	2 - 2	E33
N II	1745.046	P		$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3D$	1 - 1	E33
N II	1745.076	P		$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3D$	2 - 1	E33
N II	1745.256	P		$2s 2p^2 - 2s^2 2p 3p$	$^3P^o - ^3D$	0 - 1	E33
N II	1763.639	P	100	$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3S^o - ^3P$	1 - 2	E33, F37
N II	1765.140	P	50	$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3S^o - ^3P$	1 - 1	E33, F37
N II	1766.079	P	100	$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3S^o - ^3P$	1 - 0	E33, F37
N II	1772.735	P		$2p 3s - 2p 4p$	$^3P^o - ^1D$	1 - 2	E33
N II	1780.551	P		$2p 3s - 2p 4p$	$^1P^o - ^1D$	1 - 2	E33
N II	1830.527	P	1	$2p 3s - 2p 4p$	$^3P^o - ^3S$	0 - 1	E33, F37
N II	1831.586	P	10	$2p 3s - 2p 4p$	$^3P^o - ^3S$	1 - 1	E33, F37
N II	1836.172	P	100	$2p 3s - 2p 4p$	$^3P^o - ^3S$	2 - 1	E33, F37
N II	1839.931	P		$2p 3s - 2p 4p$	$^1P^o - ^3S$	1 - 1	E33
N II	1840.983	P	100	$2p 3s - 2p 4p$	$^3P^o - ^3P$	1 - 2	E33, F39
N II	1842.284	P	10	$2p 3s - 2p 4p$	$^3P^o - ^3P$	0 - 1	E33, F39
N II	1843.357	P	10	$2p 3s - 2p 4p$	$^3P^o - ^3P$	1 - 1	E33, F39
N II	1844.259	P	10	$2p 3s - 2p 4p$	$^3P^o - ^3P$	1 - 0	E33, F39
N II	1845.616	P	100	$2p 3s - 2p 4p$	$^3P^o - ^3P$	2 - 2	E33, F39
N II	1848.002	P	10	$2p 3s - 2p 4p$	$^3P^o - ^3P$	2 - 1	E33, F39
N II	1849.414	P	100	$2p 3s - 2p 4p$	$^1P^o - ^3P$	1 - 2	E33, E3
N II	1851.810	P		$2p 3s - 2p 4p$	$^1P^o - ^3P$	1 - 1	E33
N II	1852.721	P		$2p 3s - 2p 4p$	$^1P^o - ^3P$	1 - 0	E33
N II	1857.870	P	300	$2p 3s - 2p 4p$	$^3P^o - ^3D$	1 - 2	E33, F37
N II	1858.545	P	200	$2p 3s - 2p 4p$	$^3P^o - ^3D$	0 - 1	E33, F37
N II	1859.260	P	500	$2p 3s - 2p 4p$	$^3P^o - ^3D$	2 - 3	E33, F37
N II	1859.636	P		$2p 3s - 2p 4p$	$^3P^o - ^3D$	1 - 1	E33
N II	1862.588	P	200	$2p 3s - 2p 4p$	$^3P^o - ^3D$	2 - 2	E33, F37
N II	1864.364	P		$2p 3s - 2p 4p$	$^3P^o - ^3D$	2 - 1	E33
N II	1866.457	P		$2p 3s - 2p 4p$	$^1P^o - ^3D$	1 - 2	E33
N II	1868.240	P	10	$2p 3s - 2p 4p$	$^1P^o - ^3D$	1 - 1	E33, F3
N II	1878.624	P	200	$2p 3s - 2p 4p$	$^3P^o - ^1P$	1 - 1	E33, E3
N II	1887.404	P	350	$2p 3s - 2p 4p$	$^1P^o - ^1P$	1 - 1	E33, E3
N II	1991.301	P	10	$2p 3p - 2p 5s$	$^1P^o - ^1P^o$	1 - 1	E33, E3

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

NITROGEN III (N^{2+}), $Z = 7$
 Ground State $1s^2 2s^2 2p^2 P_{1/2}$ (5 electrons)
 Ionization Potential $382\,704\text{ cm}^{-1}$; 47.448 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N III	208.510	30d -A		$2s 2p^2 - 2p^2(^2P) 7p$	$4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	208.670	50d -A		$2s 2p^2 - 2p^2(^2P) 7p$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	208.730	50 -A		$2s 2p^2 - 2p^2(^2P) 7p$	$4P - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	212.019	20d -A		$2s 2p^2 - 2p^2(^2P) 6p$	$4P - 4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	212.049	50 -A		$2s 2p^2 - 2p^2(^2P) 6p$	$4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	212.087	80 -A		$2s 2p^2 - 2p^2(^2P) 6p$	$4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	212.359	50d -A		$2s 2p^2 - 2p^2(^2P) 6p$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	212.465	100 -A		$2s 2p^2 - 2p^2(^2P) 6p$	$4P - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	213.086	100d -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 5p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	213.164	200d -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 5p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	213.364	50d -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 5p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	213.447	170d -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 5p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	218.349	50 -A		$2s 2p^2 - 2p^2(^2P) 5p$	$4P - 4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	218.378	70 -A		$2s 2p^2 - 2p^2(^2P) 5p$	$4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	218.416	100 -A		$2s 2p^2 - 2p^2(^2P) 5p$	$4P - 4S^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M11
N III	218.949	100d -A		$2s 2p^2 - 2p^2(^2P) 5p$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	219.168	250 -A		$2s 2p^2 - 2p^2(^2P) 5p$	$4P - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	224.873	50d -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 14p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	225.302	70d -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 13p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	225.837	300d -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 12p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	226.030	300 -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 4p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	226.122	300 -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 4p$	$g^2P^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	226.520	50d -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 11p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	226.832	350 -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 4p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	226.910	400 -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 4p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	227.479	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 10p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	227.515	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 10p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	228.762	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 9p$	$g^2P^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	228.790	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 9p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	228.844	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 9p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	230.591	300b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 8p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	230.626	300b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 8p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	230.681	300b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 8p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	230.765	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 8p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	230.789	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 8p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	230.861	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 8p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	230.879	250b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 8p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	231.465	150 -A		$2s 2p^2 - 2p^2(^2P) 4p$	$4P - 4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	231.497	150 -A		$2s 2p^2 - 2p^2(^2P) 4p$	$4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	231.540	200 -A		$2s 2p^2 - 2p^2(^2P) 4p$	$4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	232.854	300d -A		$2s 2p^2 - 2p^2(^2P) 4p$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	233.332	400b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 7p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	233.368	400b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 7p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	233.393	350b -A		$2s 2p^2 - 2p^2(^2P) 4p$	$4P - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	233.424	400b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 7p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	233.459	350b -A		$2s 2p^2 - 2p^2(^2P) 4p$	$4P - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	233.498	350b -A		$2s 2p^2 - 2p^2(^2P) 4p$	$4P - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	233.599	300b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 7p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	233.620	300b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 7p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	233.696	300b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 7p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	233.716	300b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 7p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	237.532	450b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 6p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	237.565	450b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 6p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	237.624	450b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 6p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	238.034	350 -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 6p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	238.093	350 -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 6p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	238.134	300 -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 6p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	245.021	400d -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 5p$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	245.115	400d -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 5p$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	246.206	650b -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 5p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
N III	246.249	650b -A		2s ² 2p - 2s2p(² P°) 5p	g ² P° - ² D	3/2 - 5/2	M11
N III	246.311	650b -A		2s ² 2p - 2s2p(² P°) 5p	g ² P° - ² D	3/2 - 5/2	M11
N III	248.320	350 -A		2s ² 2p - 2s2p(² P°) 5p	g ² P° - ² P	1/2 - 3/2	M11
N III	248.371	350 -A		2s ² 2p - 2s2p(² P°) 5p	g ² P° - ² P	1/2 - 3/2	M11
N III	248.428	350 -A		2s ² 2p - 2s2p(² P°) 5p	g ² P° - ² P	3/2 - 5/2	M11
N III	248.478	350 -A		2s ² 2p - 2s2p(² P°) 5p	g ² P° - ² P	3/2 - 5/2	M11
N III	257.502	300d -A		2s2p ² - 2s2p(² P°) 15d	4P - ⁴ D°	3/2 - 5/2	M11
N III	257.953	500d -A		2s2p ² - 2s2p(² P°) 14d	4P - ⁴ D°	3/2 - 5/2	M11
N III	258.499	650d -A		2s2p ² - 2s2p(² P°) 13d	4P - ⁴ D°	3/2 - 5/2	M11
N III	259.189	700d -A		2s2p ² - 2s2p(² P°) 12d	4P - ⁴ D°	3/2 - 5/2	M11
N III	260.090	800d -A		2s2p ² - 2s2p(² P°) 11d	4P - ⁴ D°	3/2 - 5/2	M11
N III	261.282	800d -A		2s2p ² - 2s2p(² P°) 10d	4P - ⁴ D°	3/2 - 5/2	M11
N III	262.184	800b		2s ² 2p - 2s2p(² P°) 4p	g ² P° - ² D	1/2 - 3/2	M11
N III	262.233	800b		2s ² 2p - 2s2p(² P°) 4p	g ² P° - ² D	3/2 - 5/2	M11
N III	262.289	800b		2s ² 2p - 2s2p(² P°) 4p	g ² P° - ² D	3/2 - 5/2	M11
N III	262.867	400d -A		2s2p ² - 2s2p(² P°) 9d	4P - ⁴ P°	3/2 - 5/2	M11
N III	262.914	500d -A		2s2p ² - 2s2p(² P°) 9d	4P - ⁴ P°	3/2 - 5/2	M11
N III	264.822	400b		2s ² 2p - 2s2p(¹ P°) 3p	g ² P° - ² P	1/2 - 3/2	M11
N III	264.846	400b		2s ² 2p - 2s2p(¹ P°) 3p	g ² P° - ² P	1/2 - 3/2	M11
N III	264.945	400b		2s ² 2p - 2s2p(¹ P°) 3p	g ² P° - ² P	3/2 - 5/2	M11
N III	264.966	400b		2s ² 2p - 2s2p(¹ P°) 3p	g ² P° - ² P	3/2 - 5/2	M11
N III	265.232	500d -A		2s2p ² - 2s2p(² P°) 8d	4P - ⁴ P°	3/2 - 5/2	M11
N III	265.271	500d -A		2s2p ² - 2s2p(² P°) 8d	4P - ⁴ P°	3/2 - 5/2	M11
N III	265.339	200b		2p - 14s	g ² P° - ² S	3/2 - 5/2	M11
N III	265.852	200b		2p - 13s	g ² P° - ² S	1/2 - 3/2	M11
N III	265.978	200b		2p - 13s	g ² P° - ² S	3/2 - 5/2	M11
N III	266.255	500d		2p - 12d	g ² P° - ² D	3/2 - 5/2	M11
N III	266.613	200b		2p - 12s	g ² P° - ² S	1/2 - 3/2	M11
N III	266.737	250b		2p - 12s	g ² P° - ² S	3/2 - 5/2	M11
N III	266.805	350		2s ² 2p - 2s2p(² P°) 4p	g ² P° - ² P	1/2 - 3/2	M11
N III	266.847	400		2s ² 2p - 2s2p(² P°) 4p	g ² P° - ² P	1/2 - 3/2	M11
N III	266.930	400		2s ² 2p - 2s2p(² P°) 4p	g ² P° - ² P	3/2 - 5/2	M11
N III	266.974	350		2s ² 2p - 2s2p(² P°) 4p	g ² P° - ² P	3/2 - 5/2	M11
N III	267.199	500d		2p - 11d	g ² P° - ² D	3/2 - 5/2	M11
N III	267.661	250		2p - 11s	g ² P° - ² S	1/2 - 3/2	M11
N III	267.787	300b		2p - 11s	g ² P° - ² S	3/2 - 5/2	M11
N III	267.848	500		2s ² 2p - 2s2p(¹ P°) 3p	g ² P° - ² D	1/2 - 3/2	M11
N III	267.952	500b		2s ² 2p - 2s2p(¹ P°) 3p	g ² P° - ² D	3/2 - 5/2	M11
N III	267.966	500b		2s ² 2p - 2s2p(¹ P°) 3p	g ² P° - ² D	3/2 - 5/2	M11
N III	268.212	300 -A		2s2p ² - 2p ² (² P) 3p	4P - ⁴ S°	1/2 - 3/2	M11
N III	268.255	300 -A		2s2p ² - 2p ² (² P) 3p	4P - ⁴ S°	3/2 - 5/2	M11
N III	268.314	400 -A		2s2p ² - 2p ² (² P) 3p	4P - ⁴ S°	3/2 - 5/2	M11
N III	268.347	600d		2p - 10d	g ² P° - ² D	1/2 - 3/2	M11
N III	268.473	600d		2p - 10d	g ² P° - ² D	3/2 - 5/2	M11
N III	268.703	500 -A		2s2p ² - 2s2p(² P°) 7d	4P - ⁴ P°	3/2 - 5/2	M11
N III	268.756	400 -A		2s2p ² - 2s2p(² P°) 7d	4P - ⁴ P°	3/2 - 5/2	M11
N III	269.072	250		2p - 10s	g ² P° - ² S	1/2 - 3/2	M11
N III	269.199	300		2p - 10s	g ² P° - ² S	3/2 - 5/2	M11
N III	270.004	400b		2s ² 2p - 2s2p(² P°) 4p	g ² P° - ² S	1/2 - 3/2	M11
N III	270.073	650d		2p - 9d	g ² P° - ² D	1/2 - 3/2	M11
N III	270.201	650d		2p - 9d	g ² P° - ² D	3/2 - 5/2	M11
N III	270.554	50 -A		2s2p ² - 2s2p(² P°) 7s	4P - ⁴ P°	3/2 - 5/2	M11
N III	270.613	150 -A		2s2p ² - 2s2p(² P°) 7s	4P - ⁴ P°	3/2 - 5/2	M11
N III	270.685	50 -A		2s2p ² - 2s2p(² P°) 7s	4P - ⁴ P°	3/2 - 5/2	M11
N III	271.077	300		2p - 9s	g ² P° - ² S	1/2 - 3/2	M11
N III	271.209	350		2p - 9s	g ² P° - ² S	3/2 - 5/2	M11
N III	272.523	650d		2p - 8d	g ² P° - ² D	1/2 - 3/2	M11
N III	272.654	650d		2p - 8d	g ² P° - ² D	3/2 - 5/2	M11
N III	273.462	400 -A		2s2p ² - 2p ² (² P) 3p	4P - ⁴ P°	3/2 - 5/2	M11
N III	273.503	100 -A		2s2p ² - 2p ² (² P) 3p	4P - ⁴ P°	3/2 - 5/2	M11
N III	273.524	450 -A		2s2p ² - 2p ² (² P) 3p	4P - ⁴ P°	3/2 - 5/2	M11
N III	273.562	300 -A		2s2p ² - 2p ² (² P) 3p	4P - ⁴ P°	3/2 - 5/2	M11
N III	273.977	400		2p - 8s	g ² P° - ² S	1/2 - 3/2	M11
N III	274.108	400		2p - 8s	g ² P° - ² S	3/2 - 5/2	M11
N III	274.258	400b -A		2s2p ² - 2s2p(² P°) 6d	4P - ⁴ P°	3/2 - 5/2	M11

Filament	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N III	274.276	400b -A		2s 2p ² - 2s 2p(2P°) 6d	4P - 4P°	3/2 - 3/2	M11
N III	274.316	400b -A		2s 2p ² - 2s 2p(2P°) 6d	4P - 4D°	3/2 - 3/2	M11
N III	274.374	400b -A		2s 2p ² - 2s 2p(2P°) 6d	4P - 4D°	3/2 - 3/2	M11
N III	275.829	400b -A		2s 2p ² - 2p ² (2P) 3p	4P - 4D°	3/2 - 3/2	M11
N III	275.852	400b -A		2s 2p ² - 2p ² (2P) 3p	4P - 4D°	1/2 - 1/2	M11
N III	275.871	400b -A		2s 2p ² - 2p ² (2P) 3p	4P - 4D°	3/2 - 3/2	M11
N III	275.883	400b -A		2s 2p ² - 2p ² (2P) 3p	4P - 4D°	3/2 - 3/2	M11
N III	275.931	400b -A		2s 2p ² - 2p ² (2P) 3p	4P - 4D°	3/2 - 3/2	M11
N III	276.193	700		2p - 7d	4P - 4D°	3/2 - 3/2	M11
N III	276.326	700		2p - 7d	g ² P° - 2D	1/2 - 3/2	M11
N III	277.813	300 -A		2p - 7d	g ² P° - 2D	3/2 - 3/2	M11
N III	277.873	300b -A		2s 2p ² - 2s 2p(2P°) 6s	4P - 4P°	3/2 - 3/2	M11
N III	277.901	300b -A		2s 2p ² - 2s 2p(2P°) 6s	4P - 4P°	3/2 - 3/2	M11
N III	277.961	300 -A		2s 2p ² - 2s 2p(2P°) 6s	4P - 4P°	3/2 - 3/2	M11
N III	278.436	400		2s 2p ² - 2s 2p(2P°) 6s	4P - 4P°	3/2 - 3/2	M11
N III	278.572	400		2p - 7s	g ² P° - 2S	1/2 - 1/2	M11
N III	282.070	700		2p - 6d	g ² P° - 2S	3/2 - 1/2	M11
N III	282.209	700		2p - 6d	g ² P° - 2D	1/2 - 3/2	M11
N III	283.863	400b -A		2p - 6d	g ² P° - 2D	3/2 - 3/2	M11
N III	283.898	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4P°	1/2 - 1/2	M11
N III	283.937	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4P°	3/2 - 1/2	M11
N III	283.977	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4P°	3/2 - 3/2	M11
N III	283.996	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4P°	3/2 - 3/2	M11
N III	284.040	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4P°	3/2 - 3/2	M11
N III	284.277	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4P°	3/2 - 3/2	M11
N III	284.308	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4D°	1/2 - 3/2	M11
N III	284.336	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4D°	3/2 - 3/2	M11
N III	284.365	400b -A		2s 2p ² - 2s 2p(2P°) 5d	4P - 4D°	3/2 - 3/2	M11
N III	285.855	450		2s 2p ² - 2s 2p(2P°) 5d	4P - 4D°	3/2 - 3/2	M11
N III	286.000	450		2p - 6s	g ² P° - 2S	1/2 - 1/2	M11
N III	287.56	300d -A		2p - 6s	g ² P° - 2S	3/2 - 1/2	M11
N III	290.865	400b -A		2s 2p ² - 2s 2p(1P°) 4d	2D - 2D°	3/2 - 3/2	M11
N III	290.916	400b -A		2s 2p ² - 2s 2p(2P°) 5s	4P - 4P°	3/2 - 3/2	M11
N III	290.930	400b -A		2s 2p ² - 2s 2p(2P°) 5s	4P - 4P°	1/2 - 3/2	M11
N III	290.965	400b -A		2s 2p ² - 2s 2p(2P°) 5s	4P - 4P°	3/2 - 3/2	M11
N III	291.023	400b -A		2s 2p ² - 2s 2p(2P°) 5s	4P - 4P°	3/2 - 3/2	M11
N III	291.031	400b -A		2s 2p ² - 2s 2p(2P°) 5s	4P - 4P°	3/2 - 1/2	M11
N III	292.447	750		2s 2p ² - 2s 2p(2P°) 5s	4P - 4P°	3/2 - 3/2	M11
N III	292.595	750		2p - 5d	g ² P° - 2D	1/2 - 3/2	M11
N III	299.661	550		2p - 5d	g ² P° - 2D	3/2 - 3/2	M11
N III	299.818	550		2p - 5s	g ² P° - 2S	1/2 - 1/2	M11
N III	299.903	200b -A		2p - 5s	g ² P° - 2S	3/2 - 1/2	M11
N III	303.825	450b -A		2s 2p ² - 2s 2p(2P°) 8d	2D - 2F°	3/2 - 1/2	M11
N III	303.856	450b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4P°	3/2 - 3/2	M11
N III	303.880	450b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4P°	1/2 - 1/2	M11
N III	303.910	450b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4P°	1/2 - 3/2	M11
N III	303.960	450b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4P°	3/2 - 3/2	M11
N III	303.985	450b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4P°	3/2 - 3/2	M11
N III	304.035	450b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4P°	3/2 - 3/2	M11
N III	304.103	300b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4P°	3/2 - 3/2	M11
N III	304.203	300d -A		2s 2p ² - 2s 2p(2P°) 7d	2D - 2F°	3/2 - 3/2	M11
N III	304.786	500b -A		2s 2p ² - 2s 2p(2P°) 7d	2D - 2F°	3/2 - 3/2	M11
N III	304.812	500b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4D°	1/2 - 3/2	M11
N III	304.877	500b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4D°	3/2 - 3/2	M11
N III	304.921	500b -A		2s 2p ² - 2s 2p(2P°) 4d	4P - 4D°	3/2 - 3/2	M11
N III	305.761	500		2s 2p ² - 2s 2p(2P°) 4d	4P - 4D°	3/2 - 3/2	M11
N III	305.920	500		2s ² 2p - 2s 2p(2P°) 3p	g ² P° - 2S	1/2 - 1/2	M11
N III	310.746	50b -A		2s ² 2p - 2s 2p(2P°) 3p	g ² P° - 2S	3/2 - 1/2	M11
N III	310.803	100b -A		2s 2p ² - 2s 2p(2P°) 6d	2D - 2P°	3/2 - 1/2	M11
N III	311.007	350d -A		2s 2p ² - 2s 2p(2P°) 6d	2D - 2P°	3/2 - 3/2	M11
N III	311.113	350d -A		2s 2p ² - 2s 2p(2P°) 6d	2D - 2F°	3/2 - 3/2	M11
N III	311.550	500		2s 2p ² - 2s 2p(2P°) 6d	2D - 2F°	3/2 - 3/2	M11
N III	311.636	500		2s ² 2p - 2s 2p(2P°) 3p	g ² P° - 2D	1/2 - 3/2	M11
N III	311.721	400		2s ² 2p - 2s 2p(2P°) 3p	g ² P° - 2D	3/2 - 3/2	M11
N III	314.715	800	7	2s ² 2p - 2s 2p(2P°) 3p	g ² P° - 2D	3/2 - 3/2	M11
				2p - 4d	g ² P° - 2D	1/2 - 3/2	M11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N III	314.850	800b	7	2p - 4d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	314.877	800b	7	2p - 4d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	321.079	500b		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4s$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	321.135	500b		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4s$	$4P - 4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	321.162	500b		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4s$	$4P - 4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M11
N III	321.198	500b		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4s$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	321.278	500b		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4s$	$4P - 4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M11
N III	323.263	600d - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	323.436	500	6	$2s^2 2p - 2s 2p(^2P^{\circ}) 3p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	323.493	500	6	$2s^2 2p - 2s 2p(^2P^{\circ}) 3p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	323.620	500	6	$2s^2 2p - 2s 2p(^2P^{\circ}) 3p$	$g^2P^{\circ} - ^2P$	$\frac{5}{2} - \frac{3}{2}$	M11
N III	323.675	500	6	$2s^2 2p - 2s 2p(^2P^{\circ}) 3p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	325.788	20d - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 9d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	325.841	50d - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 9d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	329.242	50d - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 8d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	329.307	100d - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 8d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	330.26	300d - A		$2s 2p^2 - 2s 2p(^1P^{\circ}) 4d$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	332.140	650		2p - 4s	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	332.333	650		2p - 4s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	334.407	200 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 7d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	334.476	250 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 7d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	338.349	500 - A		$2s 2p^2 - 2s 2p(^1P^{\circ}) 3d$	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	338.808	250d - A		$2s 2p^2 - 2p^2(^2P) 3p$	$^2P - ^2S^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	338.937	300d - A		$2s 2p^2 - 2p^2(^2P) 3p$	$^2P - ^2S^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	340.20	500d - A		$2s 2p^2 - 2s 2p(^1P^{\circ}) 3d$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	342.665	250 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 6d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	342.741	300 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 9d$	$^2P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	347.072	100 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4d$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	347.148	200 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4d$	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M11
N III	348.683	800b - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4d$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	348.816	800b - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4d$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	351.979	500b - A		$2s^2 1p^2 - 2s 2p(^2P^{\circ}) 4d$	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	352.114	20 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 7d$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	357.238	400 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	357.324	450 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	358.278	600b	11	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - 4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	358.327	600b	11	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - 4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	358.356	600b	11	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	358.401	600b	11	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	358.469	600b	11	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - 4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	358.509	600b	11	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - 4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M11
N III	358.578	600b	11	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - 4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	M11
N III	361.061	100 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 6d$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	361.143	50 - A		$2s 2p^2 - 2p^2(^2P) 3p$	$^2P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	361.205	50 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 6d$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	361.288	200 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 6d$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	362.831	700b	10	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	362.876	700b	10	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	362.902	700b	10	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	362.949	700b	10	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M11
N III	362.982	700b	10	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	M11
N III	363.004	700b	10	$2s 2p^2 - 2s 2p(^2P^{\circ}) 3d$	$4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M11
N III	370.640	300 - A		$2s 2p^2 - 2p^2(^2P) 3p$	$^2P - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	370.794	350 - A		$2s 2p^2 - 2p^2(^2P) 3p$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	374.204	900	5	2p - 3d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	374.441	900	5	2p - 3d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	377.286	100 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M11
N III	377.380	100 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	377.444	100 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M11
N III	377.540	250 - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	387.483	500b - A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 4d$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	396.186	450		$2s 2p^2 - 2s 2p(^1P^{\circ}) 3s$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11
N III	398.885	500 - A		$2s 2p^2 - 2s 2p(^1P^{\circ}) 3d$	$^2P - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M11
N III	399.045	600b - A		$2s 2p^2 - 2s 2p(^1P^{\circ}) 3d$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M11
N III	399.06	600b - A		$2s 2p^2 - 2s 2p(^1P^{\circ}) 3d$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N III	411.056	350 -A		2s 2p ² - 2s 2p (² P°) 4d	² P - ² P°	½ - ½	M11
N III	411.173	200 -A		2s 2p ² - 2s 2p (² P°) 4d	² P - ² P°	½ - ½	M11
N III	411.243	200 -A		2s 2p ² - 2s 2p (² P°) 4d	² P - ² P°	½ - ½	M11
N III	411.361	400 -A		2s 2p ² - 2s 2p (² P°) 4d	² P - ² P°	½ - ½	M11
N III	413.681	450		2s 2p ² - 2s 2p (² P°) 3d	² D - ² P°	½ - ½	M11
N III	417.797	450		2s 2p ² - 2s 2p (² P°) 3d	² D - ² P°	½ - ½	M11
N III	418.712	650	16	2s 2p ² - 2s 2p (² P°) 3d	² D - ² F°	½ - ½	M11
N III	418.919	650	16	2s 2p ² - 2s 2p (² P°) 3d	² D - ² F°	½ - ½	M11
N III	428.180	600b	15	2s 2p ² - 2s 2p (² P°) 3d	² D - ² F°	½ - ½	M11
N III	428.244	600b	15	2s 2p ² - 2s 2p (² P°) 3d	² D - ² F°	½ - ½	M11
N III	433.911	650b	9	2s 2p ² - 2s 2p (² P°) 3s	⁴ P - ⁴ P°	¾ - ¾	M11
N III	434.014	650b	9	2s 2p ² - 2s 2p (² P°) 3s	⁴ P - ⁴ P°	¾ - ¾	M11
N III	434.066	650b	9	2s 2p ² - 2s 2p (² P°) 3s	⁴ P - ⁴ P°	¾ - ¾	M11
N III	434.129	650b	9	2s 2p ² - 2s 2p (² P°) 3s	⁴ P - ⁴ P°	¾ - ¾	M11
N III	434.246	650b	9	2s 2p ² - 2s 2p (² P°) 3s	⁴ P - ⁴ P°	¾ - ¾	M11
N III	434.280	650b	9	2s 2p ² - 2s 2p (² P°) 3s	⁴ P - ⁴ P°	¾ - ¾	M11
N III	448.285	350 -A		2p ³ - 2p ² (² P) 3d	⁴ S° - ⁴ P	¾ - ½	M11
N III	448.384	450 -A		2p ³ - 2p ² (² P) 3d	⁴ S° - ⁴ P	¾ - ½	M11
N III	448.549	450 -A		2p ³ - 2p ² (² P) 3d	⁴ S° - ⁴ P	¾ - ½	M11
N III	449.559	450		2s 2p ² - 2s 2p (¹ P°) 3s	² S - ² P°	½ - ½	M11
N III	451.869	900	4	2p - 3s	g ² P° - ² S	½ - ½	M11
N III	452.226	900	4	2p - 3s	g ² P° - ² S	½ - ½	M11
N III	456.077	600		2s 2p ² - 2s ² 4f	² D - ² F°	½ - ½	M11
N III	467.432	500 -A		2p ³ - 2p ² (² P) 3s	⁴ S° - ⁴ P	¾ - ¾	M11
N III	467.649	450 -A		2p ³ - 2p ² (² P) 3s	⁴ S° - ⁴ P	¾ - ¾	M11
N III	467.795	350 -A		2p ³ - 2p ² (² P) 3s	⁴ S° - ⁴ P	¾ - ¾	M11
N III	472.239	550	18	2s 2p ² - 2s 2p (² P°) 3d	² S - ² P°	½ - ½	M11
N III	472.399	550	18	2s 2p ² - 2s 2p (² P°) 3d	² S - ² P°	½ - ½	M11
N III	481.778	500		2s 2p ² - 2s 2p (¹ P°) 3s	² P - ² P°	½ - ½	M11
N III	482.030	500		2s 2p ² - 2s 2p (¹ P°) 3s	² P - ² P°	½ - ½	M11
N III	509.585	400	14	2s 2p ² - 2s 2p (² P°) 3s	² D - ² P°	½ - ½	E3
N III	509.897	350	14	2s 2p ² - 2s 2p (² P°) 3s	² D - ² P°	½ - ½	E3
N III	530.037	200		2s 2p ² - 2s 2p (² P°) 3d	² P - ² D°	½ - ½	E3
N III	530.268	250		2s 2p ² - 2s 2p (² P°) 3d	² P - ² D°	½ - ½	E3
N III	601.468	100		2s 2p ² - 2s 2p (² P°) 3s	² S - ² P°	½ - ½	E3
N III	601.878	10		2s 2p ² - 2s 2p (² P°) 3s	² S - ² P°	½ - ½	E3
N III	684.996	700	3	2s ² 2p - 2s 2p ²	g ² P° - ² P	½ - ¾	E6, E3
N III	685.513	750	3	2s ² 2p - 2s 2p ²	g ² P° - ² P	½ - ¾	E6, E3
N III	685.816	800	3	2s ² 2p - 2s 2p ²	g ² P° - ² P	½ - ¾	E6, E3
N III	686.335	700	3	2s ² 2p - 2s 2p ²	g ² P° - ² P	½ - ¾	E6, E3
N III	691.187	100		2s 2p ² - 2s ² 3p	² D - ² P°	½ - ¾	E3
N III	691.388	50		2s 2p ² - 2s ² 3p	² D - ² P°	½ - ¾	E3
N III	763.340	700	2	2s ² 2p - 2s 2p ²	g ² P° - ² S	½ - ½	E6, E3
N III	764.357	750	2	2s ² 2p - 2s 2p ²	g ² P° - ² S	½ - ½	E6, E3
N III	771.544	500	8	2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ¾	E6, E3
N III	771.901	550	8	2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ¾	E6, E3
N III	772.385	600	8	2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ¾	E6, E3
N III	772.891	450	13	2s 2p ² - 2p ³	² D - ² P°	½ - ¾	E3
N III	772.975	400	13	2s 2p ² - 2p ³	² D - ² P°	½ - ¾	E3
N III	871.850	10		2s 2p ² - 2s ² 3p	² S - ² P°	½ - ¾	E3
N III	979.842	400	12	2s 2p ² - 2p ³	² D - ² D°	½ - ¾	E3
N III	979.919	450	12	2s 2p ² - 2p ³	² D - ² D°	½ - ¾	E3
N III	989.790	800	1	2s ² 2p - 2s 2p ²	g ² P° - ² D	½ - ¾	E6, E3
N III	991.514	600	1	2s ² 2p - 2s 2p ²	g ² P° - ² D	½ - ¾	E6, E3
N III	991.579	900	1	2s ² 2p - 2s 2p ²	g ² P° - ² D	½ - ¾	E6, E3
N III	1006.015	300	17	2s 2p ² - 2p ³	² S - ² P°	½ - ¾	E3
N III	1183.030	350	20	2s 2p ² - 2p ³	² P - ² P°	½ - ½	E3
N III	1184.544	400	20	2s 2p ² - 2p ³	² P - ² P°	½ - ½	E3
N III	1324.40	150		3d - 5f	² D - ² F°	¾ - ¾	F38
N III	1345.81	200 -A		2s 2p (² P°) 3p - 2s 2p (² P°) 4d	⁴ D - ⁴ F°	¾ - ¾	F38
N III	1346.22	200 -A		2s 2p (² P°) 3p - 2s 2p (² P°) 4d	⁴ D - ⁴ F°	¾ - ¾	F38
N III	1347.56	10 -A		2s 2p (² P°) 3p - 2s 2p (² P°) 4d	⁴ D - ⁴ F°	¾ - ¾	F38
N III	1387.31	200		3p - 4d	² P° - ² D	¾ - ¾	E3
N III	1470.68	10 -A		2s 2p (² P°) 3p - 2s 2p (² P°) 4d	⁴ P - ⁴ D°	½ - ¾	F38
N III	1471.02	50 -A		2s 2p (² P°) 3p - 2s 2p (² P°) 4d	⁴ P - ⁴ D°	½ - ¾	F38

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N III	1471.69	100 -A		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4d	⁴ P - ⁴ D°	½ - ¾	F38
N III	1694.72	P 10		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ D - ⁴ P°	¾ - ¾	F38
N III	1596.54	150		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ D - ⁴ P°	¾ - ¾	F38
N III	1697.06	P 10		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ D - ⁴ P°	½ - ¾	F38
N III	1698.08	P 100		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ D - ⁴ P°	½ - ¾	F38
N III	1698.87	P 100		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ D - ⁴ P°	½ - ½	F38
N III	1699.32	250		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ D - ⁴ P°	¾ - ¾	F38
N III	1699.88	P 200		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ D - ⁴ P°	¾ - ¾	F38
N III	1730.04	400 -A		2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ F° - ⁴ G	¾ - ¾	E3
N III	1746.82	P		2s ² 2p - 2s 2p ²	g ³ P° - ⁴ P	½ - ¾	E5
N III	1747.86	450	19	2s 2p ² - 2p ³	³ P - ³ D°	½ - ¾	E3
N III	1748.61	3		2s ² 2p - 2s 2p ²	g ³ P° - ⁴ P	½ - ½	E5
N III	1749.674	3		2s ² 2p - 2s 2p ²	g ³ P° - ⁴ P	¾ - ¾	E5
N III	1751.24	300	19	2s 2p ³ - 2p ³	³ P - ³ D°	¾ - ¾	E3
N III	1751.75	500	19	2s 2p ² - 2p ³	³ P - ³ D°	¾ - ¾	E3
N III	1752.16	P		2s ² 2p - 2s 2p ²	g ³ P° - ⁴ P	¾ - ¾	E5
N III	1753.986	1		2s ² 2p - 2s 2p ²	g ³ P° - ⁴ P	¾ - ¾	E5
N III	1804.3	300	22	3p - 4s	³ P° - ³ S	½ - ½	E3
N III	1805.5	350	22	3p - 4s	³ P° - ³ S	¾ - ¾	F3
N III	1835.51	P 150		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ S - ⁴ P°	¾ - ¾	F36
N III	1839.44	F 100		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ S - ⁴ P°	¾ - ¾	F38
N III	1841.57	P 50		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ S - ⁴ P°	¾ - ¾	F38
N III	1845.64	250 -A		2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ D° - ⁴ F	¾ - ¾	E3
N III	1845.80	200 -A		2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ D° - ⁴ F	¾ - ¾	E3
N III	1885.25	500	24	3d - 4f	³ D - ³ F°	¾ - ¾	E3
N III	1906.22	100 -A		2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	³ D° - ⁴ F	¾ - ¾	E15
N III	1906.89	100 -A		2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	³ D° - ⁴ F	¾ - ¾	E15
N III	1907.28	400 -A		2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	³ D° - ⁴ F	¾ - ¾	E15
N III	1907.99	P 300 -A	27	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	³ D° - ³ F	¾ - ¾	E15
N III	1908.21	P 460 -A	27	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	³ D° - ³ F	¾ - ¾	E15
N III	1908.96	100 -A	27	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	³ D° - ³ F	¾ - ¾	E15
N III	1918.69	10 -A	29	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ P° - ⁴ D	¾ - ½	E15
N III	1919.06	10 -A		2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ P° - ³ D	¾ - ¾	E15
N III	1919.44	50 -A	29	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ P° - ⁴ D	¾ - ½	E15
N III	1919.71	100 -A	29	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ P° - ⁴ D	¾ - ¾	E15
N III	1919.99	100 -A	29	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ P° - ⁴ D	½ - ½	E15
N III	1920.86	400 -A	29	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ P° - ⁴ D	¾ - ¾	E15
N III	1921.49	200 -A	29	2s 2p(³ P°) 3d - 2s 2p(³ P°) 4f	⁴ P° - ⁴ D	¾ - ¾	E15
N III	1946.99	250		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ P - ⁴ P°	¾ - ¾	F38
N III	1949.22	300		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ P - ⁴ P°	¾ - ¾	F38
N III	1949.76	P 200		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ P - ⁴ P°	½ - ¾	F38
N III	1951.43	100		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ P - ⁴ P°	¾ - ¾	F38
N III	1952.14	P 50		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ P - ⁴ P°	½ - ½	F38
N III	1953.66	150		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ P - ⁴ P°	¾ - ¾	F38
N III	1953.80	150		2s 2p(³ P°) 3p - 2s 2p(³ P°) 4s	⁴ P - ⁴ P°	¾ - ½	F38

NITROGEN IV (N³⁺), Z = 7
 Ground State 1s²2s² 1S₀ (4 electrons)
 Ionization Potential 624 866 eV; 77.742 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N IV	159.366	1d -A	6.38	2s 2p - 2p 13p	³ P° - ³ P	2 - 2	M11
N IV	159.833	1d -A	6.37	2s 2p - 2p 12p	³ P° - ³ P	2 - 2	M11
N IV	160.451	1d -A	6.36	2s 2p - 2p 11p	³ P° - ³ P	2 - 2	M11
N IV	161.256	2d -A	6.35	2s 2p - 2p 10p	³ P° - ³ P	2 - 2	M11
N IV	161.286	2d -A	6.34	2s 2p - 2p 10p	³ P° - ³ D	2 - 3	M11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N IV	162.374	2 -A	6.33	2s2p - 2p9p	3p° - 3p	2-2	M11
N IV	162.423	10 -A	6.32	2s2p - 2p9p	3p° - 3D	2-3	M11
N IV	162.816	1d	2.16	2s ³ - 2s13p	g ¹ S - 1P°	0-1	M11
N IV	163.311	1d	2.15	2s ³ - 2s12p	g ¹ S - 1P°	0-1	M11
N IV	163.949	10d	2.14	2s ³ - 2s11p	g ¹ S - 1P°	0-1	M11
N IV	163.972	2 -A	6.31	2s2p - 2p8p	3p° - 3p	2-2	M11
N IV	164.048	50 -A	6.30	2s2p - 2p8p	3p° - 3D	2-3	M11
N IV	164.794	30	2.13	2s ³ - 2s10p	g ¹ S - 1P°	0-1	M11
N IV	165.945	50	2.12	2s ³ - 2s9p	g ¹ S - 1P°	0-1	M11
N IV	166.337	10 -A	6.29	2s2p - 2p7p	3p° - 3p	1-2	M11
N IV	166.377	20 -A	6.29	2s2p - 2p7p	3p° - 3D	2-2	M11
N IV	166.496	20 -A	6.28	2s2p - 2p7p	3p° - 3D	2-3	M11
N IV	166.540	75 -A	6.28	2s2p - 2p7p	3p° - 3D	2-2	M11
N IV	167.70	150	2.10	2s ³ - 2s8p	g ¹ S - 1P°	0-1	M11
N IV	170.074	200	2.09	2s ³ - 2s7p	g ¹ S - 1P°	0-1	M11
N IV	170.208	50 -A	6.27	2s2p - 2p6p	3p° - 3p	1-2	M11
N IV	170.249	100 -A	6.27	2s2p - 2p6p	3p° - 3p	2-2	M11
N IV	170.463	50 -A	6.26	2s2p - 2p6p	3p° - 3D	2-3	M11
N IV	170.505	100 -A	6.26	2s2p - 2p6p	3p° - 3D	2-2	M11
N IV	174.602	200	2.07	2s ³ - 2s6p	g ¹ S - 1P°	0-1	M11
N IV	177.119	100b -A	6.25	2s2p - 2p5p	3p° - 3p	1-2	M11
N IV	177.142	100b -A	6.25	2s2p - 2p5p	3p° - 3p	1-1	M11
N IV	177.163	200 -A	6.25	2s2p - 2p5p	3p° - 3p	2-2	M11
N IV	177.182	100b -A	6.25	2s2p - 2p5p	3p° - 3p	2-1	M11
N IV	177.602	100b -A	6.24	2s2p - 2p5p	3p° - 3D	2-3	M11
N IV	177.621	100b -A	6.24	2s2p - 2p5p	3p° - 3D	1-1	M11
N IV	177.646	250 -A	6.24	2s2p - 2p5p	3p° - 3D	2-2	M11
N IV	178.547	1 -A	12.29	2s2p - 2p11p	1P° - 1D	1-2	M11
N IV	179.554	2 -A	12.28	2s2p - 2p10p	1P° - 1D	1-2	M11
N IV	180.928	5 -A	12.27	2s2p - 2p9p	1P° - 1D	1-2	M11
N IV	181.746	400	2.06	2s ³ - 2s5p	g ¹ S - 1P°	0-1	M11
N IV	181.943	10d	6.23	2s2p - 2s15d	3p° - 3D	2-3	M11
N IV	182.323	20d	6.22	2s2p - 2s14d	3p° - 3D	2-3	M11
N IV	182.827	30d	6.21	2s2p - 2s13d	3p° - 3D	2-3	M11
N IV	182.894	10 -A	12.26	2s2p - 2p8p	1P° - 1D	1-2	M11
N IV	183.146	5d -A	12.25	2s2p - 2p8p	1P° - 1P	1-1	M11
N IV	183.432	50d	6.20	2s2p - 2s12d	3p° - 3D	1-2	M11
N IV	183.450	50 ^a	6.20	2s2p - 2s12d	3p° - 3D	2-3	M11
N IV	184.200	75d	6.19	2s2p - 2s11d	3p° - 3D	1-2	M11
N IV	184.247	75d	6.19	2s2p - 2s11d	3p° - 3D	2-3	M11
N IV	184.437	1	6.18	2s2p - 2s11s	3p° - 3S	1-1	M11
N IV	184.485	2	6.18	2s2p - 2s11s	3p° - 3S	2-1	M11
N IV	185.237	150d	6.17	2s2p - 2s10d	3p° - 3D	0-1	M11
N IV	185.257	150d	6.17	2s2p - 2s10d	3p° - 3D	1-2	M11
N IV	185.306	200d	6.17	2s2p - 2s10d	3p° - 3D	2-3	M11
N IV	185.568	3	6.16	2s2p - 2s10s	3p° - 3S	1-1	M11
N IV	185.623	5	6.16	2s2p - 2s10s	3p° - 3S	2-1	M11
N IV	185.853	75 -A	12.24	2s2p - 2p7p	1P° - 1D	1-2	M11
N IV	186.218	50 -A	12.23	2s2p - 2p7p	1P° - 1P	1-1	M11
N IV	186.690	250d	6.15	2s2p - 2s9d	3p° - 3D	0-1	M11
N IV	186.709	250d	6.15	2s2p - 2s9d	3p° - 3D	1-2	M11
N IV	186.759	300d	6.15	2s2p - 2s9d	3p° - 3D	2-3	M11
N IV	187.123	10	6.14	2s2p - 2s9s	3p° - 3S	0-1	M11
N IV	187.142	10	6.14	2s2p - 2s9s	3p° - 3S	1-1	M11
N IV	187.194	20	6.14	2s2p - 2s9s	3p° - 3S	2-1	M11
N IV	188.583	200b	6.13	2s2p - 2s8s	3p° - 3S	0-1	M11
N IV	188.606	200b	6.13	2s2p - 2s8s	3p° - 3S	1-1	M11
N IV	188.656	250	6.13	2s2p - 2s8s	3p° - 3S	2-1	M11
N IV	188.743	300b	6.12	2s2p - 2s8d	3p° - 3D	0-1	M11
N IV	188.762	300b	6.12	2s2p - 2s8d	3p° - 3D	1-2	M11
N IV	188.818	300	6.12	2s2p - 2s8d	3p° - 3D	2-3	M11
N IV	189.365	1	6.11	2s2p - 2p4p	3p° - 3S	0-1	M11
N IV	189.386	5	6.11	2s2p - 2p4p	3p° - 3S	1-1	M11
N IV	189.437	10	6.11	2s2p - 2p4p	3p° - 3S	2-1	M11
N IV	190.625	200 -A	12.22	2s2p - 2p6p	1P° - 1D	1-2	M11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N IV	191.228	1.00 -A	12.21	2s 2p - 2p 6p	$1P^{\circ} - 1P$	1-1	M11
N IV	191.551	400b	6.10	2s 2p - 2p 4p	$3P^{\circ} - 3P$	1-2	M11
N IV	191.676	400b	6.10	2s 2p - 2p 4p	$3P^{\circ} - 3P$	1-1	M11
N IV	191.702	400b	6.10	2s 2p - 2p 4p	$3P^{\circ} - 3P$	2-2	M11
N IV	191.727	400b	6.10	2s 2p - 2p 4p	$3P^{\circ} - 3P$	2-1	M11
N IV	191.748	400b	6.10	2s 2p - 2p 4p	$3P^{\circ} - 3P$	1-0	M11
N IV	191.868	350b	6.09	2s 2p - 2s 7d	$3P^{\circ} - 3D$	0-1	M11
N IV	191.898	350b	6.09	2s 2p - 2s 7d	$3P^{\circ} - 3D$	1-2	M11
N IV	191.951	350	6.09	2s 2p - 2s 7d	$3P^{\circ} - 3D$	2-3	M11
N IV	192.533	10d -A	15.23	2p ³ - 2p 13d	$3P^{\circ} - 3D^{\circ}$	2-3	M11
N IV	192.859	400b	6.08	2s 2p - 2p 4p	$3P^{\circ} - 3D$	2-3	M11
N IV	192.888	400b	6.08	2s 2p - 2p 4p	$3P^{\circ} - 3D$	1-1	M11
N IV	192.908	400b	6.08	2s 2p - 2p 4p	$3P^{\circ} - 3D$	2-2	M11
N IV	192.941	400b	6.08	2s 2p - 2p 4p	$3P^{\circ} - 3D$	2-1	M11
N IV	193.139	300b	6.07	2s 2p - 2s 7s	$3P^{\circ} - 3S$	0-1	M11
N IV	193.160	300b	6.07	2s 2p - 2s 7s	$3P^{\circ} - 3S$	1-1	M11
N IV	193.214	350	6.07	2s 2p - 2s 7s	$3P^{\circ} - 3S$	2-1	M11
N IV	194.083	75d -A	15.22	2p ³ - 2p 11d	$3P^{\circ} - 3D^{\circ}$	2-3	M11
N IV	195.202	20d -A	15.21	2p ³ - 2p 10d	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	195.258	100d -A	15.20	2p ³ - 2p 10d	$3P^{\circ} - 3D^{\circ}$	2-3	M11
N IV	195.610	1 -A	15.19	2p ³ - 2p 10s	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	196.802	100d -A	15.18	2p ³ - 2p 9d	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	196.866	500b -A	15.17	2p ³ - 2p 9d	$3P^{\circ} - 3D^{\circ}$	2-3	M11
N IV	196.921	400b	6.06	2s 2p - 2s 6d	$3P^{\circ} - 3D$	0-1	M11
N IV	196.944	400b	6.06	2s 2p - 2s 6d	$3P^{\circ} - 3D$	1-2	M11
N IV	197.000	400	6.06	2s 2p - 2s 6d	$3P^{\circ} - 3D$	2-3	M11
N IV	197.230	500	2.04	2s ³ - 2s 4p	$3^1S - 1P^{\circ}$	0-1	M11
N IV	197.343	2 -A	15.16	2p ³ - 2p 9s	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	198.740	250b	6.05	2s 2p - 2s 6s	$3P^{\circ} - 3S$	0-1	M11
N IV	198.764	250b	6.05	2s 2p - 2s 6s	$3P^{\circ} - 3S$	1-1	M11
N IV	198.821	300	6.05	2s 2p - 2s 6s	$3P^{\circ} - 3S$	2-1	M11
N IV	199.087	200d -A	15.15	2p ³ - 2p 8d	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	199.159	450b -A	15.14	2p ³ - 2p 8d	$3P^{\circ} - 3D^{\circ}$	2-3	M11
N IV	199.806	20 -A	15.13	2p ³ - 2p 8s	$3P^{\circ} - 3P^{\circ}$	1-2	M11
N IV	199.857	50 -A	15.13	2p ³ - 2p 8s	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	200.340	300 -A	12.20	2s 2p - 2p 5p	$1P^{\circ} - 1P$	1-1	M11
N IV	201.988	100d -A	18.22	2p ³ - 2p 9d	$1D - 1P^{\circ}$	2-1	M11
N IV	202.485	300d -A	15.12	2p ³ - 2p 7d	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	202.597	500b -A	15.11	2p ³ - 2p 7d	$3P^{\circ} - 3D^{\circ}$	2-3	M11
N IV	203.642	50b -A	15.10	2p ³ - 2p 7s	$3P^{\circ} - 3P^{\circ}$	1-2	M11
N IV	203.694	50b -A	15.10	2p ³ - 2p 7s	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	203.780	50 -A	15.10	2p ³ - 2p 7s	$3P^{\circ} - 3P^{\circ}$	2-1	M11
N IV	204.302	150d -A	18.21	2p ³ - 2p 8d	$1D - 1P^{\circ}$	2-1	M21
N IV	205.940	500b	6.04	2s 2p - 2s 5d	$3P^{\circ} - 3D$	0-1	M11
N IV	205.968	500b	6.04	2s 2p - 2s 5d	$3P^{\circ} - 3D$	1-2	M11
N IV	206.028	500	6.04	2s 2p - 2s 5d	$3P^{\circ} - 3D$	2-3	M11
N IV	206.707	10d	12.19	2s 2p - 2s 13d	$1P^{\circ} - 1D$	1-2	M11
N IV	207.500	20d	12.18	2s 2p - 2s 12d	$1P^{\circ} - 1D$	1-2	M11
N IV	207.812	200d -A	18.20	2p ³ - 2p 7d	$1D - 1P^{\circ}$	2-1	M21
N IV	208.066	400d -A	15.09	2p ³ - 2p 6d	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	208.113	400b -A	15.08	2p ³ - 2p 6d	$3P^{\circ} - 3D^{\circ}$	0-1	M11
N IV	208.131	400b -A	15.08	2p ³ - 2p 6d	$3P^{\circ} - 3D^{\circ}$	1-2	M11
N IV	208.150	400b -A	15.08	2p ³ - 2p 6d	$3P^{\circ} - 3D^{\circ}$	2-3	M11
N IV	208.510	100d	12.17	2s 2p - 2s 11d	$1P^{\circ} - 1D$	1-2	M11
N IV	209.378	400b	6.03	2s 2p - 2s 5s	$3P^{\circ} - 3S$	0-1	M11
N IV	209.407	400b	6.03	2s 2p - 2s 5s	$3P^{\circ} - 3S$	1-1	M11
N IV	209.471	400b	6.03	2s 2p - 2s 5s	$3P^{\circ} - 3S$	2-1	M11
N IV	209.842	150b	12.16	2s 2p - 2s 10d	$1P^{\circ} - 1D$	1-2	M11
N IV	209.975	100b -A	15.07	2p ³ - 2p 6s	$3P^{\circ} - 3P^{\circ}$	1-2	M11
N IV	210.028	200 -A	15.07	2p ³ - 2p 6s	$3P^{\circ} - 3P^{\circ}$	2-2	M11
N IV	210.092	100b -A	15.07	2p ³ - 2p 6s	$3P^{\circ} - 3P^{\circ}$	1-0	M11
N IV	210.111	100b -A	15.07	2p ³ - 2p 6s	$3P^{\circ} - 3P^{\circ}$	2-1	M11
N IV	211.405	400	2.03	2s ³ - 2p 3s	$3^1S - 1P^{\circ}$	0-1	M11
N IV	211.679	250d	12.15	2s 2p - 2s 9d	$1P^{\circ} - 1D$	1-2	M11
N IV	213.443	300d -A	18.19	2p ³ - 2p 6d	$1D - 1P^{\circ}$	2-1	M21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N IV	214.291	250	12.14	2s2p - 2s8d	$1P^{\circ} - 1D$	1-2	M11
N IV	214.414	50d - A	18.17	$2p^3 - 2p6d$	$1D - 1F^{\circ}$	2-3	M11
N IV	214.843	10	12.13	2s2p - 2s8s	$1P^{\circ} - 1S$	1-0	M11
N IV	215.755	75	12.12	2s2p - 2p4p	$1P^{\circ} - 1S$	1-0	M11
N IV	217.218	500	13.11	2s2p - 2p4p	$1P^{\circ} - 1D$	i-2	M11
N IV	217.895	500d - A	15.06	$2p^3 - 2p5d$	$3P - 3P^{\circ}$	2-2	M11
N IV	218.044	400b - A	15.05	$2p^3 - 2p5d$	$3P - 3D^{\circ}$	0-1	M11
N IV	218.067	400b - A	15.05	$2p^3 - 2p5d$	$3P - 3D^{\circ}$	1-2	M11
N IV	218.088	400b - A	15.05	$2p^3 - 2p5d$	$3P - 3D^{\circ}$	2-3	M11
N IV	218.116	400b - A	15.05	$2p^3 - 2p5d$	$3P - 3D^{\circ}$	2-2	M11
N IV	218.250	400	12.10	2s2p - 2s7d	$1P^{\circ} - 1D$	1-2	M11
N IV	220.124	50	12.09	2s2p - 2s7s	$1P^{\circ} - 1S$	1-0	M11
N IV	220.280	400	12.08	2s2p - 2p4p	$1P^{\circ} - 1P$	1-1	M11
N IV	220.885	2d - A	18.42	$2p^3 - 2p10d$	$1S - 1P^{\circ}$	0-1	M11
N IV	221.729	300b - A	15.04	$2p^3 - 2p5s$	$3P - 3P^{\circ}$	1-2	M11
N IV	221.789	450 - A	15.04	$2p^3 - 2p5s$	$3P - 3P^{\circ}$	2-2	M11
N IV	221.854	300b	15.04	$2p^3 - 2p5s$	$3P - 3P^{\circ}$	1-0	M11
N IV	221.871	300b - A	15.04	$2p^3 - 2p5s$	$3P - 3P^{\circ}$	2-1	M11
N IV	222.893	30d - A	18.41	$2p^3 - 2p9d$	$1S - 1P^{\circ}$	0-1	M11
N IV	223.421	500d - A	18.16	$2p^3 - 2p5d$	$1D - 1P^{\circ}$	2-1	M21
N IV	224.629	450b	12.07	2s2p - 2s6d	$1P^{\circ} - 1D$	1-2	M11
N IV	225.110	800b	6	2s2p - 2s4d	$3P^{\circ} - 3D$	0-1	M11
N IV	225.142	800b	6	2s2p - 2s4d	$3P^{\circ} - 3D$	1-2	M11
N IV	225.212	800	6	2s2p - 2s4d	$3P^{\circ} - 3D$	2-3	M11
N IV	225.741	50d - A	18.40	$2p^3 - 2p8d$	$1S - 1P^{\circ}$	0-1	M11
N IV	227.026	100	12.06	2s2p - 2s6s	$1P^{\circ} - 1S$	1-0	M11
N IV	230.035	100d - A	18.39	$2p^3 - 2p7d$	$1S - 1P^{\circ}$	0-1	M11
N IV	232.112	100	5.07	2s2p - 2p3p	$3P^{\circ} - 3S$	0-1	M11
N IV	232.145	150	5.07	2s2p - 2p3p	$3P^{\circ} - 3S$	1-1	M11
N IV	232.223	200	5.07	2s2p - 2p3p	$3P^{\circ} - 3S$	2-1	M11
N IV	234.124	600b	5.05	2s2p - 2p3p	$3P^{\circ} - 3P$	1-2	M11
N IV	234.195	600b	5.05	2s2p - 2p3p	$3P^{\circ} - 3P$	2-2	M11
N IV	234.249	600b	5.05	2s2p - 2p3p	$3P^{\circ} - 3P$	2-1	M11
N IV	236.068	550	12.05	2s2p - 2s5d	$1P^{\circ} - 1D$	1-2	M11
N IV	236.954	150d - A	18.38	$2p^3 - 2p6d$	$1S - 1P^{\circ}$	0-1	M11
N IV	237.873	400b	5.04	2s2p - 2s4s	$3P^{\circ} - 3S$	0-1	M11
N IV	237.908	400b	5.04	2s2p - 2s4s	$3P^{\circ} - 3S$	1-1	M11
N IV	237.991	500	5.04	2s2p - 2s4s	$3P^{\circ} - 3S$	2-1	M11
N IV	238.657	500b	15.03	$2p^3 - 2p4d$	$3P - 3P^{\circ}$	0-1	M11
N IV	238.683	500b	15.03	$2p^3 - 2p4d$	$3P - 3P^{\circ}$	1-0	M11
N IV	238.694	500b	15.03	$2p^3 - 2p4d$	$3P - 3P^{\circ}$	1-1	M11
N IV	238.731	500b	15.03	$2p^3 - 2p4d$	$3P - 3P^{\circ}$	1-2	M11
N IV	238.769	500b	15.03	$2p^3 - 2p4d$	$3P - 3P^{\circ}$	2-1	M11
N IV	238.802	600	15.03	$2p^3 - 2p4d$	$3P - 3P^{\circ}$	2-2	M11
N IV	239.146	450b	15.02	$2p^3 - 2p4d$	$3P - 3D^{\circ}$	0-1	M11
N IV	239.174	450b	15.02	$2p^3 - 2p4d$	$3P - 3D^{\circ}$	1-2	M11
N IV	239.212	450b	15.02	$2p^3 - 2p4d$	$3P - 3D^{\circ}$	2-3	M11
N IV	239.243	450b	5.03	$2p^3 - 2p4d$	$3P - 3D^{\circ}$	2-2	M11
N IV	239.616	500b	5.03	2s2p - 2p3p	$3P^{\circ} - 3D$	2-3	M11
N IV	239.632	400b	5.03	2s2p - 2p3p	$3P^{\circ} - 3D$	1-2	M11
N IV	239.659	400b	5.03	2s2p - 2p3p	$3P^{\circ} - 3D$	0-1	M11
N IV	239.679	400b	5.03	2s2p - 2p3p	$3P^{\circ} - 3D$	1-1	M11
N IV	239.708	400b	5.03	2s2p - 2p3p	$3P^{\circ} - 3D$	2-2	M11
N IV	239.763	400b	5.03	2s2p - 2p3p	$3P^{\circ} - 3D$	2-1	M11
N IV	240.363	200	12.04	2s2p - 2s5s	$1P^{\circ} - 1S$	1-0	M11
N IV	244.100	300b	18.14	$2p^3 - 2p4d$	$1D - 1P^{\circ}$	2-1	M11
N IV	247.205	900	2	$2s^2 - 2s3p$	$g^1S - 1P^{\circ}$	0-1	M11
N IV	248.383	500	15.01	$2p^3 - 2p4s$	$3P - 3P^{\circ}$	1-2	M11
N IV	248.433	500b	15.01	$2p^3 - 2p4s$	$3P - 3P^{\circ}$	0-1	M11
N IV	248.461	500b	15.01	$2p^3 - 2p4s$	$3P - 3P^{\circ}$	2-2	M11
N IV	248.484	500b	15.01	$2p^3 - 2p4s$	$3P - 3P^{\circ}$	1-1	M11
N IV	248.540	500	15.01	$2p^3 - 2p4s$	$3P - 3P^{\circ}$	1-0	M11
N IV	248.563	500	15.01	$2p^3 - 2p4s$	$3P - 3P^{\circ}$	2-1	M11
N IV	248.654	450	18.13	$2p^3 - 2p4d$	$1D - 1F^{\circ}$	2-3	M11
N IV	249.316	300d - A	18.37	$2p^3 - 2p5d$	$1S - 1P^{\circ}$	0-1	M11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N IV	250.121	300	18.12	2p ² - 2p 4d	¹ D - ¹ D°	2-2	M11
N IV	254.238	100	18.36	2p ² - 2p 5s	¹ S - ¹ P°	0-1	M11
N IV	255.148	380	18.10	2p ² - 2p 4s	¹ D - ¹ P°	2-1	M11
N IV	258.320	150	18.09	2p ² - 2s 6f	¹ D - ¹ F°	2-3	M11
N IV	259.824	450	12.03	2s 2p - 2p 3p	¹ P° - ¹ S	1-0	M11
N IV	260.447	600	12.02	2s 2p - 2s 4d	¹ P° - ¹ D	1-2	M11
N IV	270.994	650	12	2s 2p - 2p 3p	¹ P° - ¹ D	1-2	M11
N IV	273.140	300	18.07	2p ² - 2s 5f	¹ D - ¹ F°	2-3	M11
N IV	274.451	250	11.04	2s 2p - 2s 4s	¹ P° - ¹ S	1-0	M11
N IV	275.354	450	18.35	2p ² - 2p 4d	¹ S - ¹ P°	0-1	M11
N IV	276.741	10	18.05	2p ² - 2s 5p	¹ D - ¹ P°	2-1	M11
N IV	283.419	900b	5	2s 2p - 2s 3d	³ P° - ³ D	0-1	M11
N IV	283.476	900b	5	2s 2p - 2s 3d	³ P° - ³ D	1-2	M11
N IV	283.583	900	5	2s 2p - 2s 3d	³ P° - ³ D	2-3	M11
N IV	285.561	600	11	2s 2p - 2p 3p	¹ P° - ¹ P	1-1	M11
N IV	289.479	300	18.33	2p ² - 2p 4s	¹ S - ¹ P°	0-1	M11
N IV	297.595	600b	15	2p ² - 2p 3d	³ P - ³ P°	0-1	M11
N IV	297.634	600b	15	2p ² - 2p 3d	³ P - ³ P°	1-0	M11
N IV	297.657	600b	15	2p ² - 2p 3d	³ P - ³ P°	1-1	M11
N IV	297.704	600b	15	2p ² - 2p 3d	³ P - ³ P°	1-2	M11
N IV	297.770	600b	15	2p ² - 2p 3d	³ P - ³ P°	2-1	M11
N IV	297.816	700	15	2p ² - 2p 3d	³ P - ³ P°	2-2	M11
N IV	300.318	650	18.05	2p ² - 2s 4f	¹ D - ¹ F°	2-3	M11
N IV	303.006	500b	14	2p ² - 2p 3d	³ P - ³ D°	0-1	M11
N IV	303.048	500b	14	2p ² - 2p 3d	³ P - ³ D°	1-2	M11
N IV	303.078	500b	14	2p ² - 2p 3d	³ P - ³ D°	1-1	M11
N IV	303.124	500b	14	2p ² - 2p 3d	³ P - ³ D°	2-3	M11
N IV	303.162	500b	14	2p ² - 2p 3d	³ P - ³ D°	2-2	M11
N IV	303.191	500b	14	2p ² - 2p 3d	³ P - ³ D°	2-1	M11
N IV	303.280	500	18.04	2p ² - 2p 3d	¹ D - ¹ P°	2-1	M11
N IV	314.324	20	18.01	2p ² - 2s 4p	¹ D - ¹ P°	2-1	M11
N IV	315.060	600	18	2p ² - 2p 3d	¹ D - ¹ F°	2-3	M11
N IV	317.596	200	18.31	2p ² - 2s 5p	¹ S - ¹ P°	0-1	M11
N IV	322.506	700	4	2s 2p - 2s 3s	³ P° - ³ S	0-1	M11
N IV	322.572	700	4	2s 2p - 2s 3s	¹ P° - ³ S	1-1	M11
N IV	322.722	700	4	2s 2p - 2s 3s	³ P° - ³ S	2-1	M11
N IV	323.178	600b	17	2p ² - 2p 3d	¹ D - ¹ D°	2-2	M11
N IV	335.052	850	10	2s 2p - 2s 3d	¹ P° - ¹ D	1-2	M11
N IV	344.916	600b	13	2p ² - 2p 3s	³ P - ³ P°	1-2	M11
N IV	345.025	600b	13	2p ² - 2p 3s	³ P - ³ P°	0-1	M11
N IV	345.062	600b	13	2p ² - 2p 3s	³ P - ³ P°	2-2	M11
N IV	345.111	600b	13	2p ² - 2p 3s	³ P - ³ P°	1-1	M11
N IV	345.207	600b	13	2p ² - 2p 3s	³ P - ³ P°	1-0	M11
N IV	345.261	600b	13	2p ² - 2p 3s	³ P - ³ P°	2-1	M11
N IV	351.931	500b	16	2p ² - 2p 3s	¹ D - ¹ P°	2-1	M11
N IV	353.056	700	18.30	2p ² - 2p 3d	¹ S - ¹ P°	0-1	M11
N IV	368.108	450	18.29	2p ² - 2s 4p	¹ S - ¹ P°	0-1	M11
N IV	387.353	500	9	2s 2p - 2s 3s	¹ P° - ¹ S	1-0	M11
N IV	420.769	500	18.27	2p ² - 2p 3s	¹ S - ¹ P°	0-1	M11
N IV	463.740	650	15.24	2p ² - 2s 3p	¹ D - ¹ P°	2-1	M11
N IV	765.148	850	1	2s ³ - 2s 2p	² S ¹ - ¹ P°	0-1	H2
N IV	823.273	100	3.01	2s 2p - 2p ²	³ P° - ¹ D	2-2	H2
N IV	921.992	850	3	2s 2p - 2p ²	³ P° - ³ P	1-2	H2
N IV	922.519	800	3	2s 2p - 2p ²	³ P° - ³ P	0-1	H2
N IV	923.057	700	3	2s 2p - 2p ²	³ P° - ³ P	1-1	H2
N IV	923.220	1000	3	2s 2p - 2p ²	³ P° - ³ P	2-2	H2
N IV	923.675	800	3	2s 2p - 2p ²	³ P° - ³ P	1-0	H2
N IV	924.283	850	3	2s 2p - 2p ²	³ P° - ³ P	2-1	H2
N IV	948.155	100	18.79	2s 3p - 2s 4d	³ P° - ³ D	0-1	H2
N IV	948.244	200	18.79	2s 3p - 2s 4d	³ P° - ³ D	1-2	H2
N IV	948.540	250	18.79	2s 3p - 2s 4d	³ P° - ³ D	2-3	H2
N IV	955.335	1000	8	2s 2p - 2p ²	¹ P° - ¹ S	1-0	H2
N IV	1036.16	400w	18.84	2s 3d - 2s 4f	³ D - ³ F°	2-3	H2
N IV	1078.708	300	18.88	2s 3d - 2s 4f	¹ D - ¹ F°	2-3	H2
N IV	1086.084	b	18.78	2s 3p - 2s 4s	¹ P° - ³ S	0-1	H2

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N IV	1086.269	50	18.78	2s 3p - 2s 4s	$^3P^{\circ} - ^3S$	1 - 1	H2
N IV	1086.691	100	18.78	2s 3p - 2s 4s	$^3P^{\circ} - ^3S$	2 - 1	H2
N IV	1133.117	200	18.43	2s 3s - 2p 3s	$^3S - ^3P^{\circ}$	1 - 2	H2
N IV	1135.244	150	18.43	2s 3s - 2p 3s	$^3S - ^3P^{\circ}$	1 - 1	H2
N IV	1136.241	100	18.43	2s 3s - 2p 3s	$^3S - ^3P^{\circ}$	1 - 0	H2
N IV	1168.599	150	18.83	2s 3d - 2p 3d	$^3D - ^3D^{\circ}$	3 - 3	H2
N IV	1169.063	100	18.83	2s 3d - 2p 3d	$^3D - ^3D^{\circ}$	2 - 2	H2
N IV	1169.478	50	18.83	2s 3d - 2p 3d	$^3D - ^3D^{\circ}$	1 - 1	H2
N IV	1188.006	300	18.49	2s 3s - 2p 3s	$^1S - ^1P^{\circ}$	0 - 1	H2
N IV	1224.960	50	18.76	2s 3p - 2p 3p	$^3P^{\circ} - ^3S$	0 - 1	H2
N IV	1225.192	150	18.76	2s 3p - 2p 3p	$^3P^{\circ} - ^3S$	1 - 1	H2
N IV	1225.719	200	18.76	2s 3p - 2p 3p	$^3P^{\circ} - ^3S$	2 - 1	H2
N IV	1243.73	b	18.92	2p 3d - 2s 6g	$^3F^{\circ} - ^3G$	2 - 3	H2
N IV	1244.92	50	18.92	2p 3d - 2s 6g	$^3F^{\circ} - ^3G$	2 - 4	H2
N IV	1246.51	100	18.92	2p 3d - 2s 6g	$^3F^{\circ} - ^3G$	4 - 5	H2
N IV	1270.280	250	18.75	2s 3p - 2p 3p	$^3P^{\circ} - ^3D$	2 - 3	H2
N IV	1272.160	200	18.75	2s 3p - 2p 3p	$^3P^{\circ} - ^3D$	1 - 2	H2
N IV	1272.74	100	18.75	2s 3p - 2p 3p	$^3P^{\circ} - ^3D$	2 - 2	H2
N IV	1273.47	150	18.75	2s 3p - 2p 3p	$^3P^{\circ} - ^3D$	0 - 1	H2
N IV	1273.716	100	18.75	2s 3p - 2p 3p	$^3P^{\circ} - ^3D$	1 - 1	H2
N IV	1284.218	150	18.87	2s 3d - 2s 4p	$^1D - ^1P^{\circ}$	2 - 1	H2
N IV	1296.600	250	18.86	2s 3d - 2p 3d	$^1D - ^1F^{\circ}$	2 - 3	H2
N IV	1309.557	200	18.55	2s 3p - 2p 3p	$^1P^{\circ} - ^1P$	1 - 1	H2
N IV	1323.98	100b	18.81	2s 3d - 2p 3d	$^3D - ^3F^{\circ}$	3 - 4	H2
N IV	1325.685	50	18.81	2s 3d - 2p 3d	$^3D - ^3F^{\circ}$	2 - 3	H2
N IV	1326.964	20	18.81	2s 3d - 2p 3d	$^3D - ^3F^{\circ}$	1 - 2	H2
N IV	1438.37	150	18.96	2p 3d - 2s 6g	$^1F^{\circ} - ^1G$	3 - 4	H2
N IV	1446.114	250	18.85	2s 3d - 2p 3d	$^1D - ^1D^{\circ}$	2 - 2	H2
N IV	1486.496	100	0.01	2s ² - 2s 2p	$g^1S - ^3P^{\circ}$	0 - 1	H2
N IV	1687.60	50	20	2s 4f - 2s 6g	$^3F^{\circ} - ^3G$	2 - 3	H2
N IV	1687.82	100	20	2s 4f - 2s 6g	$^3F^{\circ} - ^3G$	3 - 4	H2
N IV	1688.11	150	20	2s 4f - 2s 6g	$^3F^{\circ} - ^3G$	4 - 5	H2
N IV	1696.86	150	18.91	2p 3d - 2s 5g	$^3F^{\circ} - ^3G$	2 - 3	H2
N IV	1699.03	200	18.91	2p 3d - 2s 5g	$^3F^{\circ} - ^3G$	3 - 4	H2
N IV	1702.006	250	18.91	2p 3d - 2s 5g	$^3F^{\circ} - ^3G$	4 - 5	H2
N IV	1718.551	1000	7	2s 2p - 2p ²	$^1P^{\circ} - ^1D$	1 - 2	H2

NITROGEN V (N⁴⁺), Z = 7
 Ground State 1s²2s ²S_{1/2} (3 electrons)
 Ionization Potential 789 537.2 cm⁻¹; 97.888 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N V	128.229	1 - A	3.13	2s - 17p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	128.430	1 - A	3.12	2s - 16p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	128.662	10 - A	3.11	2s - 15p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	128.954	10 - A	3.10	2s - 14p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	129.337	20 - A	3.09	2s - 13p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	129.811	30 - A	3.08	2s - 12p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	130.431	40 - A	3.07	2s - 11p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	131.254	50 - A	3.06	2s - 10p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	132.383	60 - A	3.05	2s - 9p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2
N V	133.994	70	3.04	2s - 8p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	T2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N V	136.429	80	3.03	2s - 7p	$g^2S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	T2
N V	140.356	P 160	3.02	2s - 6p	$g^2S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H1, T2
N V	142.797	1 -A	26	2p - 18d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	142.981	1 -A	25	2p - 17d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	143.241	10 -A	24	2p - 16d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	143.520	10 -A	23	2p - 15d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	143.914	20 -A	22	2p - 14d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	144.392	30 -A	21	2p - 13d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	144.978	40 -A	20	2p - 12d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	145.742	50 -A	19	2p - 11d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	146.716	30 -A	18	2p - 10d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T2
N V	146.767	60 -A	18	2p - 10d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	146.921	30 -A	18	2p - 10s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	T2
N V	147.424	P 240	3.01	2s - 5p	$g^2S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H1, T2
N V	148.116	40 -A	16	2p - 9d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T2
N V	148.168	70 -A	16	2p - 9d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	148.328	10 -A	15	2p - 9s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	T2
N V	148.387	40 -A	15	2p - 9s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	T2
N V	150.116	70 -A	14	2p - 8d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T2
N V	150.171	140 -A	14	2p - 8d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	150.429	20 -A	13	2p - 8s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	T2
N V	150.488	50 -A	13	2p - 8s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	T2
N V	153.136	180	12	2p - 7d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T2
N V	153.192	280	12	2p - 7d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T2
N V	153.624	30	11	2p - 7s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	T2
N V	153.683	60	11	2p - 7s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	T2
N V	158.024	P 240	10	2p - 6d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1, T2
N V	158.088	P 360	10	2p - 6d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H1, T2
N V	158.862	P 40	9	2p - 6s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	H1, T2
N V	158.928	P 70	9	2p - 6s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	H1, T2
N V	162.556	P 480	3	2s - 4p	$g^2S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H1, T2
N V	166.875	P 440	8	2p - 5d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1, T2
N V	166.946	P 520	8	2p - 5d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H1, T2
N V	168.514	P 50	7	2p - 5s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	H1, T2
N V	168.587	P 120	7	2p - 5s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	H1, T2
N V	186.063	P 520	6	2p - 4d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1, T2
N V	186.149	P 620	6	2p - 4d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H1, T2
N V	190.155	P 200	5.01	2p - 4s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	H1, T2
N V	190.249	P 320	5.01	2p - 4s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	H1, T2
N V	209.274	P 800	2	2s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H1, T2
N V	209.308	P 800	2	2s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	H1, T2
N V	247.561	85	5	2p - 3d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	247.706	100	5	2p - 3d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H1
N V	266.196	120	4	2p - 3s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	H1
N V	266.379	150	4	2p - 3s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	H1
N V	424.61	35	35	3p - 6d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	424.75	40	35	3p - 6d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H1
N V	436.85	60	42	3d - 6f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	H1
N V	450.08	50	28	3s - 5p	$^3S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	511.86	70	41	3d - 5f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	H1
N V	628.744	70	27	3s - 4p	$^3S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	628.874	50	27	3s - 4p	$^3S - ^3P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	H1
N V	713.518	85	30	3p - 4d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	713.860	120	30	3p - 4d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H1
N V	748.195	120	39	3d - 4f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H1
N V	748.291	150	39	3d - 4f	$^3D - ^3F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	H1
N V	777.712	35	30	3p - 4s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	H1
N V	778.172	40	30	3p - 4s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	H1
N V	1048.20	40w	51	4d - 6f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	H1
N V	1049.65	50w	54	4f - 6g	$^3F^{\circ} - ^3G$	$\frac{7}{2} - \frac{9}{2}$	H1
N V	1238.821	1000	1	2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	1242.804	800	1	2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	H1
N V	1389.514	50	43	4s - 5p	$^3S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	1389.822	40	43	4s - 5p	$^3S - ^3P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	H1
N V	1495.5	40w-A	63	5g - 8f	$^3G - ^3F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	H1

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N V	1542.67	P	46	4p - 5d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	1549.30	85	46	4p - 5d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	1616.3	150w	50	4d - 5f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{5}{2}$	H1
N V	1619.7	250w	53	4f - 5g	$^3F^o - ^3G$	$\frac{3}{2} - \frac{5}{2}$	H1
N V	1621.92	35	52	4f - 5d	$^3F^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	H1
N V	1655.88	40	49	4d - 5p	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	H1
N V	1702.30	P	45	4p - 5s	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	H1
N V	1703.218	60	45	4p - 5s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	H1
N V	1811.08	30	58	5p - 7d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H1
N V	1811.62	35	58	5p - 7d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H1
N V	1857.60	50	60	5d - 7f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	H1
N V	1857.78	50	60	5d - 7f	$^3D - ^3F^o$	$\frac{5}{2} - \frac{3}{2}$	H1
N V	1860.24	85	62	5f - 7g	$^3F^o - ^3G$	$\frac{3}{2} - \frac{3}{2}$	H1
N V	1882.36	30	57	5p - 7s	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	H1
N V	1882.92	35	57	5p - 7s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	H1

NITROGEN VI (N^{5+}), $Z = 7$ Ground State $1s^2 \ ^1S_0$ (2 electrons)Ionization Potential $4\ 452\ 758\ \text{cm}^{-1}$; $552.057\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N VI	23.771	10	4	$1s^2 - 1s4p$	$^3S - ^3P^o$	0 - 1	E6, T12
N VI	24.898	30	3	$1s^2 - 1s3p$	$^3S - ^3P^o$	0 - 1	E6, T12
N VI	28.787	100	2	$1s^2 - 1s2p$	$^3S - ^3P^o$	0 - 1	E6, T12
N VI	29.084		1	$1s^2 - 1s2p$	$^3S - ^3P^o$	0 - 1	T12
N VI	29.53	f		$1s^2 - 1s2s$	$^3S - ^3S$	0 - 1	K8
N VI	97.4	P		$1s2s - 1s10p$	$^3S - ^3P^o$	1 - 2	F20
N VI	98.3	P		$1s2s - 1s9p$	$^3S - ^3P^o$	1 - 2	F20
N VI	99.5	P		$1s2s - 1s8p$	$^3S - ^3P^o$	1 - 2	F20
N VI	101.46	P		$1s2s - 1s7p$	$^3S - ^3P^o$	1 - 2	F20
N VI	102.6	P		$1s2p - 1s10d$	$^3P^o - ^3D$	2 - 3	F20
N VI	103.6	P		$1s2p - 1s9d$	$^3P^o - ^3D$	2 - 3	F20
N VI	104.58	P		$1s2s - 1s6p$	$^3S - ^3P^o$	1 - 2	F20
N VI	105.0	P		$1s2p - 1s8d$	$^3P^o - ^3D$	2 - 3	F20
N VI	107.15	P		$1s2p - 1s7d$	$^3P^o - ^3D$	2 - 3	F20
N VI	110.23		8	$1s2s - 1s5p$	$^3S - ^3P^o$	1 - 2	F20
N VI	110.59	P		$1s2p - 1s6d$	$^3P^o - ^3D$	2 - 3	F20
N VI	116.81		11	$1s2p - 1s5d$	$^3P^o - ^3D$	2 - 3	F20
N VI	122.44		7	$1s2s - 1s4p$	$^3S - ^3P^o$	1 - 2	F20
N VI	130.32		10	$1s2p - 1s4d$	$^3P^o - ^3D$	2 - 3	F20
N VI	161.22		6	$1s2s - 1s3p$	$^3S - ^3P^o$	1 - 2	F20
N VI	173.92		9	$1s2p - 1s3d$	$^3P^o - ^3D$	2 - 3	F20
N VI	1896.82	300	5	$1s2s - 1s2p$	$^3S - ^3P^o$	1 - 2	B10
N VI	1907.34	200	5	$1s2s - 1s2p$	$^3S - ^3P^o$	1 - 1	B10
N VI	1907.67	200	5	$1s2s - 1s2p$	$^3S - ^3P^o$	1 - 0	B10

NITROGEN VII (N^{6+}), $Z = 7$
 Ground State $1s^2S_{1/2}$ (1 electron)
 Ionization Potential $5\,380\,089\text{ cm}^{-1}$; 667.029 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
N VII	18.670	P	14	$1s-15p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	18.682	P	13	$1s-14p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	18.698	P	12	$1s-13p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	18.717	P	11	$1s-12p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	18.742	P	10	$1s-11p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	18.774	P	9	$1s-10p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	18.819	P	8	$1s-9p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	18.882	P	7	$1s-8p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	18.974	P	6	$1s-7p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	19.118	P	5	$1s-6p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	19.361	P	4	$1s-5p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2
N VII	19.826	P	3	$1s-4p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2, K8
N VII	20.910	P	2	$1s-3p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2, K8
N VII	24.781	P	1	$1s-2p$	g^2S-2P°	$\frac{1}{2} - \frac{3}{2}$	G2, T12
N VII	80.96	P		2-7			G2
N VII	83.65	P		2-6			G2
N VII	88.51	P		2-5			G2
N VII	99.13	P		2-4			G2
N VII	133.82	P		2-3			G2
N VII	194.71	P		3-8			G2
N VII	204.98	P		3-7			G2
N VII	223.12	P		3-6			G2
N VII	261.45	P		3-5			G2
N VII	370.74	P		4-9			G2
N VII	382.45	P		3-4			G2
N VII	396.68	P		4-8			G2
N VII	441.75	P		4-7			G2
N VII	535.51	P		4-6			G2
N VII	619.84	P		5-10			G2
N VII	672.42	P		5-9			G2
N VII	762.88	P		5-8			G2
N VII	826.4	P		4-5			G2
N VII	949.1	P		5-7			G2
N VII	952.99	P		6-11			G2
N VII	1046.02	P		6-10			G2
N VII	1205.0	P		6-9			G2
N VII	1521.4	P		5-6			G2
N VII	1530.2	P		6-8			G2

OXYGEN I (O^{0+}), $Z = 8$
 Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
 Ionization Potential $109\ 837.02\ \text{cm}^{-1}$; $13.618\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O I	748.4	-A		$2p^4 - 2p^3(^3D^o)6d$	$g^3P - ^3P^o$	2-2	E7
O I	749.3	-A		$2p^4 - 2p^3(^3D^o)6d$	$g^3P - ^3P^o$	1-2	E7
O I	755.8	-A		$2p^4 - 2p^3(^3D^o)5d$	$g^3P - ^3P^o$	2-2	E7
O I	755.7	-A		$2p^4 - 2p^3(^3D^o)5d$	$g^3P - ^3P^o$	1-2	E7
O I	769.3528	-A		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	2-1	E35
O I	769.4083	-A		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	2-2	E35, E7
O I	770.2600	-A		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	1-0	E35
O I	770.2907	-A		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	1-1	E35
O I	770.3464	-A		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	1-2	E35
O I	770.6986	-A		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	0-1	E35
O I	791.5136	80 -A		$2s^3 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2-1	E35, E6
O I	791.9732	200 -A		$2s^3 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2-2	E35, E6
O I	792.2330	60 -A		$2s^3 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1-0	E35, E6
O I	792.5063	40 -A		$2s^3 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1-1	E35, E6
O I	792.9381	60 -A		$2s^3 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	0-1	E35, E6
O I	792.9671	80 -A		$2s^3 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1-2	E35, E6
O I	810.6650	-A		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-1	E35
O I	811.0512	-A		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-2	E35
O I	811.4968	-A		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-0	E35
O I	811.7064	-A		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-1	E35
O I	812.0936	-A		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-2	E35
O I	812.1594	-A		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	0-1	E35
O I	850.74 P	-A		$2p^4 - 2p^3(^3D^o)7s$	$^1D - ^1D^o$	2-2	E7
O I	861.63 P	-A		$2p^4 - 2p^3(^3D^o)6s$	$^1D - ^1D^o$	2-2	E7
O I	877.7983	30 -A		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2-1	E35, E6
O I	877.8787	200 -A		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2-2	E35, E6
O I	878.2007 P	-A		$2p^4 - 2p^3(^3D^o)4d$	$^1D - ^1F^o$	2-3	E35
O I	878.9720	60 -A		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	1-0	E35, E6
O I	879.0194	40 -A		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	1-1	E35, E6
O I	879.1001	80 -A		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	1-2	E35, E6
O I	879.5507	60 -A		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	0-1	E35, E6
O I	882.8895 P	-A		$2p^4 - 2p^3(^3D^o)5s$	$^1D - ^1D^o$	2-2	E35
O I	922.0081 P	-A	8	$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1F^o$	2-3	F35
O I	922.0727 P	-A		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1D^o$	2-2	E35
O I	929.5168 P	-A		$2p^4 - 2p^3(^4S^o)7d$	$g^3P - ^3D^o$	2-3	E35
O I	930.2566 P	-A		$2p^4 - 2p^3(^4S^o)8s$	$g^3P - ^3S^o$	2-1	E35
O I	930.8862 P	-A		$2p^4 - 2p^3(^4S^o)7d$	$g^3P - ^3D^o$	1-2	E35
O I	931.4820 P	-A		$2p^4 - 2p^3(^4S^o)7d$	$g^3P - ^3D^o$	0-1	E35
O I	931.6282 P	-A		$2p^4 - 2p^3(^4S^o)8s$	$g^3P - ^3S^o$	1-1	E35
O I	932.2249 P	-A		$2p^4 - 2p^3(^4S^o)8s$	$g^3P - ^3S^o$	0-1	E35
O I	935.1930 P	-A		$2p^4 - 2p^3(^3D^o)4s$	$^1D - ^1D^o$	2-2	E35
O I	936.6295 P	-A		$2p^4 - 2p^3(^4S^o)6d$	$g^3P - ^3D^o$	2-3	E35
O I	937.8405 P	-A		$2p^4 - 2p^3(^4S^o)7s$	$g^3P - ^3S^o$	2-1	E35
O I	938.0200 P	-A		$2p^4 - 2p^3(^4S^o)6d$	$g^3P - ^3D^o$	1-2	E35
O I	938.6249 P	-A		$2p^4 - 2p^3(^4S^o)6d$	$g^3P - ^3D^o$	0-1	E35
O I	939.2346 P	-A		$2p^4 - 2p^3(^4S^o)7s$	$g^3P - ^3S^o$	1-1	E35
O I	939.8412 P	-A		$2p^4 - 2p^3(^4S^o)7s$	$g^3P - ^3S^o$	0-1	E35
O I	948.6855	200		$2p^4 - 2p^3(^4S^o)5d$	$g^3P - ^3D^o$	2-3	E35, E6
O I	950.1121	120		$2p^4 - 2p^3(^4S^o)5d$	$g^3P - ^3D^o$	1-2	E35, E6
O I	950.7327	40		$2p^4 - 2p^3(^4S^o)5d$	$g^3P - ^3D^o$	0-1	E35, E6
O I	950.8846	100		$2p^4 - 2p^3(^4S^o)6s$	$g^3P - ^3S^o$	2-1	E35, E6
O I	952.3178	60		$2p^4 - 2p^3(^4S^o)6s$	$g^3P - ^3S^o$	1-1	E35, E6
O I	952.9413	20		$2p^4 - 2p^3(^4S^o)6s$	$g^3P - ^3S^o$	0-1	E35, E6
O I	971.7381	300		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	2-3	E35, E6
O I	973.2342	180		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	1-2	E35, E6
O I	973.8852	60		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	0-1	E35, E6
O I	976.4481	200		$2p^4 - 2p^3(^4S^o)5s$	$g^3P - ^3S^o$	2-1	E35, E6
O I	977.9594	120		$2p^4 - 2p^3(^4S^o)5s$	$g^3P - ^3S^o$	1-1	E35, E6
O I	978.6170	40		$2p^4 - 2p^3(^4S^o)5s$	$g^3P - ^3S^o$	0-1	E35, E6
O I	988.5778		5	$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2-1	E35

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O I	988.6549	80	5	$2p^4 - 2p^3(^1D^o)3s$	$g^3P - ^3D^o$	2 - 2	E35, E6
O I	988.7734	400	5	$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2 - 3	E35, E6
O I	990.1269	80	5	$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	1 - 1	E35, E6
O I	990.2043	200	5	$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	1 - 2	E35, E6
O I	990.8010	100	5	$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	0 - 1	E35, E6
O I	999.4974	40 - A	7	$2p^3 - 2p^2(^3P^o)3s$	$^1D - ^1P^o$	2 - 1	E35, M23
O I	1025.7618	500	4	$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2 - 3	E35, E6
O I	1027.4307	300	4	$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	1 - 2	E35, E6
O I	1028.1571	100	4	$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	0 - 1	E35, E6
O I	1039.2304	400	3	$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	2 - 1	E35, E6
O I	1040.9425	240	3	$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	1 - 1	E35, E6
O I	1041.6876	80	3	$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	0 - 1	E35, E6
O I	1152.1512	200	6	$2p^4 - 2p^3(^3D^o)3s$	$^1D - ^1D^o$	2 - 2	E35, E6
O I	1217.6477	40 - A	9	$2p^4 - 2p^3(^3P^o)3s$	$^1S - ^1P^o$	0 - 1	E35, M23
O I	1302.1686 ST	1000	2	$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 1	H4, E6, E35
O I	1304.8575 ST	600	2	$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1 - 1	H4, E6, E35
O I	1306.0286 ST	200	2	$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	0 - 1	H4, E6, E35
O I	1355.5977	100	1	$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 2	E35, E6
O I	1358.5123	60	1	$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1 - 2	E35, E6

OXYGEN II (O^{1+}), $Z = 8$ Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)Ionization Potential $283\ 240\ \text{cm}^{-1}$; 35.116 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O II	376.693	10		$2p^3 - 2p^2(^3P)5d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	376.745	10		$2p^3 - 2p^2(^3P)5d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	377.045	10		$2p^3 - 2p^2(^3P)5d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	391.912	50		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	391.943	100		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	392.002	150		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	392.322	150		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	403.035	10		$2p^3 - 2p^2(^1D)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	403.087	10		$2p^3 - 2p^2(^1D)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	403.273	10		$2p^3 - 2p^2(^1D)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	403.372	10		$2p^3 - 2p^2(^1D)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	418.598	50		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	418.812	10		$2p^3 - 2p^2(^3P)5d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	424.577	10		$2p^3 - 2p^2(^1D)4d$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	425.273	10		$2p^3 - 2p^2(^1D)4d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	426.526	50d		$2p^3 - 2p^2(^1D)4d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	429.557	100		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	429.647	250		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	429.716	200		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	429.918	250	3	$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	430.041	300	3	$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	430.177	300	3	$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	436.510	50		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	436.649	10		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	437.332	150		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	437.683	150		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	440.552	150		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	440.598	100		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	442.001	200		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	442.048	200		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O II	443.681	10		$2p^2 - 2p^2(^3P)5d$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	445.601	200		$2p^2 - 2p^2(^1D)3d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	445.638	200		$2p^2 - 2p^2(^1D)3d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	456.997	50		$2p^2 - 2p^2(^1D)4s$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	458.422	10		$2p^2 - 2p^2(^3P)5s$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	464.194	100		$2p^2 - 2p^2(^3P)4d$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	464.310	50		$2p^2 - 2p^2(^3P)4d$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	464.785	150		$2p^2 - 2p^2(^1D)3d$	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	465.529	50		$2p^2 - 2p^2(^3P)4d$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	465.760	100		$2p^2 - 2p^2(^3P)4d$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	467.926	10		$2p^2 - 2p^2(^3P)4s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	468.766	100		$2p^2 - 2p^2(^1D)3d$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	470.408	200		$2p^2 - 2p^2(^1D)3d$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	481.587	200b	10	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	481.635	10	10	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	481.704	50	10	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	481.755	150	10	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	483.752	200	9	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	483.976	250	9	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	484.025	100	9	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	485.086	300	8	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	485.465	10	8	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	485.515	250	8	$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	485.572	50		$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	485.631	200		$2p^2 - 2p^2(^3P)3d$	$^3D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	499.871	100		$2p^2 - 2p^2(^3P)4s$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	500.343	50		$2p^2 - 2p^2(^3P)4s$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	E3
O II	515.498	250	17	$2p^2 - 2p^2(^3P)3d$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	515.540	200	17	$2p^2 - 2p^2(^3P)3d$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{1}{2}$	E3
O II	517.937	200	16	$2p^2 - 2p^2(^3P)3d$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	E3
O II	518.242	250	16	$2p^2 - 2p^2(^3P)3d$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	537.830	450	7	$2s^2 2p^2 - 2s 2p^4$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	538.256	500	7	$2s^2 2p^2 - 2s 2p^4$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	538.318	350	7	$2s^2 2p^2 - 2s 2p^4$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	539.086	400	2	$2p^2 - 2p^2(^3P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	539.547	400	2	$2p^2 - 2p^2(^3P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	539.853	350	2	$2p^2 - 2p^2(^3P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	555.056	250	6	$2p^2 - 2p^2(^1D)3s$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	555.121	250	6	$2p^2 - 2p^2(^1D)3s$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	580.400	300	15	$2s^2 2p^2 - 2s 2p^4$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	E3
O II	580.967	350	15	$2s^2 2p^2 - 2s 2p^4$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	600.585	300	14	$2p^2 - 2p^2(^1D)3s$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	616.291	350	5	$2p^2 - 2p^2(^3P)3s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	616.363	200	5	$2p^2 - 2p^2(^3P)3s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	617.051	300	5	$2p^2 - 2p^2(^3P)3s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E3
O II	644.148	600	13	$2s^2 2p^2 - 2s 2p^4$	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	E6, E3
O II	672.948	400	12	$2p^2 - 2p^2(^3P)3s$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E3
O II	673.758	350	12	$2p^2 - 2p^2(^3P)3s$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	E3
O II	718.484	850	4	$2s^2 2p^2 - 2s 2p^4$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E6, E3
O II	718.562	800	4	$2s^2 2p^2 - 2s 2p^4$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E6, E3
O II	739.949	100		$2s 2p^4 - 2s 2p^2(^5S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E13
O II	740.838	10		$2s 2p^4 - 2s 2p^2(^5S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E13
O II	741.293	1		$2s 2p^4 - 2s 2p^2(^5S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E13
O II	796.661	500	11	$2s^2 2p^2 - 2s 2p^4$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E6, E3
O II	832.762	700	1	$2s^2 2p^2 - 2s 2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E6, E3
O II	833.332	750	1	$2s^2 2p^2 - 2s 2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E6, E3
O II	834.462	750	1	$2s^2 2p^2 - 2s 2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E6, E3
O II	1957.49	10		$2p^2(^3P)3p - 2p^2(^3P)5s$	$^4F^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B16
O II	1960.34	100		$2p^2(^3P)3p - 2p^2(^3P)5s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B16
O II	1962.27	300		$2p^2(^3P)3p - 2p^2(^3P)5s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B16
O II	1963.86	200		$2p^2(^3P)3p - 2p^2(^3P)5s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B16
O II	1964.35	10		$2p^2(^3P)3p - 2p^2(^3P)5s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	B16

OXYGEN III (O^{2+}), $Z = 8$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential 443 086 cm^{-1} ; 54.934 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O III	226.038	50d		$2s^2 2p^2 - 2s 2p^2(^4P)4p$	$g^3P - ^3D^o$	2-3	E3
O III	228.893	10		$2s^2 2p^2 - 2s 2p^2(^4P)4p$	$g^3P - ^3S^o$	1-1	E3
O III	228.988	10		$2s^2 2p^2 - 2s 2p^2(^4P)4p$	$g^3P - ^3S^o$	2-1	E3
O III	236.710	50d		$2s^2 2p^2 - 2s 2p^2(^4P)4p$	$^1D - ^3D^o$	2-3	E3, K8
O III	240.979	100d		$2p^2 - \bar{z}p6a$	$g^3P - ^3D^o$	1-2	E3
O III	241.037	100d		$2p^2 - 2p6d$	$g^3P - ^3D^o$	2-3	E3
O III	241.819	50		$2s 2p^3 - 2s 2p^2(^4P)5d$	$^3S^o - ^3P$	2-2	E3
O III	241.875	50		$2s 2p^3 - 2s 2p^2(^4P)5d$	$^3S^o - ^3P$	2-3	E3
O III	244.049	100d		$2s^2 2p^2 - 2s 2p^2(^2D)3p$	$^1D - ^1P^o$	2-1	E3
O III	246.265	150		$2s^2 2p^2 - 2s 2p^2(^2D)3p$	$^1D - ^1D^o$	2-2	E3
O III	247.080	50		$2s^2 2p^2 - 2s 2p^2(^2D)3p$	$^1D - ^1F^o$	2-3	E3
O III	248.320	50-1		$2p^2 - 2p7d$	$^1D - ^1F^o$	2-3	E3
O III	248.538	50		$2p^2 - 2p5d$	$g^3P - ^3D^o$	0-1	E3
O III	248.574	60		$2p^2 - 2p5d$	$g^3P - ^3D^o$	1-2	E3
O III	248.618	100		$2p^2 - 2p5d$	$g^3P - ^3D^o$	2-3	E3
O III	253.548	10		$2p^2 - 2p6d$	$^1D - ^1D^o$	2-2	E3
O III	255.044	10		$2p^2 - 2p5s$	$g^3P - ^3P^o$	1-2	E3
O III	255.158	50		$2p^2 - 2p5s$	$g^3P - ^3P^o$	2-2	E3
O III	255.302	10		$2p^2 - 2p5s$	$g^3P - ^3P^o$	2-1	E3
O III	256.425	100 -A		$2s 2p^3 - 2s 2p^2(^4P)4d$	$^3S^o - ^3P$	2-1	E3
O III	256.460	150 -A		$2s 2p^3 - 2s 2p^2(^4P)4d$	$^3S^o - ^3P$	2-2	E3
O III	256.506	150 -A		$2s 2p^3 - 2s 2p^2(^4P)4d$	$^3S^o - ^3P$	2-3	E3
O III	261.027	200d		$2p^2 - 2p5d$	$^1D - ^1F^o$	2-3	E3
O III	262.113	100		$2p^2 - 2p5d$	$^1D - ^1D^o$	2-2	E3
O III	262.289	10		$2p^2 - 2p5d$	$^1D - ^3F^o$	2-2	E3
O III	262.729	10		$2p^2 - 2p4d$	$g^3P - ^3P^o$	1-2	E3
O III	262.882	50		$2p^2 - 2p4d$	$g^3P - ^3P^o$	2-2	E3
O III	263.652	150		$2p^2 - 2p4d$	$g^3P - ^3D^o$	0-1	E3
O III	263.728	200		$2p^2 - 2p4d$	$g^3P - ^3D^o$	1-2	E3
O III	263.768	150		$2p^2 - 2p4d$	$g^3P - ^3D^o$	1-1	E3
O III	263.818	250		$2p^2 - 2p4d$	$g^3P - ^3D^o$	2-3	E3
O III	263.861	150		$2p^2 - 2p4d$	$^1P - ^3D^o$	2-2	E3
O III	263.903	10		$2p^2 - 2p4d$	$g^3P - ^3D^o$	2-1	E3
O III	264.257	200		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3P^o$	0-1	E3
O III	264.338	250d		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3P^o$	1-2	E3
O III	264.480	300		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3P^o$	2-2	E3
O III	264.967	250b		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3D^o$	0-1	E3
O III	266.985	350		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3D^o$	1-2	E3
O III	267.030	350		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3D^o$	2-3	E3
O III	267.050	150		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3D^o$	1-1	E3
O III	267.121	200		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3D^o$	2-2	E3
O III	268.451	50d		$2p^2 - 2p5s$	$^1D - ^1P^o$	2-1	E3
O III	271.403	50		$2s 2p^3 - 2s 2p^2(^4P)4s$	$^3S^o - ^3P$	2-3	E3
O III	271.523	50		$2s 2p^3 - 2s 2p^2(^4P)4s$	$^3S^o - ^3P$	2-2	E3
O III	271.611	10		$2s 2p^3 - 2s 2p^2(^4P)4s$	$^3S^o - ^3P$	2-1	E3
O III	275.281	100		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3S^o$	0-1	E3
O III	275.366	150		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3S^o$	1-1	E3
O III	275.513	200		$2s^2 2p^2 - 2s 2p^2(^4P)3p$	$g^3P - ^3S^o$	2-1	E3
O III	277.385	350		$2p^2 - 2p4d$	$^1D - ^1F^o$	2-3	E3
O III	277.514	50		$2p^2 - 2p5d$	$^1S - ^1P^o$	0-1	E3
O III	279.787	150		$2p^2 - 2p4d$	$^1D - ^1D^o$	2-2	E3
O III	280.030	100		$2p^2 - 2p4d$	$^1D - ^3F^o$	2-2	E3
O III	280.116	50		$2p^2 - 2p4s$	$g^3P - ^3P^o$	1-2	E3
O III	280.234	50		$2p^2 - 2p4s$	$g^3P - ^3P^o$	0-1	E3
O III	280.265	150		$2p^2 - 2p4s$	$g^3P - ^3P^o$	2-2	E3
O III	280.328	50		$2p^2 - 2p4s$	$g^3P - ^3P^o$	1-1	E3
O III	280.412	50		$2p^2 - 2p4s$	$g^3P - ^3P^o$	1-0	E3
O III	280.483	50		$2p^2 - 2p4s$	$g^3P - ^3P^o$	2-1	E3
O III	286.038	10		$2p^2 - 2p5s$	$^1S - ^1P^o$	0-1	E3
O III	295.511	150		$2p^2 - 2p4s$	$^1D - ^1P^o$	2-1	E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O III	295.619	250		2s 2p ² - 2s 2p ² (⁴ P)3d	⁴ S° - ⁴ P	2 - 1	E3
O III	295.657	300		2s 2p ² - 2s 2p ² (⁴ P)3d	⁴ S° - ⁴ P	2 - 2	E3
O III	295.716	300		2s 2p ² - 2s 2p ² (⁴ P)3d	⁴ S° - ⁴ P	2 - 3	E3
O III	295.944	150		2p ² - 2p 4d	¹ S - ¹ P°	0 - 1	E3
O III	296.012	200		2s 2p ² - 2s 2p ² (⁴ P)3d	⁴ S° - ⁴ D	2 - 3	E3
O III	296.22	50d - A		2s 2p ² - 2s 2p ² (² D)3d	² D° - ² P	3 - 2	E3
O III	299.275	100d - A		2s 2p ² - 2s 2p ² (² D)3d	² D° - ² D	3 - 3	E3
O III	300.455	150d - A		2s 2p ² - 2s 2p ² (² D)3d	² D° - ² F	3 - 4	E3
O III	303.411	350	6	2p ² - 2p 3d	² P° - ² P°	0 - 1	E3
O III	303.460	350	6	2p ² - 2p 3d	² P° - ² P°	1 - 0	E3
O III	303.515	350	6	2p ² - 2p 3d	² P° - ² P°	1 - 1	E3
O III	303.621	350	6	2p ² - 2p 3d	² P° - ² P°	1 - 2	E3
O III	303.693	350	6	2p ² - 2p 3d	² P° - ² P°	2 - 1	E3
O III	303.799	450	6	2p ² - 2p 3d	² P° - ² P°	2 - 2	E3
O III	305.596	400	5	2p ² - 2p 3d	² P° - ² D°	0 - 1	E3
O III	305.656	450	5	2p ² - 2p 3d	² P° - ² D°	1 - 2	E3
O III	305.705	400	5	2p ² - 2p 3d	² P° - ² D°	1 - 1	E3
O III	305.769	500	5	2p ² - 2p 3d	² P° - ² D°	2 - 3	E3
O III	305.836	400	5	2p ² - 2p 3d	² P° - ² D°	2 - 2	E3
O III	305.879	200	5	2p ² - 2p 3d	² P° - ² D°	2 - 1	E3
O III	308.051	50		2p ² - 2p 3d	² P° - ¹ D°	1 - 2	E3
O III	308.306	100		2p ² - 2p 3d	² P° - ² F°	2 - 3	E3
O III	316.967	150		2p ² - 2p 4s	¹ S - ¹ P°	0 - 1	E3
O III	317.24	50d - A		2s 2p ² - 2s 2p ² (² D)3d	² P° - ² P	2 - 2	E3
O III	319.996	150		2p ² - 2p 3d	¹ D - ¹ P°	2 - 1	E3
O III	320.720	100d - A		2s 2p ² - 2s 2p ² (² D)3d	² P° - ² D	2 - 3	E3
O III	320.979	600	11	2p ² - 2p 3d	¹ D - ¹ F°	2 - 3	E6, E3
O III	328.448	500	10	2p ² - 2p 3d	¹ D - ¹ D°	2 - 2	E3
O III	328.742	450		2p ² - 2p 3d	¹ D - ² F°	2 - 2	E3
O III	345.309	500	15	2p ² - 2p 3d	¹ S - ¹ P°	0 - 1	E3
O III	349.825	150		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² D	3 - 3	E3
O III	349.918	100		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² D	2 - 2	E3
O III	349.961	50		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² D	1 - 1	E3
O III	355.137	300		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² F	3 - 4	E3
O III	355.293	150		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² F	3 - 3	E3
O III	355.333	250		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² F	2 - 3	E3
O III	355.469	250		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² F	1 - 2	E3
O III	356.558	10		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² P	1 - 0	E3
O III	356.625	50		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² P	1 - 1	E3
O III	356.725	100		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² P	3 - 2	E3
O III	356.768	10		2s 2p ² - 2s 2p ² (⁴ P)3d	² D° - ² P	1 - 2	E3
O III	359.016	400		2s 2p ² - 2s 2p ² (⁴ P)3s	⁴ S° - ⁴ P	2 - 3	E3
O III	359.223	400		2s 2p ² - 2s 2p ² (⁴ P)3s	⁴ S° - ⁴ P	2 - 2	E3
O III	359.384	350		2s 2p ² - 2s 2p ² (⁴ P)3s	⁴ S° - ⁴ P	2 - 1	E3
O III	364.739	150		2s 2p ² - 2s 2p ² (² D)3s	² D° - ² D	3 - 3	E3
O III	364.867	100		2s 2p ² - 2s 2p ² (² D)3s	² D° - ² D	2 - 2	E3
O III	364.940	50		2s 2p ² - 2s 2p ² (² D)3s	² D° - ² D	1 - 1	E3
O III	373.805	400	4	2p ² - 2p 3s	² P° - ² P°	1 - 2	E3
O III	374.005	400	4	2p ² - 2p 3s	² P° - ² P°	0 - 1	E3
O III	374.075	500	4	2p ² - 2p 3s	² P° - ² P°	2 - 2	E3
O III	374.165	400	4	2p ² - 2p 3s	² P° - ² P°	1 - 1	E3
O III	374.331	400	4	2p ² - 2p 3s	² P° - ² P°	1 - 0	E3
O III	374.436	400	4	2p ² - 2p 3s	² P° - ² P°	2 - 1	E3
O III	379.505	200		2s 2p ² - 2s 2p ² (⁴ P)3d	² P° - ² D	2 - 3	E3
O III	379.575	150		2s 2p ² - 2s 2p ² (⁴ P)3d	² P° - ² D	2 - 2	E3
O III	379.631	100		2s 2p ² - 2s 2p ² (⁴ P)3d	² P° - ² D	0 - 1	E3
O III	382.211	50d		2s 2p ² - 2s ² 2p 4f	² D° - D[³ / ₂]	3 - 2	E3, K8
O III	382.903	50d		2s 2p ² - 2s ² 2p 4f	² D° - G[³ / ₂]	3 - 3	E3, K8
O III	387.398	100		2s 2p ² - 2s 2p ² (⁴ P)3d	² P° - ² P	1 - 0	E3
O III	387.482	150		2s 2p ² - 2s 2p ² (⁴ P)3d	² P° - ² P	0 - 1	E3
O III	387.639	200		2s 2p ² - 2s 2p ² (⁴ P)3d	² P° - ² P	2 - 2	E3
O III	395.558	600	9	2p ² - 2p 3s	¹ D - ¹ P°	2 - 1	E6, E3
O III	397.120	100		2s 2p ² - 2s 2p ² (² D)3s	² P° - ² D	2 - 3	E3
O III	397.231	50		2s 2p ² - 2s 2p ² (² D)3s	² P° - ² D	1 - 2	E3
O III	397.310	10		2s 2p ² - 2s 2p ² (² D)3s	² P° - ² D	0 - 1	E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O III	434.256	200		$2s2p^3 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	3-2	E3
O III	434.646	150		$2s2p^3 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	2-1	E3
O III	434.840	100		$2s2p^3 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	1-0	E3
O III	434.975	500	14	$2p^2 - 2p3s$	$^1S - ^1P^o$	0-1	E3
O III	480.955	200		$2s2p^3 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	2-2	E3
O III	481.354	150		$2s2p^3 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	2-1	E3
O III	481.381	100		$2s2p^3 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	0-1	E3
O III	481.587	2006		$2s2p^3 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	1-0	E3
O III	491.714	10		$2s2p^3 - 2s2p^2(^4P)3d$	$^3S^o - ^3P$	1-1	E3
O III	491.980	50		$2s2p^3 - 2s2p^2(^4P)3d$	$^3S^o - ^3P$	1-2	E3
O III	507.391	800	3	$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	0-1	E6,E3
O III	507.683	850	3	$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	1-1	E6,E3
O III	508.182	900	3	$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	2-1	E6,E3
O III	525.795	900	8	$2s^22p^2 - 2s2p^3$	$^1D - ^1P^o$	2-1	E6,E3
O III	554.275	10		$2s2p^3 - 2s^22p3p$	$^3D^o - ^3P$	3-2	E13
O III	574.065	1		$2s2p^3 - 2s^22p3p$	$^3D^o - ^3D$	3-3	E13
O III	597.818	750	13	$2s^22p^2 - 2s2p^3$	$^1S - ^1P^o$	0-1	E6,E3
O III	599.598	900	7	$2s^22p^2 - 2s2p^3$	$^1D - ^1D^o$	2-2	E6,E3
O III	609.705	300	16	$2s2p^3 - 2p^4$	$^3D^o - ^3P$	1-0	E3
O III	610.043	350	16	$2s2p^3 - 2p^4$	$^3D^o - ^3P$	2-1	E3
O III	610.746	400	16	$2s2p^3 - 2p^4$	$^3D^o - ^3P$	3-2	E3
O III	610.850	300	16	$2s2p^3 - 2p^4$	$^3D^o - ^3P$	2-2	E3
O III	658.578	50		$2s2p^3 - 2s^22p3p$	$^3P^o - ^3D$	2-3	E13
O III	659.538	10		$2s2p^3 - 2s^22p3p$	$^3P^o - ^3D$	1-2	E13
O III	702.332	800	2	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	0-1	E6,E3
O III	702.822	800	2	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	1-0	E6,E3
O III	702.899	850	2	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	1-2	E6,E3
O III	703.850	900	2	$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	2-2	E6,E3
O III	705.762	100		$2s2p^3 - 2p^4$	$^3P^o - ^3P$	1-0	E3
O III	706.224	150		$2s2p^3 - 2p^4$	$^3P^o - ^3P$	2-1	E3
O III	706.298	100		$2s2p^3 - 2p^4$	$^3P^o - ^3P$	0-1	E3
O III	707.315	200		$2s2p^3 - 2p^4$	$^3P^o - ^3P$	2-2	E3
O III	752.762	200		$2s2p^3 - 2p^4$	$^1P^o - ^1S$	1-0	E3
O III	832.927	700	1	$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^o$	0-1	E6,E3
O III	833.742	800	1	$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^o$	1-2	E6,E3
O III	835.096	700	1	$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^o$	2-2	E6,E3
O III	835.232	800	1	$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^o$	2-3	E6,E3
O III	898.957	400	17	$2s2p^3 - 2p^4$	$^1D^o - ^1D$	2-2	E3
O III	1138.545	100		$2s2p^3 - 2p^4$	$^1P^o - ^1D$	1-2	E3
O III	1149.603	50		$2s2p^3 - 2p^4$	$^3S^o - ^3P$	1-0	E3
O III	1150.882	100		$2s2p^3 - 2p^4$	$^3S^o - ^3P$	1-1	E3
O III	1153.773	150		$2s2p^3 - 2p^4$	$^3S^o - ^3P$	1-2	E3
O III	1476.89	600		$2p3p - 2p4s$	$^1P - ^1P^o$	1-1	B10
O III	1584.45	400		$2p3p - 2p4s$	$^3D - ^3P^o$	2-2	B10
O III	1587.87	400		$2p3p - 2p4s$	$^3D - ^3P^o$	1-1	B10
O III	1590.01	800		$2p3p - 2p4s$	$^3D - ^3P^o$	3-2	B10
O III	1590.61	400		$2p3p - 2p4s$	$^3D - ^3P^o$	1-0	B10
O III	1591.33	600		$2p3p - 2p4s$	$^3D - ^3P^o$	2-1	B10
O III	1660.803	20		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	1-2	E5
O III	1666.153	250		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	2-2	E5
O III	1679.06	400		$2p3p - 2p4s$	$^3S - ^3P^o$	1-2	B10
O III	1760.12	700		$2p3d - 2p4f$	$^3F^o - G[\frac{7}{2}]$	3-4	B10
O III	1760.42	500		$2p3p - 2p4s$	$^3P - ^3P^o$	1-2	B10
O III	1763.22	700		$2p3d - 2p4f$	$^3F^o - G[\frac{7}{2}]$	2-3	B10
O III	1764.48	700		$2p3p - 2p4s$	$^3P - ^3P^o$	2-2	B10
O III	1766.34	400		$2p3p - 2p4s$	$^3P - ^3P^o$	0-1	B10
O III	1767.78	1000		$2p3d - 2p4f$	$^3F^o - G[\frac{7}{2}]$	4-5	B10
O III	1768.24	900		$2p3d - 2p4f$	$^3F^o - G[\frac{7}{2}]$	3-4	B10
O III	1769.32	400		$2p3d - 2p4f$	$^3F^o - G[\frac{7}{2}]$	3-3	B10
O III	1771.67	900		$2p3d - 2p4f$	$^1D^o - G[\frac{7}{2}]$	2-3	B10
O III	1772.31	400		$2p3p - 2p4s$	$^3P - ^3P^o$	1-0	B10
O III	1773.00	500		$2p3p - 2p4s$	$^3P - ^3P^o$	2-1	B10
O III	1773.85	500		$2p3d - 2p4f$	$^3F^o - G[\frac{7}{2}]$	4-4	B10
O III	1779.16	700		$2p3d - 2p4f$	$^3F^o - F[\frac{7}{2}]$	2-3	B10
O III	1781.03	600		$2p3d - 2p4f$	$^3F^o - F[\frac{7}{2}]$	2-3	B10

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O III	1784.85	600		2p3d - 2p4f	$^3F^{\circ} - F[\frac{7}{2}]$	3 - 4	B10
O III	1789.66	700		2p3d - 2p4f	$^1D^{\circ} - F[\frac{7}{2}]$	2 - 5	B10
O III	1848.26	500		2p3d - 2p4f	$^3D^{\circ} - D[\frac{7}{2}]$	3 - 3	B10
O III	1856.62	500		2p3d - 2p4f	$^3D^{\circ} - G[\frac{7}{2}]$	3 - 4	B10
O III	1872.78	800		2p3d - 2p4f	$^3D^{\circ} - F[\frac{7}{2}]$	2 - 3	B10
O III	1872.87	800		2p3d - 2p4f	$^3D^{\circ} - F[\frac{7}{2}]$	1 - 2	B10
O III	1874.94	800		2p3d - 2p4f	$^3D^{\circ} - F[\frac{7}{2}]$	2 - 3	B10
O III	1920.04	600		2p3p - 2p4s	$^1D - ^1P^{\circ}$	2 - 1	B10
O II*	1920.75	500		2p3d - 2p4f	$^3P^{\circ} - D[\frac{7}{2}]$	1 - 2	B10
O III	1921.52	500		2p3d - 2p4f	$^3P^{\circ} - D[\frac{7}{2}]$	1 - 1	B10
O III	1923.49	700		2p3d - 2p4f	$^3P^{\circ} - D[\frac{7}{2}]$	2 - 3	B10
O III	1923.82	500		2p3d - 2p4f	$^3P^{\circ} - D[\frac{7}{2}]$	0 - 1	B10
O III	1926.94	500		2p3d - 2p4f	$^3P^{\circ} - D[\frac{7}{2}]$	1 - 2	B10

OXYGEN IV (O^{3+}), $Z = 8$ Ground State $1s^2 2s^2 2p^2 P_{1/2}$ (5 electrons)Ionization Potential $624\ 383.8\ \text{cm}^{-1}$; $77.412\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O IV	152.264	1 -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 4p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	152.355	1 -A		$2s^2 2p - 2s 2p(^1P^{\circ}) 4p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3
O IV	153.162	1 -A		$2s^2 2p - 2p^2(^1D) 3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E8, K8
O IV	158.553	1 -A		$2s^2 2p - 2s 2p(^3P^{\circ}) 5p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	158.606	2 -A		$2s^2 2p - 2s 2p(^3P^{\circ}) 5p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3
O IV	167.145	1d -A					
O IV	169.47	0		$2s 2p^2 - 2s 2p(^3P^{\circ}) 7d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E3
O IV	169.58	1		$2s^2 2p - 2s 2p(^3P^{\circ}) 4p$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K8
O IV	170.940	1 -A		$2s^2 2p - 2s 2p(^2P^{\circ}) 4p$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{5}{2}$	K8
O IV	170.988	1 -A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 6d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E3
O IV	171.071	5		$2s 2p^2 - 2s 2p(^2P^{\circ}) 6d$	$^4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	E3
O IV	171.121	5		$2s^2 2p - 2s 2p(^2F^{\circ}) 4p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	171.191	1		$2s^2 2p - 2s 2p(^2P^{\circ}) 4p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3
O IV	173.803	1		$2s^2 2p - 2s 2p(^3P^{\circ}) 4p$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3
O IV	173.851	2		$2s^2 2p - 2s 2p(^2P^{\circ}) 4p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	173.917	5		$2s^2 2p - 2s 2p(^2P^{\circ}) 4p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E3
O IV	173.968	1		$2s^2 2p - 2s 2p(^2P^{\circ}) 4p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E3
O IV	174.105	5		$2s^2 2p - 2s 2p(^2P^{\circ}) 4p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	174.220	10		2p - 6d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	177.598	1 -A		2p - 6d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3
O IV	177.659	1 -A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	177.698	2 -A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	177.761	5 -A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	177.808	6 -A		$2s 2p^2 - 2s 2p(^2P^{\circ}) 5d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	180.351	2		$2s^2 2p - 2s 2p(^1P^{\circ}) 3p$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E3
O IV	180.481	5		$2s^2 2p - 2s 2p(^1P^{\circ}) 3p$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E3
O IV	181.150	15		$2s^2 2p - 2s 2p(^1P^{\circ}) 3p$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	181.275	25		2p - 5d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	181.876	10		2p - 5d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	181.995	15		$2s^2 2p - 2s 2p(^1P^{\circ}) 3p$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E3
O IV	182.711	10		$2s^2 2p - 2s 2p(^1P^{\circ}) 3p$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	182.832	15		$2s^2 2p - 2s 2p(^1P^{\circ}) 3p$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	183.353	1		$2s 2p^2 - 2p^2(^2P) 3p$	$^4P - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	183.395	2		$2s 2p^2 - 2p^2(^2P) 3p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	183.454	3		$2s 2p^2 - 2p^2(^2P) 3p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O IV	185.384	1		2p - 5s	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E3
O IV	185.544	2		2p - 5s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	186.872	2		2s 2p ² - 2p ² (² P) 3p	4I	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	186.936	5		2s 2p ² - 2p ² (² P) 3p	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	186.982	1		2s 2p ² - 2p ² (² P) 3p	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	E3
O IV	188.152	5		2s 2p ² - 2p ² (² P) 3p	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	188.190	1		2s 2p ² - 2p ² (² P) 3p	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	191.609	5d		2s 2p ² - 2s 2p(² P ^o) 4d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	191.640	1		2s 2p ² - 2s 2p(² P ^o) 4d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	191.695	5		2s 2p ² - 2s 2p(² P ^o) 4d	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	E3
O IV	191.752	10		2s 2p ² - 2s 2p(² P ^o) 4d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	192.139	15		2s 2p ² - 2s 2p(² P ^o) 4d	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	192.169	20		2s 2p ² - 2s 2p(² P ^o) 4d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	192.206	25		2s 2p ² - 2s 2p(² P ^o) 4d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	192.244	10		2s 2p ² - 2s 2p(² P ^o) 4d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	195.863	60		2p - 4d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	196.009	90		2p - 4d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	196.348	1d - A		2s 2p ² - 2s 2p(² P ^o) 5d	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	196.435	1d - A		2s 2p ² - 2s 2p(² P ^o) 5d	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	200.827	2 - A		2s 2p ² - 2p ² (¹ D) 3p	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E13
O IV	200.915	2		2s 2p ² - 2s 2p(² P ^o) 4s	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	200.966	2		2s 2p ² - 2s 2p(² P ^o) 4s	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	200.995	5		2s 2p ² - 2s 2p(² P ^o) 4s	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	201.022	1		2s 2p ² - 2s 2p(² P ^o) 4s	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E3
O IV	201.073	2		2s 2p ² - 2s 2p(² P ^o) 4s	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	201.098	2		2s 2p ² - 2s 2p(² P ^o) 4s	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	202.885	15		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	203.044	25		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	204.708	1d		2s 2p ² - 2p ² (² P) 3p	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	204.905	1 - A		2s 2p ² - 2s 2p(¹ P ^o) 4d	$^2P - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	204.996	1 - A		2s 2p ² - 2s 2p(¹ P ^o) 4d	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	205.842	1		2p - 4s	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E3
O IV	206.002	2		2p - 4s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	207.183	40		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	207.239	60		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	207.348	15		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	211.808	1d - A		2s 2p ² - 2s 2p(² P ^o) 5d	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	212.578	5d		2s 2p ² - 2p ² (² P) 3p	$^2D - ^2S^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	E3, K8
O IV	212.974	10d		2s 2p ² - 2s 2p(² P ^o) 4d	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	213.061	10d		2s 2p ² - 2s 2p(² P ^o) 4d	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	213.975	15		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	214.028	25		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	214.152	40		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	214.205	15		2s ² 2p - 2s 2p(² P ^o) 3p	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	214.249	2		2s 2p ² - 2s 2p(² P ^o) 4d	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	214.290	2		2s 2p ² - 2s 2p(² P ^o) 4d	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	216.960	1		2s 2p ² - 2s ² 7f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	221.648	15		2s 2p ² - 2p ² (² P) 3p	$^2S - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3, K8
O IV	222.763	25		2s 2p ² - 2s 2p(¹ P ^o) 3d	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	222.777	15		2s 2p ² - 2s 2p(¹ P ^o) 3d	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	223.728	1		2s 2p ² - 2s 2p(² P ^o) 4s	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	223.841	1		2s 2p ² - 2s 2p(² P ^o) 4s	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	225.299	25		2s 2p ² - 2s 2p(¹ P ^o) 3d	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	229.896	1		2s 2p ² - 2p ² (² P) 3p	$^2P - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	230.040	1		2s 2p ² - 2p ² (² P) 3p	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	230.682	2		2s 2p ² - 2s 2p(² P ^o) 4d	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E3
O IV	230.755	5		2s 2p ² - 2s 2p(² P ^o) 4d	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	231.031	10		2s 2p ² - 2s 2p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	231.070	60b		2s 2p ² - 2s 2p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	231.101	40		2s 2p ² - 2s 2p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	231.140	15		2s 2p ² - 2s 2p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	231.200	40		2s 2p ² - 2s 2p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	231.239	40		2s 2p ² - 2s 2p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	231.299	60		2s 2p ² - 2s 2p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	233.457	60	7	2s 2p ² - 2s 2p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O IV	233.496	60	7	2s 2p ² - 2s 2p(2P°) 3d	4P - 4D°	3/2 - 5/2	B33
O IV	233.521	40	7	2s 2p ² - 2s 2p(2P°) 3d	4P - 4D°	3/2 - 5/2	E3
O IV	233.561	90	7	2s 2p ² - 2s 2p(2P°) 3d	4P - 4D°	3/2 - 5/2	E3
O IV	233.596	40	7	2s 2p ² - 2s 2p(2P°) 3d	4P - 4D°	3/2 - 5/2	E3
O IV	234.988	10		2s 2p ² - 2s ² 5f	2D - 2F°	3/2 - 5/2	E3
O IV	236.071	2d		2s 2p ² - 2s 2p(2P°) 3d	4P - 4F°	3/2 - 7/2	E3
O IV	238.360	400		2p - 3d	g ² P° - 2D	1/2 - 3/2	B33
O IV	238.571	500		2p - 3d	g ² P° - 2D	3/2 - 5/2	B33
O IV	239.592	10		2s 2p ² - 2s 2p(1P°) 3d	2S - 2P°	1/2 - 3/2	E3
O IV	239.935	1		2s 2p ² - 2p ² (2P) 3p	2P - 2S°	1/2 - 1/2	E3
O IV	240.079	2		2s 2p ² - 2p ² (2P) 3p	2P - 2S°	3/2 - 1/2	E3
O IV	242.045	5		2s 2p ² - 2s 2p(2P°) 4d	2P - 2D°	1/2 - 3/2	E3
O IV	242.140	10		2s 2p ² - 2s 2p(2P°) 4d	2P - 2D°	3/2 - 5/2	E3
O IV	242.183	1		2s 2p ² - 2s 2p(2P°) 4d	2P - 2D°	3/2 - 7/2	E3
O IV	245.7	2d		2s 2p ² - 2s ² 7f	2P - 2F°	? 3/2 - 5/2	E3, K8
O IV	246.465	5 -A		2p ² - 2p ² (2P) 3d	4S° - 4P	3/2 - 1/2	E3
O IV	246.503	10 -A		2p ² - 2p ² (2P) 3d	4S° - 4P	3/2 - 3/2	E3
O IV	246.563	15 -A		2p ² - 2p ² (2P) 3d	4S° - 4P	3/2 - 5/2	E3
O IV	249.223	10		2s 2p ² - 2s 2p(1P°) 3d	2P - 2P°	1/2 - 1/2	E3
O IV	249.365	15		2s 2p ² - 2s 2p(1P°) 3d	2P - 2P°	3/2 - 3/2	E3
O IV	251.114	2 -A		2p ² - 2p ² (1D) 3d	2D° - 2P	3/2 - 1/2	E13
O IV	251.148	2 -A		2p ² - 2p ² (1D) 3d	2D° - 2P	3/2 - 3/2	E13
O IV	252.564	40d -A		2p ² - 2p ² (1D) 3d	2D° - 2F	3/2 - 7/2	E3
O IV	252.948	40		2s 2p ² - 2s 2p(1P°) 3d	2P - 2D°	1/2 - 3/2	E3
O IV	253.082	60		2s 2p ² - 2s 2p(1P°) 3d	2P - 2D°	3/2 - 3/2	E3
O IV	255.252	25		2s 2p ² - 2s 2p(1P°) 3s	2D - 2P°	3/2 - 3/2	E3
O IV	255.302	1 -A		2p ² - 2p ² (1D) 3d	2D° - 2D	3/2 - 3/2	E13
O IV	258.116	5		2s 2p ² - 2s 2p(2P°) 3d	2D - 2P°	3/2 - 1/2	E3
O IV	258.207	10		2s 2p ² - 2s 2p(2P°) 3d	2D - 2P°	3/2 - 3/2	E3
O IV	260.389	150	9	2s 2p ² - 2s 2p(2P°) 3d	2D - 2F°	3/2 - 7/2	B33
O IV	260.555	120	9	2s 2p ² - 2s 2p(2P°) 3d	2D - 2F°	3/2 - 3/2	B33
O IV	265.062	1 -A		2p ² - 2p ² (2P) 3d	2D° - 2D	3/2 - 3/2	E3
O IV	266.690	1 -A		2p ² - 2p ² (2P) 3d	2D° - 2F	3/2 - 7/2	E3
O IV	266.729	1 -A		2p ² - 2p ² (2P) 3d	2D° - 2F	? 3/2 - 3/2	E3
O IV	266.932	40		2s 2p ² - 2s 2p(2P°) 3d	2D - 2D°	3/2 - 3/2	E3
O IV	266.967	25b		2s 2p ² - 2s 2p(2P°) 3d	2D - 2D°	3/2 - 3/2	E3
O IV	269.559	1d -A		2p ² - 2p ² (1D) 3d	2P° - 2S	3/2 - 1/2	E3, E13
O IV	271.990	40		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	3/2 - 3/2	B33
O IV	272.076	40		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	1/2 - 3/2	B33
O IV	272.127	60		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	3/2 - 3/2	B33
O IV	272.174	25		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	3/2 - 3/2	E3
O IV	272.273	40		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	3/2 - 1/2	B33
O IV	272.310	40		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	3/2 - 3/2	B33
O IV	279.456	5 -A		2p ² - 2p ² (1D) 3d	2P° - 2D	3/2 - 3/2	E13
O IV	279.631	150	4	2p - 3s	g ² P° - 2S	1/2 - 1/2	B33
O IV	279.933	200	4	2p - 3s	g ² P° - 2S	3/2 - 1/2	B33
O IV	282.213	2		2s 2p ² - 2s 2p(1P°) 3s	2S - 2P°	1/2 - 3/2	E3
O IV	285.710	40		2s 2p ² - 2s 2p(2P°) 3d	2S - 2P°	1/2 - 1/2	B33
O IV	285.834	60		2s 2p ² - 2s 2p(2P°) 3d	2S - 2P°	1/2 - 3/2	B33
O IV	289.292	10		2p ² - 2p ² (2P) 3s	4S° - 4P	3/2 - 3/2	E3
O IV	289.469	5		2p ² - 2p ² (2P) 3s	4S° - 4P	3/2 - 3/2	E3
O IV	289.590	2		2p ² - 2p ² (2P) 3s	4S° - 4P	3/2 - 1/2	E3
O IV	289.898	5		2p ² - 2p ² (1D) 3s	2D° - 2D	3/2 - 3/2	E3
O IV	289.933	2		2p ² - 2p ² (1D) 3s	2D° - 2D	3/2 - 3/2	E3
O IV	291.054	2 -A		2p ² - 2p ² (2P) 3d	2P° - 2D	1/2 - 3/2	E3
O IV	291.203	3 -A		2p ² - 2p ² (2P) 3d	2P° - 2D	3/2 - 3/2	E3
O IV	295.051	2		2p ² - 2s 2p(2P°) 4f	2D° - 2F	3/2 - 7/2	E3
O IV	295.140	2		2p ² - 2s 2p(2P°) 4f	2D° - 2F	3/2 - 3/2	E3
O IV	295.874	5		2s 2p ² - 2s 2p(1P°) 3s	2P - 2P°	3/2 - 3/2	E3
O IV	299.499	10		2s 2p ² - 2s 2p(2P°) 3d	2P - 2P°	1/2 - 1/2	B33
O IV	299.620	5		2s 2p ² - 2s 2p(2P°) 3d	2P - 2P°	1/2 - 3/2	E3
O IV	299.710	5		2s 2p ² - 2s 2p(2P°) 3d	2P - 2P°	3/2 - 1/2	E3
O IV	299.853	15		2s 2p ² - 2s 2p(2P°) 3d	2P - 2P°	3/2 - 3/2	B33
O IV	306.623	90		2s 2p ² - 2s 2p(2P°) 3s	2D - 2P°	3/2 - 3/2	B33
O IV	306.884	60		2s 2p ² - 2s 2p(2P°) 3s	2D - 2P°	3/2 - 1/2	B33

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O IV	311.499	25		$2s 2p^2 - 2s 2p(^2P^o) 3d$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	311.682	40		$2s 2p^2 - 2s 2p(^2P^o) 3d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{5}{2}$	B33
O IV	311.726	10		$2s 2p^2 - 2s 2p(^2P^o) 3d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	321.457	2		$2p^2 - 2p^2(^1D) 3s$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3
O IV	339.330	2		$2p^2 - 2s 2p(^1P^o) 3p$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	339.436	1		$2p^2 - 2s 2p(^1P^o) 3p$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	346.372	15		$2s 2p^2 - 2s 2p(^2P^o) 3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	346.374	15		$2s 2p^2 - 2s 2p(^2P^o) 3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	346.692	10		$2s 2p^2 - 2s 2p(^2P^o) 3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	367.192	5		$2s 2p^2 - 2s 2p(^2P^o) 3s$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	379.780	15		$2s 2p^2 - 2s^2 3p$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	379.923	10		$2s 2p^2 - 2s^2 3p$	$^2F - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	B43
O IV	442.705	2		$2s 2p^2 - 2s^2 3p$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E3
O IV	442.873	1		$2s 2p^2 - 2s^2 3p$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E3
O IV	471.273	2		$2p^2 - 2s 2p(^2P^o) 3p$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E3
O IV	471.603	1		$2p^2 - 2s 2p(^2P^o) 3p$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E3
O IV	542.859	2		$3p - 6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	543.118	5		$3p - 6d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	553.370	900	3	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	554.075	950	3	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	554.314	1000	3	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	555.261	900	3	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	608.398	800	2	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	609.829	850	2	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	616.952	350		$2s 2p^2 - 2p^2$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	617.005	150		$2s 2p^2 - 2p^2$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	617.036	275		$2s 2p^2 - 2p^2$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	617.786	10		$3p - 5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	618.107	15		$3p - 5d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	624.617	750	6	$2s 2p^2 - 2p^2$	$^2P - ^2S^o$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	625.130	800	6	$2s 2p^2 - 2p^2$	$^2P - ^2S^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	625.852	850	6	$2s 2p^2 - 2p^2$	$^2P - ^2S^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	752.150	5		$3d - 5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	779.734	200	8	$2s 2p^2 - 2p^2$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	779.821	400	8	$2s 2p^2 - 2p^2$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	779.912	500	8	$2s 2p^2 - 2p^2$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	779.997	200	8	$2s 2p^2 - 2p^2$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	787.711	850	1	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	790.109	750	1	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E33
O IV	790.199	900	1	$2s^2 2p - 2s 2p^2$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	802.200	200		$2s 2p^2 - 2p^2$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	802.255	150		$2s 2p^2 - 2p^2$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	830.506	10		$3p - 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	831.070	15		$3p - 4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	921.296	120		$2s 2p^2 - 2p^2$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	R33
O IV	921.366	150		$2s 2p^2 - 2p^2$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	923.367	200		$2s 2p^2 - 2p^2$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	923.433	120		$2s 2p^2 - 2p^2$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	988.523	25		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	988.571	40		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	988.628	40		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	988.713	40		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	1045.384	15		$3p - 4s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B33
O IV	1046.316	25		$3p - 4s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B33
O IV	1061.780	25		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4D^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	B33
O IV	1061.952	25		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1062.133	40		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1062.271	40		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1062.434	10		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1062.840	10		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1067.810	120		$3d - 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1080.965	60		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1081.645	10		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1083.382	10		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^2F - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B33
O IV	1083.613	10		$2s 2p(^2P^o) 3d - 2s 2p(^2P^o) 4f$	$^2P - ^2D$	$\frac{1}{2} - \frac{1}{2}$	B33

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O IV	1084.189	40		2s 2p(² P°) 3d - 2s 2p(² P°) 4f	⁴ P° - ⁴ D	½ - ½	B33
O IV	1164.320	25		2s 2p(² P°) 3d - 2s 2p(² P°) 4f	² F° - ² G	½ - ½	B33
O IV	1164.545	40		2s 2p(² P°) 3d - 2s 2p(² P°) 4f	² F° - ² G	½ - ½	B33
O IV	1167.532	10		2s 2p(² P°) 3d - 2s 2p(² P°) 4f	² F° - ⁴ G	½ - ½	B33
O IV	1169.160	2		2s 2p(² P°) 3d - 2s 2p(² P°) 4f	² F° - ⁴ G	½ - ½	B33
O IV	1211.043	5		2s 2p(² P°) 3d - 2s 2p(² P°) 4f	² P° - ² D	¾ - ¾	B33
O IV	1213.035	60		2s 2p(² P°) 3d - 2s 2p(² P°) 4f	² P° - ² D	¾ - ¾	B33
O IV	1213.196	40		2s 2p(² P°) 3d - 2s 2p(² P°) 4f	² P° - ² D	½ - ¾	B33
O IV	1338.612	200		2s 2p ² - 2p ³	² P° - ² D°	½ - ¾	B33
O IV	1342.992	120		2s 2p ² - 2p ³	² P° - ² D°	½ - ¾	B33
O IV	1343.512	275		2s 2p ² - 2p ³	² P° - ² D°	¾ - ¾	B33
O IV	1397.20	10		2s ² 2p - 2s 2p ²	^g ² P° - ⁴ P	½ - ¾	B33
O IV	1399.774	25		2s ² 2p - 2s 2p ²	^g ² P° - ⁴ P	½ - ½	B33
O IV	1401.156	60		2s ² 2p - 2s 2p ²	^g ² P° - ⁴ P	¾ - ¾	B33
O IV	1404.812	15		2s ² 2p - 2s 2p ²	^g ² P° - ⁴ P	¾ - ¾	B33
O IV	1407.386	25		2s ² 2p - 2s 2p ²	^g ² P° - ⁴ P	¾ - ½	B33
O IV	1604.620	5		4f - 6g	² F° - ² G	¾ - ¾	B33
O IV	1604.901	10		4f - 6g	² F° - ² G	¾ - ¾	B33
O IV	1639.430	15		4s - 5p	² S - ² P°	½ - ¾	B33
O IV	1639.842	10		4s - 5p	² S - ² P°	½ - ½	B33

OXYGEN V (O⁴⁺), Z = 8Ground State 1s²2s² 1S₀ (4 electrons)Ionization Potential 918 657 cm⁻¹; 113.896 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O V	122.128	10		2s 2p - 2p(² P°) 5p	³ P° - ³ P	2 - 2	E3
O V	122.372	10		2s 2p - 2p(² P°) 5p	³ P° - ³ D	2 - 3	E3
O V	124.6159	200		2s ² - 2s 5p	^g 1S - ¹ P°	0 - 1	B11, E3
O V	128.235	10		2s 2p - 2s 7d	³ P° - ³ D	1 - 2	E3
O V	128.297	20		2s 2p - 2s 7d	³ P° - ³ D	2 - 3	E3
O V	131.750	100		2s 2p - 2s 6d	³ P° - ³ D	1 - 2	E3
O V	131.807	100		2s 2p - 2s 6d	³ P° - ³ D	2 - 3	E3
O V	132.800	100		2s 2p - 2p(² P°) 4p	³ P° - ³ P	0 - 1	E3
O V	132.851	150		2s 2p - 2p(² P°) 4p	³ P° - ³ P	2 - 2	E3
O V	132.885	10		2s 2p - 2p(² P°) 4p	³ P° - ³ P	2 - 1	E3
O V	133.328	10		2s 2p - 2p(² P°) 4p	³ P° - ³ S	1 - 1	E3
O V	133.395	20		2s 2p - 2p(² P°) 4p	³ P° - ³ S	2 - 1	E3
O V	133.521	200		2s 2p - 2p(² P°) 4p	³ P° - ³ 1)	2 - 3	E3
O V	135.5232	300		2s ² - 2s 4p	^g 1S - ¹ P°	0 - 1	B11, E3
O V	138.0255	150		2s 2p - 2s 5d	³ P° - ³ 1)	0 - 1	B11, E3
O V	138.0510	200		2s 2p - 2s 5d	³ P° - ³ D	1 - 2	B11, E3
O V	138.0514 P	70		2s 2p - 2s 5d	³ P° - ³ D	1 - 1	B11, K8
O V	138.1089	250		2s 2p - 2s 5d	³ P° - ³ D	2 - 3	B11, E3
O V	138.1095 P	70		2s 2p - 2s 5d	³ P° - ³ D	2 - 2	B11, K8
O V	139.0289	300		2s ² - 2p(² P°) 3d	^g 1S - ¹ P°	0 - 1	B11, E3
O V	140.045	10		2s 2p - 2s 5s	³ P° - ³ S	1 - 1	E3
O V	140.109	20		2s 2p - 2s 5s	³ P° - ³ S	2 - 1	E3
O V	142.12	10		2s 2p - 2s 7d	¹ P° - ¹ D	1 - 2	C2, K8
O V	144.802	100		2p ² - 2p 5d	³ P° - ³ D°	1 - 2	E3
O V	144.857	100		2p ² - 2p(² P°) 5d	³ P° - ³ D°	2 - 3	E3
O V	146.345	100		2s 2p - 2s 6d	¹ P° - ¹ D	1 - 2	E3
O V	147.261	200		2s 2p - 2p(² P°) 4p	¹ P° - ¹ D	1 - 2	E3
O V	149.034	10		2p ² - 2p(² P°) 5d	¹ D - ¹ D°	2 - 2	E3
O V	149.078	150		2s 2p - 2p(² P°) 4p	¹ P° - ¹ P	1 - 1	E3
O V	151.4470	250		2s 2p - 2s 4d	³ P° - ³ D	0 - 1	B11, E3

Element	Wav. length	Intensity	Multiplet	Configuration	Term	J - J	References
O V	151.4772	300		2s 2p - 2s 4d	$3P^{\circ} - 3D$	1 - 2	B11, E3
O V	151.4782 F	100		2s 2p - 2s 4d	$3P^{\circ} - 3D$	1 - 1	B11, K8
O V	151.5465	330		2s 2p - 2s 4d	$3P^{\circ} - 3D$	2 - 3	B11, E3
O V	151.5476 P	100		2s 2p - 2s 4d	$3P^{\circ} - 3D$	2 - 2	B11, K8
O V	153.4516	200		2s 2p - 2s 5d	$1P^{\circ} - 1D$	1 - 2	B11, E3
O V	156.1189	100		2s 2p - 2s 4s	$3P^{\circ} - 3S$	0 - 1	B11, E3
O V	156.1521	150		2s 2p - 2s 4s	$3P^{\circ} - 3S$	1 - 1	B11, E3
O V	156.2269	200		2s 2p - 2s 4s	$3P^{\circ} - 3S$	2 - 1	B11, E3
O V	158.813	100d		$2p^2 - 2p(^2P^{\circ})4d$	$3P - 3P^{\circ}$	1 - 0	E3
O V	158.926	150		$2p^2 - 2p(^2P^{\circ})4d$	$3P - 3P^{\circ}$	2 - 2	E3
O V	159.343	250		$2p^2 - 2p(^2P^{\circ})4d$	$3P - 3D^{\circ}$	1 - 2	E3
O V	159.380	250		$2p^2 - 2p(^2P^{\circ})4d$	$3P - 3D^{\circ}$	2 - 3	E3
O V	160.141	10		$2p^2 - 2s 6p$	$3P - 3P^{\circ}$	2 - 2	E3
O V	162.494	250		$2p^2 - 2p(^2P^{\circ})4d$	$1D - 1F^{\circ}$	2 - 3	E3
O V	164.1766	150		$2p^2 - 2s 6f$	$1D - 1F^{\circ}$	2 - 3	B11, E3
O V	164.5739	300		2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3P$	1 - 2	B11
O V	164.5887	250		2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3P$	0 - 1	B11
O V	164.6256	200		2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3P$	1 - 1	B11
O V	164.6570	330		2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3P$	2 - 2	B11
O V	164.7087	300		2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3P$	2 - 1	B11
O V	164.986	150		$2p^2 - 2p(^2P^{\circ})4d$	$1D - 1D^{\circ}$	2 - 2	E3
O V	166.1128	200		2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3S$	0 - 1	B11, E3
O V	166.1504	250		2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3S$	1 - 1	B11, E3
O V	166.2351	300		2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3S$	2 - 1	B11, E3
O V	167.9883	400	6	2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3D$	2 - 3	B11
O V	167.9910	300	6	2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3D$	1 - 2	B11
O V	168.0084	250	6	2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3D$	0 - 1	B11
O V	168.0469	200	6	2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3D$	1 - 1	B11
O V	168.0776	200	6	2s 2p - 2p(^2P^{\circ})3p	$3P^{\circ} - 3D$	2 - 2	B11
O V	170.2194	330		2s 2p - 2s 4d	$1P^{\circ} - 1D$	1 - 2	B11, E3
O V	172.169	700	2	2s 2 - 2s 3p	$g^1S - 1P^{\circ}$	0 - 1	B11
O V	174.560	150		2s 2p - 2s 4s	$1P^{\circ} - 1S$	1 - 0	B11
O V	178.713	150		$2p^2 - 2p(^2P^{\circ})4d$	$1S - 1P^{\circ}$	0 - 1	E3
O V	182.205	150		2s 2p - 2p(^2P^{\circ})3p	$1P^{\circ} - 1S$	1 - 0	B11
O V	185.745	500	12	2s 2p - 2p(^2P^{\circ})3p	$1P^{\circ} - 1D$	1 - 2	B11
O V	191.397	10		$2p^2 - 2s 4p$	$3P - 3P^{\circ}$	0 - 1	E3
O V	191.458	100		$2p^2 - 2s 4p$	$3P - 3P^{\circ}$	1 - 2	E3
O V	191.556	150		$2p^2 - 2s 4p$	$3P - 3P^{\circ}$	2 - 2	E3
O V	192.751	600	5	2s 2p - 2s 3d	$3P^{\circ} - 3D$	0 - 1	B11
O V	192.799	700	5	2s 2p - 2s 3d	$3P^{\circ} - 3D$	1 - 2	B11
O V	192.906	800	5	2s 2p - 2s 3d	$3P^{\circ} - 3D$	2 - 3	B11
O V	193.003	300		$2p^2 - 2s 4f$	$1D - 1F^{\circ}$	2 - 3	B11
O V	194.593	420	11	2s 2p - 2p(^2P^{\circ})3p	$1P^{\circ} - 1P$	1 - 1	B11
O V?	198.031	150					E3
O V	202.161	300	14	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3P^{\circ}$	0 - 1	B11, E3
O V	202.191	300	14	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3P^{\circ}$	1 - 0	E3
O V	202.224	300	14	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3P^{\circ}$	1 - 1	B11, E3
O V	202.283	300	14	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3P^{\circ}$	1 - 2	B11, E3
O V	202.334	300	14	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3P^{\circ}$	2 - 1	B11, E3
O V	202.393	380	14	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3P^{\circ}$	2 - 2	B11, E3
O V	203.783	330	13	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3D^{\circ}$	0 - 1	E3
O V	203.821	380	13	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3D^{\circ}$	1 - 2	E3
O V	203.851	330	13	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3D^{\circ}$	1 - 1	E3
O V	203.890	420	13	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3D^{\circ}$	2 - 3	E3
O V	203.935	330	13	$2p^2 - 2p(^2P^{\circ})3d$	$3P - 3D^{\circ}$	2 - 2	E3
O V	205.105	150		$2p^2 - 2p(^2P^{\circ})3d$	$1D - 1P^{\circ}$	2 - 1	B11
O V	207.794	550	16	$2p^2 - 2p(^2P^{\circ})3d$	$1D - 1F^{\circ}$	2 - 3	B11
O V	215.040	380	4	2s 2p - 2s 3s	$3P^{\circ} - 3S$	0 - 1	B11
O V	215.103	420	4	2s 2p - 2s 3s	$3P^{\circ} - 3S$	1 - 1	B11
O V	215.245	530	4	2s 2p - 2s 3s	$3P^{\circ} - 3S$	2 - 1	B11
O V	216.018	500	15	$2p^2 - 2p(^2P^{\circ})3d$	$1D - 1D^{\circ}$	2 - 2	B11
O V	220.352	800	10	2s 2p - 2s 3d	$1P^{\circ} - 1D$	1 - 2	B11
O V	222.235	200		$2p^2 - 2s 4p$	$1S - 1P^{\circ}$	0 - 1	B11
O V	227.372	300		$2p^2 - 2p(^2P^{\circ})3s$	$3P - 3P^{\circ}$	1 - 2	B11
O V	227.469	300		$2p^2 - 2p(^2P^{\circ})3s$	$3P - 3P^{\circ}$	0 - 1	B11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O V	227.511	380		$2p^2 - 2p(^2P^o) 3s$			
O V	227.549	300		$2p^2 - 2p(^2P^o) 3s$	$^2P - ^2P^o$	2-2	B11
O V	227.634	300		$2p^2 - 2p(^2P^o) 3s$	$^2P - ^2P^o$	1-1	B11
O V	227.689	300		$2p^2 - 2p(^2P^o) 3s$	$^2P - ^2P^o$	1-0	B11
O V	231.070	380b		$2p^2 - 2p(^2P^o) 3s$	$^2P - ^2P^o$	2-1	B11
O V	231.823	380		$2p^2 - 2p(^2P^o) 3s$	$^2D - ^2P^o$	2-1	E3
O V	248.459	330	9	$2p^2 - 2p(^2P^o) 3d$	$^1S - ^1P^o$	0-1	B11
O V	265.550	250		$2s 2p - 2s 3s$	$^1P^o - ^1S$	1-0	B11
O V	270.982	10		$2p^2 - 2p(^2P^o) 3z$	$^1S - ^1P^o$	0-1	E3
O V	286.448	330		$2p^2 - 2s 3p$	$^2P - ^2P^o$	2-2	E3
O V	286.448	330		$2p^2 - 2s 3p$	$^1D - ^1P^o$	2-1	B11
O V	341.391	10		$2p^2 - 2s 3p$	$^1S - ^1P^o$	0-1	E3
O V	343.168	40		$2s 3s - 2s 6p$	$^2S - ^2P^o$	1-2	B11
O V	382.757	20		$2s 3p - 2s 6d$	$^1P^o - ^1D$	1-2	B11
O V	390.755	120		$2s 3s - 2s 5p$	$^2S - ^2P^o$	1-2	B11
O V	413.30	160		$2s 3d - 2s 6f$	$^2D - ^2F^o$	3-4	B11
O V	414.612	40		$2s 3s - 2s 5p$	$^1S - ^1P^o$	0-1	B11
O V	438.197	20		$2s 3d - 2s 6f$	$^1D - ^1F^o$	2-3	B11
O V	439.517	120		$2s 3p - 2s 5d$	$^1P^o - ^1D$	1-2	B11
O V	447.226	120h		$2s 3p - 2s 5d$	$^2P^o - ^2D$	1-2	B11
O V	447.356	160		$2s 3p - 2s 5d$	$^2P^o - ^2D$	2-3	B11
O V	469.150	40		$2s 3p - 2s 5s$	$^2P^o - ^2S$	2-1	B11
O V	481.14	240		$2s 3d - 2s 5f$	$^2D - ^2F^o$	3-4	B11
O V	539.415	120		$2s 3d - 2s 5f$	$^1D - ^1F^o$	2-3	B11
O V	529.20	240w		$2s 3s - 2s 4p$	$^2S - ^2P^o$	1-2	B11
O V	561.959	80		$2p(^2P^o) 3s - 2p(^2P^o) 4p$	$^2P^o - ^2D$	1-2	B11
O V	562.080	120		$2p(^2P^o) 3s - 2p(^2P^o) 4p$	$^2P^o - ^2D$	2-3	B11
O V	566.232	80		$2s 3s - 2s 4p$	$^1S - ^1P^o$	0-1	B11
O V	604.416	280		$2s 3p - 2s 4d$	$^1P^o - ^1D$	1-2	B11
O V	627.225	80		$2s 3p - 2s 4d$	$^2P^o - ^2D$	0-1	B11
O V	627.351	160		$2s 3p - 2s 4d$	$^2P^o - ^2D$	1-2	B11
O V	627.636	200		$2s 3p - 2s 4d$	$^2P^o - ^2D$	2-3	B11
O V	629.730	1000	1	$2s^2 - 2s 2p$	$^2S - ^2P^o$	0-1	B11
O V	654.207	80		$2p(^2P^o) 3d - 2p(^2P^o) 4f$	$^2F^o - ^2G$	2-3	B11
O V	654.712	120b		$2p(^2P^o) 3d - 2p(^2P^o) 4f$	$^2F^o - ^2G$	3-4	B11
O V	655.039	200		$2p(^2P^o) 3d - 2p(^2P^o) 4f$	$^2F^o - ^2G$	4-5	B11
O V	662.928	40h		$2s 3p - 2s 4s$	$^1P^o - ^1S$	1-0	B11
O V	668.225	40		$2s 2p - 2p^2$	$^2P^o - ^1D$	1-2	B11
O V	669.628	200		$2s 2p - 2p^2$	$^2P^o - ^1D$	2-2	B11
O V	677.968	80		$2p(^2P^o) 3d - 2s 6g$	$^2F^o - ^2G$	2-3	B11
O V	678.612	120		$2p(^2P^o) 3d - 2s 6g$	$^2F^o - ^2G$	3-4	B11
O V	679.136	160		$2p(^2P^o) 3d - 2s 6g$	$^2F^o - ^2G$	4-5	B11
O V	681.27	480		$2s 3d - 2s 4f$	$^2D - ^2F^o$	3-4	B11
O V	715.955	120b		$2s 3p - 2s 4s$	$^2P^o - ^2S$	0-1	B11
O V	716.137	120		$2s 3p - 2s 4s$	$^2P^o - ^2S$	1-1	B11
O V	716.553	200		$2s 3p - 2s 4s$	$^2P^o - ^2S$	2-1	B11
O V	728.733	320		$2s 3d - 2s 4f$	$^1D - ^1F^o$	2-3	B11
O V	739.84	40h		$2s 3d - 2s 4p$	$^2D - ^2P^o$	3-2	B11
O V	752.019	40b		$2p(^2P^o) 3d - 2p(^2P^o) 4f$	$^1F^o - ^1G$	3-4	B11
O V	758.678	840	3	$2s 2p - 2p^2$	$^2P^o - ^2P$	1-2	B11
O V	759.441	800	3	$2s 2p - 2p^2$	$^2P^o - ^2P$	0-1	B11
O V	760.228	760	3	$2s 2p - 2p^2$	$^2P^o - ^2P$	1-1	B11
O V	760.445	880	3	$2s 2p - 2p^2$	$^2P^o - ^2P$	2-2	B11
O V	761.128	800	3	$2s 2p - 2p^2$	$^2P^o - ^2P$	1-0	B11
O V	762.003	840	3	$2s 2p - 2p^2$	$^2P^o - ^2P$	2-1	B11
O V	774.518	720	8	$2s 2p - 2p^2$	$^1P^o - ^1S$	1-0	B11
O V	784.795	80		$2p(^2P^o) 3d - 2s 6g$	$^1F^o - ^1G$	3-4	B11
O V	788.577	40h		$2s 3p - 2p(^2P^o) 3p$	$^1P^o - ^1S$	1-0	B11
O V	1055.451	200		$2s 3p - 2p(^2P^o) 3p$	$^2P^o - ^2D$	2-3	B11
O V	1058.149	120		$2s 3p - 2p(^2P^o) 3p$	$^2P^o - ^2D$	1-2	B11
O V	1058.998	80		$2s 3p - 2p(^2P^o) 3p$	$^2P^o - ^2D$	2-2	B11
O V	1059.930	80		$2s 3p - 2p(^2P^o) 3p$	$^2P^o - ^2D$	0-1	B11
O V	1060.380	80		$2s 3p - 2p(^2P^o) 3p$	$^2P^o - ^2D$	1-1	B11
O V	1218.406	40		$2s^2 - 2s 2p$	$^1S - ^2P^o$	0-1	B11
O V	1243.801	40		$2s 4s - 2s 5p$	$^2S - ^2P^o$	1-2	B11
O V	1371.292	300	7	$2s 2p - 2p^2$	$^1P^o - ^1D$	1-2	B11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O V	1417.653	40					
O V	1417.908	80		2s 4p - 2s 5d	$^3P^o - ^3D$	0 - 1	B11
O V	1418.393	120		2s 4p - 2s 5d	$^3P^o - ^3D$	1 - 2	B11
O V	1419.009	80		2s 4p - 2s 5d	$^3P^o - ^3D$	2 - 3	B11
O V	1506.72	400w		2s 4p - 2s 5d	$^1P^o - ^1D$	1 - 2	B11
O V				2s 4d - 2s 5f	$^3D - ^3F^o$	3 - 4	B11
O V	1596.375	280					
O V	1643.68	540w		2s 4d - 2s 5f	$^1D - ^1F^o$	2 - 3	B11
O V	1707.996	400		2s 4f - 2s 5g	$^3F^o - ^3G$	4 - 5	B11
O V	1844.4	110w		2s 4f - 2s 5g	$^1F^o - ^1G$	3 - 4	B11
O V	1845.63	40w		2s 5g - 2s 7h	$^3G - ^3H^o$	5 - 6	B11
O V				2s 5f - 2s 7g	$^3F^o - ^3G$	4 - 5	B11

OXYGEN VI (O^{5+}), $Z = 8$ Ground State $1s^2 2s^2 S_{1/2}$ (3 electrons)Ionization Potential $1\ 114\ 008\ \text{cm}^{-1}$; $138.116\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O VI	93.03	100		2s - 10p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P9
O VI	93.84	150		2s - 9p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P9
O VI	95.02	200		2s - 8p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P9
O VI	96.78	250		2s - 7p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P9
O VI	99.68	250		2s - 6p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P9
O VI	101.57	100					
O VI	102.30	150		2p - 11d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P9
O VI	103.26	200		2p - 10d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P9
O VI	104.67	250		2p - 9d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P9
O VI	104.811	350		2p - 8d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P9
O VI				2s - 5p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E3, P9
O VI	106.79	300					
O VI	110.148	120		2p - 7d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P9
O VI	110.220	250		2p - 6d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3, P9
O VI	110.69	150		2p - 6d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3, P9
O VI	115.824	350		2p - 6s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P9
O VI				2s - 4p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E3, P9
O VI	116.347	120					
O VI	116.419	250		2p - 5d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3, P9
O VI	117.40	300		2p - 5d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3, P9
O VI	129.786	150	5	2p - 5s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P9
O VI	129.872	250	5	2p - 4d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3, P9
O VI				2p - 4d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3, P9
O VI	132.219	100					
O VI	132.312	200		2p - 4s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E3, P9
O VI	150.089	500	2	2p - 4s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E3, P9
O VI	150.124	250	2	2s - 3p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E6, P9, E3
O VI	172.935	950	4	2s - 3p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E6, P9, E3
O VI				2p - 3d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E6, E3
O VI	173.082	1000	4				
O VI	183.937	650	3	2p - 3d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E6, E3
O VI	184.117	850	3	2p - 3s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E6, E3
O VI	447.712	10		2p - 3s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E6, E3
O VI	447.840	10		3s - 4p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E3
O VI				3s - 4p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E3
O VI	498.090	10d					
O VI	498.431	100d		3p - 4d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E3
O VI	519.610	200d		3p - 4d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E3
O VI	519.723	200d		3d - 4f	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E3
O VI	1031.912	850	1	3d - 4f	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$	E3
O VI				2s - 2p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E3
O VI	1037.613	750	1	2s - 2p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E3

OXYGEN VII (O^{6+}), $Z = 8$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $5\ 963\ 135\ \text{cm}^{-1}$; $739.315\ \text{eV}$

Element	Wavelength	intensity	Multiplet	Configuration	Term	J - J	References
O VII	17.200	50		$1s^2 - 1s6p$	$g^1S - ^1P^o$	0 - 1	T12
O VII	17.396	100		$1s^2 - 1s5p$	$g^1S - ^1P^o$	0 - 1	T12
O VII	17.768	200		$1s^2 - 1s4p$	$g^1S - ^1P^o$	0 - 1	E6, T12
O VII	18.627	500		$1s^2 - 1s3p$	$g^1S - ^1P^o$	0 - 1	E6, T12
O VII	21.6020	1000		$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	S26, T12
O VII	21.804	300		$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	T12
O VII	22.10	f		$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	K8, J5
O VII	72.3 P			$1s2s - 1s10p$	$^3S - ^3P^o$	1 - 2	F20
O VII	73.0 P			$1s2s - 1s9p$	$^3S - ^3P^o$	1 - 2	F20
O VII	73.9 P			$1s2s - 1s8p$	$^3S - ^3P^o$	1 - 2	F20
O VII	75.35 P			$1s2s - 1s7p$	$^3S - ^3P^o$	1 - 2	F20
O VII	75.5 P			$1s2p - 1s10d$	$^3P^o - ^3D$	2 - 3	F20
O VII	76.3 P			$1s2p - 1s9d$	$^3P^o - ^3D$	2 - 3	F20
O VII	77.31 P			$1s2p - 1s8d$	$^3P^o - ^3D$	2 - 3	F20
O VII	77.68 P			$1s2s - 1s6p$	$^3S - ^3P^o$	1 - 2	F20
O VII	78.94	50		$1s2p - 1s7d$	$^3P^o - ^3D$	2 - 3	P9
O VII	81.50	100		$1s2p - 1s6d$	$^3P^o - ^3D$	2 - 3	P9
O VII	81.89	150		$1s2s - 1s5p$	$^3S - ^3P^o$	1 - 2	P9
O VII	86.07	200		$1s2p - 1s5d$	$^3P^o - ^3D$	2 - 3	P9
O VII	91.02	250		$1s2s - 1s4p$	$^3S - ^3P^o$	1 - 2	P9
O VII	96.12	300		$1s2p - 1s4d$	$^3P^o - ^3D$	2 - 3	P9
O VII	120.351	350		$1s2s - 1s3p$	$^3S - ^3P^o$	1 - 2	E1, P9
O VII	128.412	150		$1s2p - 1s3d$	$^3P^o - ^3D$	1 - 2	E1, P9
O VII	128.560	200		$1s2p - 1s3d$	$^3P^o - ^3D$	2 - 3	E1, P9
O VII	133.31	250		$1s2p - 1s3s$	$^3P^o - ^3S$	2 - 1	P9
O VII	1623.29			$1s2s - 1s2p$	$^3S - ^3P^o$	1 - 2	E30
O VII	1637.96			$1s2s - 1s2p$	$^3S - ^3P^o$	1 - 1	E30
O VII	1639.58			$1s2s - 1s2p$	$^3S - ^3P^o$	1 - 0	E30

OXYGEN VIII (O^{7+}), $Z = 8$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential $7\ 028\ 394\ \text{cm}^{-1}$; $871.390\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O VIII	14.453			$1s - 8p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
O VIII	14.524			$1s - 7p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
O VIII	14.634			$1s - 6p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
O VIII	14.821			$1s - 5p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
O VIII	15.176 P	10		$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
O VIII	16.006 P	30		$1s - 3p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
O VIII	18.969 P	100		$1s - 2p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
O VIII	61.977 P			2 - 7			G2
O VIII	64.03 P			2 - 6			G2
O VIII	67.76 P			2 - 5			G2
O VIII	75.89 P			2 - 4			G2
O VIII	102.43 P			2 - 3			G2
O VIII	149.06 P			3 - 8			G2
O VIII	156.92 P			3 - 7			G2
O VIII	170.80 P			3 - 6			G2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
O VIII	200.15	P		3-5			G2
O VIII	283.83	P		4-9			G2
O VIII	292.8	P		3-4			G2
O VIII	303.69	P		4-8			G2
O VIII	338.19	P		4-7			G2
O VIII	409.97	P		4-6			G2
O VIII	474.54	P		5-10			G2
O VIII	514.80	P		5-9			G2
O VIII	584.05	P		5-8			G2
O VIII	632.7	P		4-5			G2
O VIII	726.6	P		5-7			G2
O VIII	729.61	P		6-11			G2
O VIII	800.8	P		6-10			G2
O VIII	922.6	P		6-9			G2
O VIII	1164.8	P		5-6			G2
O VIII	1171.5	P		6-8			G2
O VIII	1931.8	P		6-7			G2

FLUORINE I (F^0), $Z = 9$
 Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
 Ionization Potential $140\ 524.5\ \text{cm}^{-1}$; $17.422\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F I	588.84	P	-A	$2s^3 2p^4 - 2s\ 2p^6$	$g^2P^0 - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8
F I	590.25	P	-A	$2s^3 2p^4 - 2s\ 2p^6$	$g^2P^0 - ^3S$	$\frac{1}{2} - \frac{1}{2}$	K8
F I	680.698	2	-A	$2p^5 - 2p^4(^1S)3s$	$g^2P^0 - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P3, L8
F I	682.577	2	-A	$2p^5 - 2p^4(^1S)3s$	$g^2P^0 - ^3S$	$\frac{1}{2} - \frac{1}{2}$	P3, L8
F I	732.960	1		$2p^5 - 2p^4(^3P)5d$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	734.642	1		$2p^5 - 2p^4(^3P)5d$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{1}{2}$	L8
F I	734.795	1		$2p^5 - 2p^4(^3P)5d$	$g^2P^0 - ^3D$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	735.154	1		$2p^5 - 2p^4(^3P)5d$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	735.469	1		$2p^5 - 2p^4(^3P)6s$	$g^2P^0 - ^3P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	736.987	2		$2p^5 - 2p^4(^3P)6s$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	745.767	2		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^2P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	746.400	1		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	746.627	3		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	747.999	2		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^3P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	748.134	1		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	748.338	2		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^3D$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	748.580	4		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^3D$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	748.709	2		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^4F$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	748.946	3		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	750.418	1		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{1}{2}$	L8
F I	750.610	3		$2p^5 - 2p^4(^3P)5s$	$g^2P^0 - ^2P$	$\frac{3}{2} - \frac{1}{2}$	L8
F I	750.885	1		$2p^5 - 2p^4(^3P)4d$	$g^2P^0 - ^4D$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	751.861	4		$2p^5 - 2p^4(^3P)5s$	$g^2P^0 - ^3P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	752.884	4		$2p^5 - 2p^4(^3P)5s$	$g^2P^0 - ^2P$	$\frac{1}{2} - \frac{1}{2}$	L8
F I	753.303	4		$2p^5 - 2p^4(^3P)5s$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	754.148	2		$2p^5 - 2p^4(^3P)5s$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	755.603	2		$2p^5 - 2p^4(^3P)5s$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	776.926	4		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^2P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	777.010	5		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	777.531	4		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	778.059	6		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	779.192	2		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{1}{2}$	L8
F I	779.365	6		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^2P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	779.910	5		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	779.972	2		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4F$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	780.134	1		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4D$	$\frac{3}{2} - \frac{1}{2}$	L8
F I	780.390	15		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	780.519	10		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	780.713	5		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	781.654	3		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4D$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	782.378	10		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{1}{2}$	L8
F I	782.575	2		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^2D$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	782.976	5		$2p^5 - 2p^4(^3P)3d$	$g^2P^0 - ^4F$	$\frac{1}{2} - \frac{1}{2}$	L8
F I	790.006	7		$2p^5 - 2p^4(^3P)4s$	$g^2P^0 - ^4D$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	791.875	12		$2p^5 - 2p^4(^3P)4s$	$g^2P^0 - ^2P$	$\frac{3}{2} - \frac{1}{2}$	L8
F I	792.536	10		$2p^5 - 2p^4(^3P)4s$	$g^2P^0 - ^3P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	793.237	1		$2p^5 - 2p^4(^3P)4s$	$g^2P^0 - ^2P$	$\frac{1}{2} - \frac{1}{2}$	L8
F I	794.417	10		$2p^5 - 2p^4(^3P)4s$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{1}{2}$	L8
F I	795.774	2		$2p^5 - 2p^4(^3P)4s$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	796.982	3		$2p^5 - 2p^4(^3P)4s$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{1}{2}$	L8
F I	806.970	150	2	$2f^5 - 2p^4(^1D)3s$	$g^2P^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P3, L8
F I	809.607	125	2	$2p^5 - 2p^4(^1D)3s$	$g^2P^0 - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P3, L8
F I	951.871	500	1	$2p^5 - 2p^4(^3P)3s$	$g^2P^0 - ^2P$	$\frac{3}{2} - \frac{1}{2}$	L8
F I	954.825	1000	1	$2p^5 - 2p^4(^3P)3s$	$g^2P^0 - ^3P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	955.545	750	1	$2p^5 - 2p^4(^3P)3s$	$g^2P^0 - ^2P$	$\frac{1}{2} - \frac{1}{2}$	L8
F I	958.524	500	1	$2p^5 - 2p^4(^3P)3s$	$g^2P^0 - ^2P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	972.401	20		$2p^5 - 2p^4(^3P)3s$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{1}{2}$	L8
F I	973.895	350		$2p^5 - 2p^4(^3P)3s$	$g^2P^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	L8
F I	976.217	100		$2p^5 - 2p^4(^3P)3s$	$g^2P^0 - ^4P$	$\frac{1}{2} - \frac{1}{2}$	L8
F I	976.505	40		$2p^5 - 2p^4(^3P)3s$	$g^2P^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	L8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F I	977.745	100		$2p^3 - 2p^3(^3P)3s$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	L8
F I	1096.8 P	-A		$2s2p^6 - 2s2p^53s$	$^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	K8

FLUORINE II (F^{2+}), $Z = 9$
 Ground State $1s^22s^22p^4\ ^3P_2$ (8 electrons)
 Ionization Potential $282\ 058.6\ \text{cm}^{-1}$; $34.970\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F II	348.795	1 -A		$2p^4 - 2p^3(^3P^o)4s$	$g^3P - ^3P^o$	2-2	P2
F II	353.423	2 -A		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-2	P2
F II	375.237	10		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-1	P2
F II	375.303	100		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-2	P2
F II	375.432	10		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3S^o$	2-1	P2
F II	375.702	40		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-0	P2
F II	375.784	10		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-2	P2
F II	375.927	40		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	0-1	P2
F II	375.684	10		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$	2-3	P2
F II	377.133	1		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$	1-2	P2
F II	379.719	1		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^1P^o$	2-1	P2
F II	380.896	100		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^1F^o$	2-3	P2
F II	381.824	1		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^1D^o$	2-2	P2
F II	393.680	40		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	2-3	P2
F II	394.207	10		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	1-2	P2
F II	394.438	1		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	0-1	P2
F II	400.582	10		$2p^4 - 2p^3(^3D^o)4s$	$^1D - ^1D^o$	2-2	P2
F II	405.638	100		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1P^o$	2-1	P2
F II	407.041	200		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1F^o$	2-3	P2
F II	407.503	100		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1D^o$	2-2	P2
F II	417.872	10		$2p^4 - 2p^3(^3P^o)3d$	$^1S - ^1P^o$	0-1	P2
F II	422.013	40		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	2-1	P2
F II	422.623	10		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	1-1	P2
F II	422.884	1		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	0-1	P2
F II	430.914	300		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2-3	P2
F II	431.552	200		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	1-2	P2
F II	431.832	100		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	0-1	P2
F II	435.636	200		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2-2	P2
F II	436.281	100		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	1-2	P2
F II	436.565	40		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	0-1	P2
F II	457.179	600		$2s^22p^4 - 2s2p^5$	$^1D - ^1P^o$	2-1	P2
F II	471.921	10	3	$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2-1	P2
F II	471.952	200	3	$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2-2	P2
F II	471.999	450	3	$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2-3	P2
F II	472.681	100		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	1-1	P2
F II	472.711	300		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	1-2	P2
F II	473.015	200		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	0-1	P2
F II	484.601	850		$2p^4 - 2p^3(^3P^o)3s$	$^1D - ^1P^o$	2-1	P2
F II	513.644	300		$2s^22p^4 - 2s2p^5$	$^1S - ^1P^o$	0-1	P2
F II	514.944	600		$2p^4 - 2p^3(^3D^o)3s$	$^1D - ^1D^o$	2-2	P2
F II	546.852	600	2	$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2-1	P2
F II	547.874	450	2	$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1-1	P2
F II	548.322	300	2	$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	0-1	P2
F II	548.516	200		$2p^4 - 2p^3(^3P^o)3s$	$^1S - ^1P^o$	0-1	P2
F II	605.670	850	1	$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	2-1	P2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F II	606.286	700	1	$2s^2 2p^4 - 2s 2p^3$	$g^3P - ^3P^o$	1-0	P2
F II	606.804	1000	1	$2s^2 2p^4 - 2s 2p^3$	$g^3P - ^3P^o$	2-2	P2
F II	606.922	600	1	$2s^2 2p^4 - 2s 2p^3$	$g^3P - ^3P^o$	1-1	P2
F II	607.472	700	1	$2s^2 2p^4 - 2s 2p^3$	$g^3P - ^3P^o$	0-1	P2
F II	608.063	850	1	$2s^2 2p^4 - 2s 2p^3$	$g^3P - ^3P^o$	1-2	P2
F II	694.801	10		$2s^2 2p^4 - 2s 2p^3$	$^1D - ^3P^o$	2-2	P2
F II	832.035	10		$2s^2 2p^4 - 2s 2p^3$	$^1S - ^3P^o$	0-1	P2
F II	1112.116	10		$2s 2p^3 - 2s^2 2p^2 (^3P^o) 3p$	$^3P^o - ^3D$	2-2	P2
F II	1112.302	100		$2s 2p^3 - 2s^2 2p^2 (^3P^o) 3p$	$^3P^o - ^3D$	2-3	P2
F II	1115.946	40		$2s 2p^3 - 2s^2 2p^2 (^3P^o) 3p$	$^3P^o - ^3D$	1-2	P2
F II	1118.017	10		$2s 2p^3 - 2s^2 2p^2 (^3P^o) 3p$	$^3P^o - ^3D$	0-1	P2
F II	1129.758	200		$2s 2p^3 - 2s^2 2p^2 (^3P^o) 3p$	$^3P^o - ^3S$	2-1	P2
F II	1133.714	100		$2s 2p^3 - 2s^2 2p^2 (^3P^o) 3p$	$^3P^o - ^3S$	1-1	P2
F II	1135.938	10		$2s 2p^3 - 2s^2 2p^2 (^3P^o) 3p$	$^3P^o - ^3S$	0-1	P2
F II	1209.345	40		$2p^3 (^4S^o) 3s - 2p^2 (^4S^o) 5p$	$^3S^o - ^3P$	2-3	P2
F II	1221.235	100		$2s 2p^3 - 2s^2 2p^2 (^4S^o) 4p$	$^3P^o - ^3P$	2-2	P2
F II	1221.536	40		$2s 2p^3 - 2s^2 2p^2 (^4S^o) 4p$	$^3P^o - ^3P$	2-1	P2
F II	1225.854	40		$2s 2p^3 - 2s^2 2p^2 (^4S^o) 4p$	$^3P^o - ^3P$	1-2	P2
F II	1226.161	10		$2s 2p^3 - 2s^2 2p^2 (^4S^o) 4p$	$^3P^o - ^3P$	1-1	P2
F II	1226.267	40		$2s 2p^3 - 2s^2 2p^2 (^4S^o) 4p$	$^3P^o - ^3P$	1-0	P2
F II	1228.763	40		$2s 2p^3 - 2s^2 2p^2 (^4S^o) 4p$	$^3P^o - ^3P$	0-1	P2
F II	1321.515	10		$2p^3 (^4S^o) 3p - 2p^2 (^3P^o) 3d$	$^3P - ^3D^o$	2-3	P2
F II	1327.058	200		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3P$	2-1	P2
F II	1328.108	300		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3P$	2-2	P2
F II	1532.042	100		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3P$	1-0	P2
F II	1332.512	100		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3P$	1-1	P2
F II	1333.588	200		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3P$	1-2	P2
F II	1343.693	300		$2p^3 (^4S^o) 3s - 2p^2 (^3P^o) 3p$	$^3S^o - ^3P$	1-2	P2
F II	1344.037	200		$2p^3 (^4S^o) 3s - 2p^2 (^3P^o) 3p$	$^3S^o - ^3P$	1-1	P2
F II	1344.295	100		$2p^3 (^4S^o) 3s - 2p^2 (^3P^o) 3p$	$^3S^o - ^3P$	1-0	P2
F II	1375.319	100		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3F$	2-3	P2
F II	1400.611	300		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3D$	2-3	P2
F II	1407.135	200		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3D$	1-2	P2
F II	1410.618	100		$2s 2p^3 - 2s^2 2p^2 (^3D^o) 3p$	$^3P^o - ^3D$	0-1	P2
F II	1419.485	10		$2p^3 (^4S^o) 3s - 2p^2 (^3P^o) 3p$	$^3S^o - ^3S$	1-1	P2
F II	1424.737	1		$2p^3 (^4S^o) 3s - 2p^2 (^4S^o) 3p$	$^3S^o - ^3P$	2-2	P2
F II	1462.842	1 -A		$2p^3 (^3P^o) 3s - 2p^2 (^3P^o) 4p$	$^1P^o - ^1P$	1-1	P2
F II	1493.091	450		$2p^3 (^4S^o) 3s - 2p^2 (^4S^o) 4p$	$^3S^o - ^3P$	2-3	P2
F II	1493.235	300		$2p^3 (^4S^o) 3s - 2p^2 (^4S^o) 4p$	$^3S^o - ^3P$	2-2	P2
F II	1493.311	200		$2p^3 (^4S^o) 3s - 2p^2 (^4S^o) 4p$	$^3S^o - ^3P$	2-1	P2
F II	1514.789	100		$2p^3 (^3D^o) 3s - 2p^2 (^3D^o) 4p$	$^3D^o - ^3F$	3-4	P2
F II	1515.034	40		$2p^3 (^3D^o) 3s - 2p^2 (^3D^o) 4p$	$^3D^o - ^3F$	2-3	P2
F II	1521.590	10 -A		$2p^3 (^3P^o) 3s - 2p^2 (^3P^o) 4p$	$^3P^o - ^3D$	2-3	P2
F II	1523.197	100		$2p^3 (^3D^o) 3s - 2p^2 (^3D^o) 4p$	$^3D^o - ^3D$	3-3	P2
F II	1523.583	40		$2p^3 (^3D^o) 3s - 2p^2 (^3D^o) 4p$	$^3D^o - ^3D$	2-2	P2
F II	1523.925	10		$2p^3 (^3D^o) 3s - 2p^2 (^3D^o) 4p$	$^3D^o - ^3D$	1-1	P2
F II	1566.961	100		$2p^3 (^4S^o) 3s - 2p^2 (^4S^o) 4p$	$^3S^o - ^3P$	1-2	P2
F II	1567.435	40		$2p^3 (^4S^o) 3s - 2p^2 (^4S^o) 4p$	$^3S^o - ^3P$	1-1	P2
F II	1585.056	40		$2p^3 (^3D^o) 3s - 2p^2 (^3D^o) 4p$	$^1D^o - ^1P$	2-3	P2
F II	1609.798	10		$2p^3 (^3D^o) 3s - 2p^2 (^3D^o) 4p$	$^1D^o - ^1P$	2-1	P2
F II	1650.200	1		$2p^3 (^4S^o) 3s - 2p^2 (^4S^o) 4p$	$^3S^o - ^3P$	1-2	P2
F II	1700.185	10		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3P^o$	1-0	P2
F II	1700.691	10		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3P^o$	1-1	P2
F II	1700.767	10		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3P^o$	0-1	P2
F II	1700.831	40		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3P^o$	2-1	P2
F II	1701.993	40		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3P^o$	1-2	P2
F II	1702.130	200		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3P^o$	2-2	P2
F II	1704.696	10		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3S^o$	1-1	P2
F II	1704.834	40		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3S^o$	2-1	P2
F II	1729.669	1		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3D^o$	0-1	P2
F II	1730.119	10		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3D^o$	1-2	P2
F II	1731.047	40		$2p^3 (^4S^o) 3p - 2p^2 (^3D^o) 3d$	$^3P - ^3D^o$	2-3	P2
F II	1734.494	10		$2p^3 (^4S^o) 3p - 2p^2 (^4S^o) 6s$	$^3P - ^3S^o$	2-1	P2
F II	1744.745	200		$2p^3 (^4S^o) 3s - 2p^2 (^3D^o) 3p$	$^3S^o - ^3P$	1-0	P2
F II	1745.550	300		$2p^3 (^4S^o) 3s - 2p^2 (^3D^o) 3p$	$^3S^o - ^3P$	1-1	P2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F II	1747.389	450		$2p^2(^4S^o)3s - 2p^2(^2D^o)3p$	$^3S^o - ^3P$	1 - 2	P2
F II	1885.047	10		$2p^2(^4S^o)3p - 2p^2(^4S^o)5s$	$^3P - ^4S^o$	1 - 2	P2
F II	1885.442	40		$2p^2(^4S^o)3p - 2p^2(^4S^o)5s$	$^3P - ^4S^o$	2 - 2	P2
F II	1886.147	100		$2p^2(^4S^o)3p - 2p^2(^4S^o)5s$	$^3P - ^4S^o$	3 - 2	P2
F II	1929.791	10 - A		$2p^2(^2D^o)3p - 2p^2(^2D^o)5s$	$^1F - ^1D^o$	3 - 2	P2
F II	1959.758	1		$2p^2(^4S^o)3p - 2p^2(^4S^o)4d$	$^3P - ^4D^o$	1 - 2	P2
F II	1960.255	10		$2p^2(^4S^o)3p - 2p^2(^4S^o)4d$	$^3P - ^4D^o$	2 - 3	P2
F II	1960.984	40		$2p^2(^4S^o)3p - 2p^2(^4S^o)4d$	$^3P - ^4D^o$	3 - 4	P2

FLUORINE III (F^{2+}), $Z = 9$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential 505 777 cm^{-1} ; 62.707 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F III	214.804	3		$2p^3 - 2p^2(^3P)5d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	214.862	3		$2p^3 - 2p^2(^3P)5d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	219.277	1		$2p^3 - 2p^2(^1D)5d$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	219.588	0		$2p^3 - 2p^2(^1D)5d$	$^2D^o - ^2F$	$\frac{5}{2} - \frac{7}{2}$	P4
F III	226.055	6		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	226.094	10		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	226.169	20		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	230.117	35		$2s^2 2p^3 - 2s 2p^3(^4S^o)3p$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	230.553	1		$2p^3 - 2p^2(^1D)4d$	$^2D^o - ^2P$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	230.603	1		$2p^3 - 2p^2(^1D)4d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	231.011	6		$2p^3 - 2p^2(^1D)4d$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	231.381	1		$2p^3 - 2p^2(^3P)5d$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	240.231	3		$2p^3 - 2p^2(^1D)4d$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	240.264	1		$2p^3 - 2p^2(^1D)4d$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	240.546	3		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	240.720	6		$2p^3 - 2p^2(^1D)4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	240.735	1		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	240.857	1		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	241.135	1		$2p^3 - 2p^2(^3P)5d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	243.357	3		$2p^3 - 2p^2(^3P)4d$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	243.407	1		$2p^3 - 2p^2(^3P)4d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	244.701	6		$2p^3 - 2p^2(^1S)3d$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	244.769	20		$2p^3 - 2p^2(^3P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{7}{2}$	P4
F III	245.005	10		$2p^3 - 2p^2(^3P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	245.866	3		$2p^3 - 2p^2(^1D)4s$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	254.165	20		$2p^3 - 2p^2(^3P)4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	254.197	10		$2p^3 - 2p^2(^3P)4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	255.632	3		$2p^3 - 2p^2(^1S)3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	255.667	1		$2p^3 - 2p^2(^1S)3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	255.723	35		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	255.770	60		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	255.863	100		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	256.358	35		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	256.526	3		$2p^3 - 2p^2(^3P)4d$	$^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	256.675	3		$2p^3 - 2p^2(^3P)4d$	$^2P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	256.723	1		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	256.894	6		$2p^3 - 2p^2(^1D)4s$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	260.307	20		$2p^3 - 2p^2(^1D)3d$	$^2D^o - ^2P$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	260.372	10		$2p^3 - 2p^2(^1D)3d$	$^2D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	260.496	10		$2p^3 - 2p^2(^3P)4s$	$^2D^o - ^2P$	$\frac{5}{2} - \frac{3}{2}$	P4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F III	260.782	3		$2p^2 - 2p^2(^2P)4s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	261.713	100		$2p^2 - 2p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	261.749	60		$2p^2 - 2p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	263.808	150		$2p^2 - 2p^2(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	270.677	20		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	272.712	20		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	272.756	10		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	272.919	10		$2p^2 - 2p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	273.206	6		$2p^2 - 2p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	274.260	60		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	276.780	35		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	276.897	20		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	279.689	100		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	280.007	60		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	280.802	1		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	280.905	3		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	281.204	10		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	281.343	20		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	290.846	60		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	290.945	35		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	295.369	6		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	295.404	3		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	295.703	35		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	295.889	60		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	311.413	20		$2p^2 - 2p^2(^1S)3s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	315.219	150		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	315.536	100		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	315.747	60		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	316.484	20		$2s2p^4 - 2s2p^2(^2S^{\circ})3d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	316.822	10		$2s2p^4 - 2s2p^2(^2S^{\circ})3d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	316.995	6		$2s2p^4 - 2s2p^2(^2S^{\circ})3d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	317.791	3		$2s2p^4 - 2s2p^2(^2D^{\circ})3s$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	318.126	1		$2s2p^4 - 2s2p^2(^2D^{\circ})3s$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	322.647	20		$2p^2 - 2p^2(^1D)3s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	322.675	10		$2p^2 - 2p^2(^1D)3s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	341.921	10		$2p^2 - 2p^2(^1D)3s$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	343.893	35		$2p^2 - 2p^2(^2P)3s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	343.934	3		$2p^2 - 2p^2(^2P)3s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	344.385	20		$2p^2 - 2p^2(^2P)3s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	365.876	60		$2p^2 - 2p^2(^2P)3s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	366.391	35		$2p^2 - 2p^2(^2P)3s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	378.580	10		$2s2p^4 - 2s2p^2(^2D^{\circ})3s$	$^2D^{\circ} - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	395.443	6		$2s2p^4 - 2s2p^2(^2S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	395.972	3		$2s2p^4 - 2s2p^2(^2S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	396.244	1		$2s2p^4 - 2s2p^2(^2S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	429.512	250		$2s^22p^2 - 2s2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	430.152	300		$2s^22p^2 - 2s2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	430.222	150		$2s^22p^2 - 2s2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	464.288	200		$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	465.113	250		$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	486.430	10		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	487.223	6		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	487.643	3		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	500.953	10		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	501.425	6		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	501.804	6		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	502.280	3		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	502.511	6		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	502.713	6		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	506.674	3		$2s2p^4 - 2s^22p^2(^2P)3p$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	508.386	400		$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	508.506	6		$2s2p^4 - 2s^22p^2(^1S)3p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	522.285	10		$2s2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	523.662	60		$2s2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	567.636	150		$2s^22p^2 - 2s2p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F III	567.686	400		$2s^2 2p^3 - 2s 2p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	567.752	300		$2s^2 2p^3 - 2s 2p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	567.801	150		$2s^2 2p^3 - 2s 2p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	573.886	20		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	573.935	1		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	574.384	10		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	588.060	3		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	588.208	6		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2D - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	600.104	10		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	600.390	6		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F4
F III	630.137	150		$2s^2 2p^2 - 2s 2p^3$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	630.198	200		$2s^2 2p^2 - 2s 2p^3$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	630.327	2		$2s 2p^4 - 2s^2 2p^3(^1S) 3p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	630.346	1		$2s 2p^4 - 2s^2 2p^3(^1S) 3p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	651.622	3		$2s 2p^4 - 2p^5$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	653.833	6		$2s 2p^4 - 2p^5$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	656.121	400		$2s^2 2p^2 - 2s 2p^3$	$^2S^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	656.869	500		$2s^2 2p^2 - 2s 2p^3$	$^2S^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	658.329	600		$2s^2 2p^2 - 2s 2p^3$	$^2S^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	665.809	10		$2s 2p^4 - 2s^2 2p^3(^3P) 3p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	666.258	6		$2s 2p^4 - 2s^2 2p^3(^3P) 3p$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	668.195	6		$2s^2 2p^2(^3P) 3s - 2s 2p^3(^3D) 3s$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	669.648	10		$2s^2 2p^2(^3P) 3s - 2s 2p^3(^3D) 3s$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	712.524	1		$2s 2p^4 - 2s^2 2p^3(^1S) 3p$	$^2P - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	734.047	6		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	734.767	2		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	739.851	20		$2s 2p^4 - 2p^5$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	741.955	35		$2s 2p^4 - 2p^5$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	742.699	60		$2s 2p^4 - 2p^5$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	744.818	20		$2s 2p^4 - 2p^5$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	847.962	10		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	848.915	3		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	850.707	3		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	851.700	6		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	879.59	6		$2s 2p^4 - 2s^2 2p^3(^1D) 3p$	$^2P - ^2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	882.136	3		$2s 2p^4 - 2s^2 2p^3(^1D) 2p$	$^2P - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	902.239	3		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	902.425	3		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	903.96	3		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	904.657	3		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	905.048	6		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	906.577	3		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	910.334	6		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	910.645	6		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	911.164	20		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	912.090	6		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	913.303	3		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	914.836	3		$2p^2(^3P) 3p - 2p^2(^3P) 5g$	$^4S^\circ - ^2[2]$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	924.716	6		$2p^2(^3P) 3p - 2p^2(^3P) 5s$	$^2S^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	938.538	1		$2p^2(^3P) 3p - 2p^2(^1D) 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	962.580	6		$2p^2(^3P) 3p - 2p^2(^3P) 5s$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	963.322	3		$2p^2(^3P) 3p - 2p^2(^3P) 5s$	$^4D^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	983.927	1		$2p^2(^3P) 3p - 2p^2(^3P) 5s$	$^4P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	991.102	3		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^2P - ^2S^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	993.281	6		$2s^2 2p^2 - 2s 2p^3$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	994.899	6		$2p^2(^3P) 3s - 2p^2(^3P) 4p$	$^2P - ^2S^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	996.616	3		$2s^2 2p^2 - 2s 2p^3$	$^2P^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1023.270	3		$2p^2(^3P) 3p - 2p^2(^3P) 5s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1033.898	1		$2p^2(^3P) 3p - 2p^2(^3P) 4d$	$^2S^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1045.236	3		$2p^2(^3P) 3p - 2p^2(^3P) 5s$	$^4S^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1048.898	3		$2p^2(^3P) 3p - 2p^2(^3P) 5s$	$^4S^\circ - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1065.268	60		$2s 2p^4 - 2s^2 2p^3(^3P) 3p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1066.251	6		$2s 2p^4 - 2s^2 2p^3(^3P) 3p$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1069.636	6		$2s 2p^4 - 2s^2 2p^3(^3P) 3p$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1070.623	20		$2s 2p^4 - 2s^2 2p^3(^3P) 3p$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F III	1085.297	3		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1094.277	3		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4D^{\circ} - ^4F$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1094.660	6		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4D^{\circ} - ^4F$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1095.095	10		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4D^{\circ} - ^4F$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1109.262	3		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1111.782	3		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4P^{\circ} - ^4D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1112.507	6		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4P^{\circ} - ^4D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1113.244	3		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4P^{\circ} - ^2P$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1113.463	20		$2s2p^4 - 2s^22p^2(^2P)3p$	$^3P - ^3D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1118.320	10		$2s2p^4 - 2s^22p^2(^2P)3p$	$^3P - ^3D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1118.854	3		$2p^2(^1D)3p - 2p^2(^1D)4d$	$^2S^{\circ} - ^2G$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1119.673	6		$2p^2(^1D)3p - 2p^2(^1D)4d$	$^2F^{\circ} - ^2G$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1123.126	20		$2s2p^4 - 2s^22p^2(^2P)3p$	$^3P - ^3D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1138.182	6		$2s^22p^2(^2P)3s - 2s2p^2(^2S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1141.857	3		$2p^2(^1D)3p - 2p^2(^1D)4d$	$^3D^{\circ} - ^3P$	$\frac{7}{2} - \frac{5}{2}$	F4
F III	1142.332	10		$2s^22p^2(^2P)3s - 2s2p^2(^2S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1143.354	1		$2p^2(^1D)3p - 2p^2(^1D)4d$	$^3D^{\circ} - ^3P$	$\frac{7}{2} - \frac{1}{2}$	P4
F III	1158.073	6		$2p^2(^1D)3s - 2p^2(^2P)4p$	$^3D - ^3D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1158.781	10		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^3D^{\circ} - ^3F$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1159.227	20		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^3D^{\circ} - ^3F$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1165.961	10		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^4D^{\circ} - ^4P$	$\frac{7}{2} - \frac{1}{2}$	P4
F III	1177.988	3		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4S^{\circ} - ^4P$	$\frac{7}{2} - \frac{1}{2}$	P4
F III	1178.642	3		$2p^2(^2P)3p - 2p^2(^1D)4s$	$^3D^{\circ} - ^3D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1179.035	6		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4S^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1181.061	10		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^4S^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1181.909	3		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1182.427	3		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^3P^{\circ} - ^3D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1184.039	3		$2p^2(^2P)3p - 2p^2(^1D)4s$	$^3D^{\circ} - ^3D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1201.358	3		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^4P^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1204.380	6		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^4P^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1210.349	3		$2p^2(^1D)3p - 2p^2(^1D)4d$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1211.585	6		$2p^2(^1D)3s - 2p^2(^2P)4p$	$^3D - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1212.255	6		$2p^2(^1D)3p - 2p^2(^1D)4d$	$^3P^{\circ} - ^3D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1212.321	1		$2p^2(^1D)3p - 2p^2(^1D)4d$	$^3P^{\circ} - ^3D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1213.353	20		$2p^2(^2P)3s - 2p^2(^1S)3p$	$^3P - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1214.368	3		$2p^2(^2P)3p - 2p^2(^1S)3d$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1214.864	0		$2p^2(^2P)3p - 2p^2(^1S)3d$	$^3P^{\circ} - ^3D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1219.032	150		$2p^2(^2P)3s - 2p^2(^1S)3p$	$^3P - ^3P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1235.316	10		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^3P - ^4D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1237.308	6		$2p^2(^2P)3p - 2p^2(^2P)4d$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1242.585	3		$2p^2(^2P)3p - 2p^2(^1D)4s$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1243.888	6		$2p^2(^2P)3p - 2p^2(^1D)4s$	$^3P^{\circ} - ^3D$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1261.859	6		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 2[3]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1263.987	6		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 2[5]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1264.870	3		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 2[4]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1266.867	150		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 1[4]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1267.711	200		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 2[5]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1268.27	3		$2s^22p^2(^2P)3d - 2s2p^2(^2D^{\circ})3s$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1268.573	35		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 1[3]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1269.368	20		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 1[4]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1269.559	60		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 1[4]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1271.075	10		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^4F - 0[3]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1272.463	3		$2p^2(^2P)3d - 2p^2(^1D)4f$	$^4P - 2[1]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1272.795	6		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^3D^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1276.352	3		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^3P - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1278.810	60		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^3D^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1282.240	10		$2p^2(^1D)3d - 2p^2(^1D)5f$	$^3F - 2[4]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1283.098	6		$2p^2(^1D)3d - 2p^2(^1D)5f$	$^3F - 2[4]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1284.105	3		$2s2p^4 - 2s^22p^2(^2P)3p$	$^3P - ^4S^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	P4
F III	1291.565	1		$2p^2(^2P)3d - 2p^2(^1D)4f$	$^3F - 2[3]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1294.279	1		$2p^2(^2P)3d - 2p^2(^2P)5f$	$^3P - 2[3]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1294.83	1		$2s^22p^2(^2P)3s - 2p^3$	$^3P - ^3P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1296.940	20		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^4S^{\circ} - ^4P$	$\frac{7}{2} - \frac{1}{2}$	P4
F III	1297.188	60		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^4S^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1297.537	100		$2s^22p^2(^2P)3p - 2s2p^2(^2S^{\circ})3p$	$^4S^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	P4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F III	1297.757	1		$2p^2(^3P)3d - 2p^2(^1D)4f$	$^3F - 2[3]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1298.072	6		$2s^2 2p^2(^3P)3d - 2s 2p^2(^4S^{\circ})3d$	$^4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	F4
F III	1299.055	3		$2p^2(^3P)3d - 2p^2(^1D)4f$	$^3F - 2[4]^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	P4
F III	1300.466	3		$2s^2 2p^2(^3P)3d - 2s 2p^2(^4S^{\circ})3d$	$^4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	1302.599	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3P - 1[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1303.624	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 2[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1303.871	35		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 2[3]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	P4
F III	1304.368	20		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3P - 1[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1304.705	1		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3P - 2[2]^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	1305.008	0		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 2[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1305.657	3		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 2[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1305.870	35		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 2[4]^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	P4
F III	1306.04	60		$2p^2(^1D)3d - 2p^2(^1D)5f$	$^3G - 2[5]^{\circ}$	$\frac{5}{2} - \frac{11}{2}$	P4
F III	1306.122	20		$2p^2(^1D)3d - 2p^2(^1D)5f$	$^3G - 2[5]^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	P4
F III	1306.991	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 2[2]^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1310.117	3		$2s^2 2p^2(^3P)3s - 2p^5$	$^3P - ^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1311.963	1		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 1[2]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1312.763	1		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 1[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1316.401	35		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 0[3]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	P4
F III	1316.531	35		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4D - 0[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1317.744	3		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4P - 2[2]^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	1317.975	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4P - 2[2]^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	1320.203	3		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4P - 2[2]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1320.451	1		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4P - 2[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1323.311	3		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4P - 2[1]^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	P4
F III	1325.214	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4P - 1[2]^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	1326.926	20		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4P - 1[3]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	P4
F III	1329.704	1		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^4P - 0[3]^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	1329.892	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3F - 2[4]^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	P4
F III	1330.490	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3F - 2[4]^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	P4
F III	1333.139	60		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3F - 2[5]^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	P4
F III	1334.292	3		$2p^2(^1D)3d - 2p^2(^1D)5f$	$^3D - 2[4]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	P4
F III	1337.196	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3F - 0[3]^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	1339.337	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3F - 1[4]^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	P4
F III	1359.921	100		$2p^2(^3P)3p - 2p^2(^3P)4s$	$^3S^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1364.291	10		$2p^2(^3P)3d - 2p^2(^1D)4f$	$^3D - 2[3]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	P4
F III	1367.083	60		$2p^2(^3P)3p - 2p^2(^3P)4s$	$^3S^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1398.190	10		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3D - 2[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1399.491	6		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3D - 2[2]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1399.839	60		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3D - 2[4]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	P4
F III	1401.794	3		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3D - 2[2]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1403.153	1		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3D - 2[1]^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1410.039	20		$2p^2(^3P)3d - 2p^2(^3P)5f$	$^3D - 1[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1419.740	1		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	P4
F III	1423.831	10		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{1}{2}$	P4
F III	1424.64	3		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1424.74	1		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	1436.687	1		$2p^2(^1D)3p - 2p^2(^3P)5s$	$^3P^{\circ} - ^3P$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	1442.192	3		$2p^2(^1D)3p - 2p^2(^3P)5s$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1457.145	3		$2p^2(^1D)3d - 2p^2(^1D)5p$	$^3G - ^3F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	P4
F III	1457.441	1		$2p^2(^1D)3d - 2p^2(^1D)5p$	$^3G - ^3F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	P4
F III	1458.802	6		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^3F - ^3D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	1459.503	10		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4D - ^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	1460.750	1		$2p^2(^1D)3p - 2p^2(^3P)5s$	$^3P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1462.313	6		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4D - ^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	P4
F III	1463.808	3		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4D - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	1473.820	3		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^3P - ^3S^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1475.787	3		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	1476.043	1		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4D - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	P4
F III	1478.224	3		$2p^2(^3P)3s - 2p^2(^1D)3p$	$^4P - ^3P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1478.879	1		$2p^2(^3P)3d - 2p^2(^3P)5p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1486.913	3		$2p^2(^3P)3s - 2p^2(^1D)3p$	$^4P - ^3P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P4
F III	1494.680	100		$2p^2(^3P)3p - 2p^2(^3P)4s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P4
F III	1498.953	300		$2p^2(^3P)3p - 2p^2(^3P)4s$	$^4D^{\circ} - ^4P$	$\frac{5}{2} - \frac{5}{2}$	P4
F III	1499.425	150		$2p^2(^3P)3p - 2p^2(^3P)4s$	$^4D^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F III	1502.014	400		$2p^2(^3P)3p - 2p^2(^2P)4s$	$4D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1504.177	300		$2p^2(^3P)3p - 2p^2(^2P)4s$	$4D^{\circ} - 4P$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1504.785	600		$2p^2(^3P)3p - 2p^2(^2P)4s$	$4D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1506.300	500		$2p^2(^3P)3p - 2p^2(^2P)4s$	$4D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1506.767	300		$2p^2(^3P)3p - 2p^2(^2P)4s$	$4D^{\circ} - 4P$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1518.137	3		$2p^2(^1D)3p - 2p^2(^1S)3d$	$2F^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1520.716	3		$2p^2(^1D)3p - 2p^2(^3P)4d$	$2F^{\circ} - 2F$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1527.524	1		$2p^2(^1D)3p - 2p^2(^3P)4d$	$2F^{\circ} - 2F$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1534.754	60		$2s2p^2(^3S^{\circ})3p - 2s2p^2(^3S^{\circ})4s$	$4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1535.269	100		$2s2p^2(^3S^{\circ})3p - 2s2p^2(^3S^{\circ})4s$	$4P - 4S^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1536.113	150		$2s2p^2(^3S^{\circ})3p - 2s2p^2(^3S^{\circ})4s$	$4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1544.276	3		$2p^2(^1D)3p - 2p^2(^3P)4d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1549.492	3		$2p^2(^3P)3d - 2p^2(^3P)5p$	$2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1553.023	250		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1557.592	300		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4P^{\circ} - 4P$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1558.641	200		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4P^{\circ} - 4P$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1560.939	60		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1562.234	100		$2p^2(^1D)3p - 2p^2(^1D)4s$	$2F^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1563.726	250		$2p^2(^1D)3p - 2p^2(^1D)4s$	$2F^{\circ} - 2D$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1565.539	250		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1566.070	200		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1577.652	1		$2p^2(^3P)3s - 2p^2(^1D)3p$	$4P - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1585.593	3		$2p^2(^3P)3s - 2p^2(^1D)3p$	$4P - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1590.180	10		$2p^2(^1D)3s - 2p^2(^1S)3p$	$2D - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1599.926	10		$2p^2(^1S)3p - 2p^2(^1S)4s$	$2P^{\circ} - 2S$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1600.041	25		$2p^2(^1S)3p - 2p^2(^1S)4s$	$2P - 2S$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1613.186	60		$2p^2(^3P)3p - 2p^2(^3P)4s$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1623.294	150		$2p^2(^3P)3p - 2p^2(^3P)4s$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1623.402	250		$2p^2(^3P)3p - 2p^2(^3P)4s$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1648.608	6		$2p^2(^3P)3p - 2p^2(^1D)3d$	$2P - 2S$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1650.764	250		$2p^2(^1D)3p - 2p^2(^1D)4s$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1650.974	20		$2p^2(^3P)3p - 2p^2(^1D)3d$	$2P^{\circ} - 2S$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1652.288	3		$2p^2(^1D)3p - 2p^2(^1D)4s$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1652.416	60		$2p^2(^1D)3p - 2p^2(^1D)4s$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1661.025	1		$2p^2(^3P)3p - 2p^2(^1D)3d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1661.505			$2p^2(^3P)3p - 2p^2(^1D)3d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1666.652	150		$2p^2(^3P)3s - 2p^2(^1D)3p$	$2P - 2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1670.388	500		$2p^2(^3P)3s - 2p^2(^1D)3p$	$2P - 2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1671.870	35		$2p^2(^3P)3p - 2p^2(^1D)3d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1672.341	3		$2p^2(^3P)3p - 2p^2(^1D)3d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1677.397	600		$2p^2(^3P)3s - 2p^2(^1D)3p$	$2P - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1681.182	150		$2p^2(^3P)3s - 2p^2(^1D)3p$	$2P - 2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1681.478	10		$2s^22p^2(^1D)3d - 2s2p^2(^3D^{\circ})3s$	$2S - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1683.991	6		$2p^2(^1S)3s - 2p^2(^3P)4p$	$2S - 2P$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1716.990	230		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4S^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1726.665	200		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4S^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1732.945	100		$2p^2(^3P)3p - 2p^2(^3P)4s$	$4S^{\circ} - 4P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1733.200	6		$2s^22p^2(^1D)3s - 2p^5$	$2D - 2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1735.417	35		$2p^2(^3P)3p - 2p^2(^3P)4s$	$2P^{\circ} - 2P$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1738.041	200		$2p^2(^3P)3p - 2p^2(^3P)4s$	$2P^{\circ} - 2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1746.545	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	P4
F III	1747.114	150		$2p^2(^3P)3p - 2p^2(^3P)4s$	$2P^{\circ} - 2P$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1747.881	10		$2p^2(^3P)3p - 2p^2(^1D)3d$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1748.023	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1748.806	3		$2s^22p^2(^1D)3s - 2p^5$	$2D - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1749.766	35		$2p^2(^3P)3p - 2p^2(^3P)4s$	$2P^{\circ} - 2P$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1750.640	10		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1751.276	6		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1752.694	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1753.518	60		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[3]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	P4
F III	1758.956	150		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1759.792	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[3]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	P4
F III	1761.444	6		$2p^2(^3P)3p - 2p^2(^1D)3d$	$2D^{\circ} - 2F$	$\frac{3}{2} - \frac{7}{2}$	P4
F III	1763.206	150		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1768.038	200		$2p^2(^3P)3d - 2p^2(^3P)4f$	$4F - 1[4]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	P4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F III	1769.529	6		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1770.092	400		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 1[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1770.668	700		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1776.963	10		$2p^2(^1D)3p - 2p^2(^1D)4s$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1777.925	300		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 1[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1773.363	600		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 1[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1773.496	35		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 1[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1774.104	150		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 0[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1775.079	60		$2p^2(^1D)3p - 2p^2(^1D)4s$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1777.358	60		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 0[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1777.845	35		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 1[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1779.778	6		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4F - 1[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1786.436	1		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2F - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1788.110	1		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2F - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1791.445	3		$2p^2(^3P)3p - 2p^2(^1D)3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1791.548	800		$2p^2(^3P)3s - 2p^2(^1D)3p$	$^3P - ^2D^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1800.505	100		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2F - 2[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1802.181	60		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2F - 2[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1803.027	300		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2F - 2[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1804.073	200		$2p^2(^3P)3s - 2p^2(^1D)3p$	$^3P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1804.698	250		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2F - 2[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1805.896	900		$2p^2(^3P)3s - 2p^2(^1D)3p$	$^3P - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1830.567	3		$2p^2(^1S)3d - 2p^2(^1S)4f$	$^2D - 0[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1832.761	6		$2p^2(^1S)3d - 2p^2(^1S)4f$	$^2D - 0[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1833.322	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1833.791	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^3P - 2[1]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1834.997	100		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1835.712	200		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1837.815	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1837.880	100		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1838.568	20		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1839.301	300		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1839.968	400		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2G - 2[5]^\circ$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1840.140	300		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2G - 2[5]^\circ$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1840.530	10		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^3P - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1842.326	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1844.077	100		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^2P - 1[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1847.467	150		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^2P - 1[2]^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1848.431	200		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^3P - 0[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1850.889	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[5]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1852.539	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[1]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1852.683	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[1]^\circ$	$\frac{3}{2} - \frac{1}{2}$	P4
F III	1854.028	35		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1857.034	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1859.143	60		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 1[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1861.584	60		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 2[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1861.814	35		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2G - 2[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1861.912	5		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2G - 2[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1862.094	35		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1863.758	6		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1865.701	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 2[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1867.050	6		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 1[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1867.310	100		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1867.598	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1868.690	10		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1869.380	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1871.923	10		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1876.348	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^2F - 2[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1878.580	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^2F - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1878.910	1		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 2[1]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1883.925	6		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 2[1]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1885.587	3		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 1[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1886.464	6		$2p^2(^3P)3d - 2p^2(^3P)4f$	$^4P - 2[1]^\circ$	$\frac{1}{2} - \frac{1}{2}$	P4
F III	1886.950	3		$2p^2(^1D)3d - 2p^2(^3P)5f$	$^2F - 1[3]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1888.530	10		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2D - 2[2]^\circ$	$\frac{3}{2} - \frac{3}{2}$	P4

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F III	1889.076	20		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^4P - 1[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1889.711	1		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^4P - 1[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1893.273	3		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^4P - 1[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1894.082	60		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^4P - 0[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1894.779	1		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^4P - 1[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1898.631	100		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^2F - 1[4]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1899.373	1		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^4P - 0[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1900.760	150		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^2F - 1[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1904.247	60		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2D - 2[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1904.834	35		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2D - 2[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1909.375	1		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2D - 2[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1912.543	10		$2p^2(^2P)^2D - 2p^2(^2P)4f$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	P4
F III	1917.766	1		$2p^2(^2P)3d - 2p^2(^2P)4f$	$^2F - 1[4]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1948.731	10		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2F - 1[3]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1963.439	20		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2P - 2[1]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4
F III	1965.726	35		$2p^2(^1D)3d - 2p^2(^1D)4f$	$^2P - 2[2]^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P4

FLUORINE IV (F^{3+}), $Z = 9$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential 702 830 cm^{-1} ; 87.138 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F IV	140.781	1 - A		$2s^2 2p^2 - 2s 2p^2(^4P) 5p$	$g^3P - ^3D^{\circ}$	1 - 2	E11
F IV	140.816	1 - A		$2s^2 2p^2 - 2s 2p^2(^4P) 5p$	$g^3P - ^3D^{\circ}$	2 - 3	E11
F IV	150.335	10		$2s^2 2p^2 - 2s 2p^2(^4P) 4p$	$g^3P - ^3P^{\circ}$	1 - 2	E11
F IV	150.422	10		$2s^2 2p^2 - 2s 2p^2(^4P) 4p$	$g^3P - ^3P^{\circ}$	2 - 2	E11
F IV	150.977	100		$2s^2 2p^2 - 2s 2p^2(^4P) 4p$	$g^3P - ^3D^{\circ}$	0 - 1	E11
F IV	151.005	100		$2s^2 2p^2 - 2s 2p^2(^4P) 4p$	$g^3P - ^3D^{\circ}$	2 - 3	E11
F IV	151.079	1		$2s^2 2p^2 - 2s 2p^2(^4P) 4p$	$g^3P - ^3D^{\circ}$	2 - 2	E11
F IV	152.997	1		$2p^2 - 2p6d$	$g^3P - ^3P^{\circ}$	1 - 2	E11
F IV	153.102	10		$2p^2 - 2p6d$	$g^3P - ^3P^{\circ}$	2 - 2	E11
F IV	153.141	10		$2p^2 - 2p6d$	$g^3P - ^3D^{\circ}$	2 - 3	E11
F IV	155.624	10 - A		$2s 2p^3 - 2s 2p^2(^4P) 5d$	$^5S^{\circ} - ^5P$	2 - 2	E11
F IV	155.673	10 - A		$2s 2p^3 - 2s 2p^2(^4P) 5d$	$^5S^{\circ} - ^5P$	2 - 3	E11
F IV	158.398	10		$2p^2 - 2p5d$	$g^3P - ^3P^{\circ}$	1 - 0	E11
F IV	158.537	400b		$2p^2 - 2p5d$	$g^3P - ^3P^{\circ}$	2 - 2	E14, E11
F IV	158.601	100		$2p^2 - 2p5d$	$g^3P - ^3D^{\circ}$	2 - 3	E11
F IV	158.925	100		$2p^2 - 2p6d$	$^1D - ^1F^{\circ}$	2 - 3	E11
F IV	164.612	200		$2p^2 - 2p5d$	$^1D - ^1F^{\circ}$	2 - 3	E11
F IV	165.350	10		$2p^2 - 2p5d$	$^1D - ^1D^{\circ}$	2 - 2	E11
F IV	165.479	1		$2p^2 - 2p5d$	$^1D - ^3F^{\circ}$	2 - 2	E11
F IV	166.444	200		$2s 2p^3 - 2s 2p^2(^4P) 4d$	$^5S^{\circ} - ^5P$	2 - 2	E11
F IV	166.499	200		$2s 2p^3 - 2s 2p^2(^4P) 4d$	$^5S^{\circ} - ^5P$	2 - 3	E11
F IV	168.450	200		$2s^2 2p^2 - 2s 2p^2(^2D) 3p$	$^1D - ^1P^{\circ}$	2 - 1	E11
F IV	169.166	200 - A		$2s 2p^3 - 2s 2p^2(^2D) 4d$	$^3D^{\circ} - ^3F$	3 - 4	E11
F IV	169.481	100		$2p^2 - 2p4d$	$g^3P - ^3P^{\circ}$	1 - 0	E11
F IV	169.502	100		$2p^2 - 2p4d$	$g^3P - ^3P^{\circ}$	1 - 1	E11
F IV	169.610	100		$2p^2 - 2p4d$	$g^3P - ^3P^{\circ}$	2 - 1	E11
F IV	169.661	200		$2p^2 - 2p4d$	$g^3P - ^3P^{\circ}$	2 - 2	E11
F IV	169.748	200		$2p^2 - 2p4d$	$g^3P - ^3D^{\circ}$	0 - 1	E11
F IV	169.790	300		$2p^2 - 2p4d$	$g^3P - ^3D^{\circ}$	1 - 2	E11
F IV	169.839	300		$2p^2 - 2p4d$	$g^2P - ^3D^{\circ}$	2 - 3	E11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F IV	170.187	200		2s ² 2p ² - 2s2p ² (³ D)3p	¹ D - ¹ D°	2-2	E11
F IV	171.066	300		2s ² 2p ² - 2s2p ² (³ D)3p	¹ D - ¹ F°	2-3	E11
F IV	172.653	10		2p ² - 2p5d	¹ S - ¹ P°	0-1	E11
F IV	175.033	10		2s2p ³ - 2s2p ² (⁴ P)4s	³ S° - ³ P	2-3	E11
F IV	175.132	1		2s2p ³ - 2s2p ² (⁴ P)4s	³ S° - ³ P	2-2	E11
F IV	176.367	400		2p ² - 2p4d	¹ D - ¹ F°	2-3	E11
F IV	177.971	200		2p ² - 2p4d	¹ D - ¹ D°	2-2	E11
F IV	178.126	100		2p ² - 2p4d	¹ D - ³ F°	2-2	E11
F IV	178.540	100		2p ² - 2p4s	g ³ P - ³ P°	1-2	E11
F IV	178.670	300		2p ² - 2p4s	g ³ P - ³ P°	2-2	E11
F IV	178.724	100		2p ² - 2p4s	g ³ P - ³ P°	1-0	E11
F IV	178.805	100		2p ² - 2p4s	g ³ P - ³ P°	2-1	E11
F IV	179.827	100		2s ² 2p ² - 2s2p ² (⁴ P)3p	g ³ P - ³ P°	1-2	E11
F IV	179.907	1		2s ² 2p ² - 2s2p ² (⁴ P)3p	g ³ P - ³ P°	1-1	E11
F IV	179.943	200		2s ² 2p ² - 2s2p ² (⁴ P)3p	g ³ P - ³ P°	2-2	E11
F IV	180.029	10		2s ² 2p ² - 2s2p ² (⁴ F)3p	g ³ P - ³ P°	2-1	E11
F IV	181.521	400		2s ² 2p ² - 2s2p ² (⁴ P)3p	g ³ P - ³ D°	1-2	E11
F IV	181.571	400		2s ² 2p ² - 2s2p ² (⁴ P)3p	g ³ P - ³ D°	2-3	E11
F IV	181.655	200		2s ² 2p ² - 2s2p ² (⁴ P)3p	g ³ P - ³ D°	2-2	E11
F IV	185.484	300		2p ² - 2p4d	¹ S - ¹ P°	0-1	E11
F IV	186.558	100		2p ² - 2p4s	¹ D - ¹ P°	2-1	E11
F IV	187.105	200		2s ² 2p ² - 2s2p ² (⁴ P)3p	g ³ P - ³ S°	1-1	E11
F IV	187.240	300		2s ² 2p ² - 2s2p ² (⁴ P)3p	g ³ P - ³ S°	2-1	E11
F IV	187.916	100		2s2p ³ - 2s2p ² (⁴ P)4d	³ D° - ³ D	3-3	E11
F IV	188.004	10		2s2p ³ - 2s2p ² (⁴ P)4d	³ D° - ³ D	2-2	E11
F IV	188.656	200		2s2p ³ - 2s2p ² (⁴ P)4d	³ D° - ³ F	3-4	E11
F IV	188.758	100		2s2p ³ - 2s2p ² (⁴ P)4d	³ D° - ³ F	2-3	E11
F IV	188.834	10		2s2p ³ - 2s2p ² (⁴ P)4d	³ D° - ³ F	1-2	E11
F IV	196.351	400		2s2p ³ - 2s2p ² (⁴ P)3d	³ S° - ³ P	2-1	E11
F IV	196.390	500		2s2p ³ - 2s2p ² (⁴ P)3d	³ S° - ³ P	2-2	E11
F IV	196.448	600		2s2p ³ - 2s2p ² (⁴ P)3d	³ S° - ³ P	2-3	E11
F IV	196.968	100		2p ² - 2p4s	¹ S - ¹ P°	0-1	E11
F IV	197.108	200		2s2p ³ - 2s2p ² (⁴ P)3d	³ S° - ³ D	2-3	E11
F IV	197.298	100d		2s2p ³ - 2s2p ² (³ D)3d	³ D° - ³ S	2-1	E14, K8
F IV	199.004	300		2s2p ³ - 2s2p ² (³ D)3d	³ D° - ³ D	3-3	E11
F IV	199.086	300		2s2p ³ - 2s2p ² (³ D)3d	³ D° - ³ D	2-2	E11
F IV	199.607	100		2s2p ³ - 2s2p ² (³ D)3d	³ D° - ³ P	3-2	E11
F IV	199.761	500		2p ² - 2p3d	g ³ P - ³ P°	0-1	E11
F IV	199.804	500		2p ² - 2p3d	g ³ P - ³ P°	1-6	E11
F IV	199.849	500		2p ² - 2p3d	g ³ P - ³ P°	1-1	E11
F IV	199.934	500		2p ² - 2p3d	g ³ P - ³ P°	1-2	E11
F IV	200.001	500		2p ² - 2p3d	g ³ P - ³ P°	2-1	E11
F IV	200.089	700		2p ² - 2p3d	g ³ P - ³ P°	2-2	E11
F IV	201.011	600		2p ² - 2p3d	g ³ P - ³ D°	0-1	E11
F IV	201.063	700		2p ² - 2p3d	g ³ P - ³ D°	1-2	E11
F IV	201.101	600		2p ² - 2p3d	g ³ P - ³ D°	1-1	E11
F IV	201.160	800		2p ² - 2p3d	g ³ P - ³ D°	2-3	E11
F IV	201.222	660		2p ² - 2p3d	g ³ P - ³ D°	2-2	E11
F IV	201.465	400		2s2p ³ - 2s2p ² (³ D)3d	³ D° - ³ F	3-4	E11
F IV	202.989	10		2p ² - 2p3d	g ³ P - ¹ D°	1-2	E11
F IV	203.152	100		2p ² - 2p3d	g ³ P - ³ F°	2-3	E11
F IV	208.254	900		2p ² - 2p3d	¹ D - ¹ F°	2-3	E11
F IV	208.549	200		2s2p ³ - 2s2p ² (³ D)3d	³ P° - ³ S	2-1	E11
F IV	210.480	100		2s2p ³ - 2s2p ² (³ D)3d	³ P° - ³ D	2-3	E11
F IV	210.545	100		2s2p ³ - 2s2p ² (³ D)3d	³ P° - ³ D	1-2	E11
F IV	211.152	10		2s2p ³ - 2s2p ² (³ D)3d	³ P° - ³ P	2-2	E11
F IV	213.848	700		2p ² - 2p3d	¹ D - ³ F°	2-3	E11
F IV	214.062	700		2p ² - 2p3d	¹ D - ³ F°	2-2	E11
F IV	220.765	700		2p ² - 2p3d	¹ S - ¹ P°	0-1	E11
F IV	223.394	300		2s2p ³ - 2s2p ² (⁴ P)3d	³ D° - ³ D	3-3	E11
F IV	223.456	200		2s2p ³ - 2s2p ² (⁴ P)3d	³ D° - ³ D	2-2	E11
F IV	223.497	100		2s2p ³ - 2s2p ² (⁴ P)3d	³ D° - ³ D	1-1	E11
F IV	226.944	600		2s2p ³ - 2s2p ² (⁴ P)3d	³ D° - ³ F	3-4	E11
F IV	227.079	300		2s2p ³ - 2s2p ² (⁴ P)3d	³ D° - ³ F	3-3	E11
F IV	227.101	500		2s2p ³ - 2s2p ² (⁴ P)3d	³ D° - ³ F	2-3	E11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F IV	227.211	400		$2s2p^3 - 2s2p^2(^4P)3d$	$^3D^o - ^3F$	1-2	E11
F IV	228.496	1		$2s2p^3 - 2s2p^2(^4P)3d$	$^3D^o - ^3P$	1-0	E11
F IV	228.552	10		$2s2p^3 - 2s2p^2(^4P)3d$	$^3D^o - ^3P$	2-1	E11
F IV	228.645	100		$2s2p^3 - 2s2p^2(^4P)3d$	$^3D^o - ^3P$	3-2	E11
F IV	233.159	200		$2s2p^3 - 2s2p^2(^2D)3d$	$^1D^o - ^1D$	2-2	E11
F IV	233.222	600		$2s2p^2 - 2s2p^2(^4P)3s$	$^3S^o - ^3P$	2-3	E11
F IV	233.297	200		$2s2p^2 - 2s2p^2(^3D)3d$	$^1D^o - ^1F$	2-3	E11
F IV	233.393	500		$2s2p^2 - 2s2p^2(^4P)3s$	$^3S^o - ^3P$	2-2	E11
F IV	233.526	400		$2s2p^2 - 2s2p^2(^4P)3s$	$^3S^o - ^3P$	2-1	E11
F IV	237.913	300		$2s2p^2 - 2s2p^2(^2D)3s$	$^3D^o - ^3D$	3-3	E11
F IV	237.955	400		$2s2p^2 - 2s2p^2(^4P)3d$	$^3P^o - ^3D$	2-3	E11
F IV	238.012	300		$2s2p^2 - 2s2p^2(^2D)3s$	$^3D^o - ^3D$	2-2	E11
F IV	238.042	200		$2s2p^2 - 2s2p^2(^4P)3d$	$^3P^o - ^3D$	0-1	E11
F IV	238.099	100		$2s2p^2 - 2s2p^2(^3D)3s$	$^3D^o - ^3D$	1-1	E11
F IV	239.856	700		$2p^2 - 2p3s$	$g^3P - ^3P^o$	1-2	E11
F IV	240.017	700		$2p^2 - 2p3s$	$g^3P - ^3P^o$	0-1	E11
F IV	240.079	900		$2p^2 - 2p3s$	$g^3P - ^3P^o$	2-2	E11
F IV	240.146	700		$2p^2 - 2p3s$	$g^3P - ^3P^o$	1-1	E11
F IV	240.275	700		$2p^2 - 2p3s$	$g^3P - ^3P^o$	1-0	E11
F IV	240.371	700		$2p^2 - 2p3s$	$g^3P - ^3P^o$	2-1	E11
F IV	243.736	200		$2s2p^2 - 2s2p^2(^4P)3d$	$^3P^o - ^3P$	1-0	E11
F IV	243.796	300		$2s2p^2 - 2s2p^2(^4P)3d$	$^3P^o - ^3P$	2-1	E11
F IV	243.922	400		$2s2p^2 - 2s2p^2(^4P)3d$	$^3P^o - ^3P$	2-2	E11
F IV	249.228	100		$2s2p^2 - 2s2p^2(^2D)3d$	$^1P^o - ^1P$	1-1	E11
F IV	249.744	10		$2s2p^2 - 2s2p^2(^2D)3d$	$^1P^o - ^1D$	1-2	E11
F IV	251.026	1000		$2p^2 - 2p3s$	$^1D - ^1P^o$	2-1	E11
F IV	254.491	200		$2s2p^2 - 2s2p^2(^2D)3s$	$^3P^o - ^3D$	2-3	E11
F IV	254.595	100		$2s2p^2 - 2s2p^2(^2D)3s$	$^3P^o - ^3D$	1-2	E11
F IV	254.681	10		$2s2p^2 - 2s2p^2(^2D)3s$	$^3P^o - ^3D$	0-1	E11
F IV	268.785	400		$2s2p^2 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	3-2	E11
F IV	268.817	100		$2s2p^2 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	2-2	E11
F IV	269.076	300		$2s2p^2 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	2-1	E11
F IV	269.225	200		$2s2p^2 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	1-0	E11
F IV	270.225	400		$2p^2 - 2p3s$	$^3S - ^3P^o$	0-1	E11
F IV	279.834	300		$2s2p^2 - 2s2p^2(^2D)3s$	$^1D^o - ^1D$	2-2	E11
F IV	287.994	1		$2s2p^2 - 2s2p^2(^4P)3d$	$^3S^o - ^3P$	1-0	E11
F IV	288.078	10		$2s2p^2 - 2s2p^2(^4P)3d$	$^3S^o - ^3P$	1-1	E11
F IV	288.267	100		$2s2p^2 - 2s2p^2(^4P)3d$	$^3S^o - ^3P$	1-2	E11
F IV	290.147	400		$2s2p^2 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	2-2	E11
F IV	290.440	300		$2s2p^2 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	2-1	E11
F IV	290.461	200		$2s2p^2 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	0-1	E11
F IV	290.608	200		$2s2p^2 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	1-0	E11
F IV	319.695	300		$2s2p^2 - 2s^22p^3p$	$^3D^o - ^3P$	3-2	E11
F IV	319.740	10		$2s2p^2 - 2s^22p^3p$	$^3D^o - ^3P$	2-2	E11
F IV	320.004	200		$2s2p^2 - 2s^22p^3p$	$^3D^o - ^3P$	2-1	E11
F IV	320.192	100		$2s2p^2 - 2s^22p^3p$	$^3D^o - ^3P$	1-0	E11
F IV	328.213	10		$2s2p^2 - 2s^22p^3p$	$^3D^o - ^1D$	3-3	E11
F IV	355.045	200		$2s2p^2 - 2s^22p^3p$	$^3P^o - ^3S$	2-1	E11
F IV	360.635	100		$2s2p^2 - 2s^22p^3p$	$^3P^o - ^3D$	2-3	E11
F IV	361.208	10		$2s2p^2 - 2s^22p^3p$	$^3P^o - ^3D$	1-2	E11
F IV	419.645	800		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	0-1	P5
F IV	420.045	900		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	1-1	P5
F IV	420.729	1000		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	2-1	P5
F IV	430.759	900		$2s^22p^2 - 2s2p^3$	$^1D - ^1P^o$	2-1	P5
F IV	490.568	700		$2s^22p^2 - 2s2p^3$	$^1S - ^1P^o$	0-1	P5
F IV	491.001	1000		$2s^22p^2 - 2s2p^3$	$^1D - ^1D^o$	2-2	P5
F IV	497.375	60		$2s2p^2 - 2p^4$	$^3D^o - ^3P$	1-0	P5
F IV	497.830	100		$2s2p^2 - 2p^4$	$^3D^o - ^3P$	2-1	P5
F IV	498.796	150		$2s2p^2 - 2p^4$	$^3D^o - ^3P$	3-2	P5
F IV	498.907	35		$2s2p^2 - 2p^4$	$^3D^o - ^3P$	2-2	P5
F IV	570.640	800		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	0-1	P5
F IV	571.304	800		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	1-0	P5
F IV	571.391	900		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	1-2	P5
F IV	572.663	1000		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	2-2	P5
F IV	575.643	10		$2s2p^2 - 2p^4$	$^3P^o - ^3P$	1-0	P5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
F IV	576.265	15		$2s2p^2 - 2p^4$	$3p^{\circ} - 3p$	2 - 1	P5
F IV	576.359	10		$2s2p^2 - 2p^4$	$3p^{\circ} - 3p$	0 - 1	P5
F IV	577.734	35		$2s2p^2 - 2p^4$	$3p^{\circ} - 3p$	2 - 2	P5
F IV	607.37			$2s2p^2 - 2p^4$	$1p^{\circ} - 1S$	1 - 0	F6
F IV	639.13	-A		$2s^2 2p4s - 2s2p^2(^4P)5d$	$3p^{\circ} - 3p$? 2 - 2	F6, K8
F IV	666.662	1		$2s^2 2p^3 - 2s2p^3$	$1D - 3P^{\circ}$	2 - 1	P5
F IV	676.119	800		$2s^2 2p^3 - 2s2p^3$	$g^2P - 3D^{\circ}$	0 - 1	P5
F IV	677.149	700		$2s^2 2p^3 - 2s2p^3$	$g^2P - 3D^{\circ}$	1 - 1	P5
F IV	677.219	900		$2s^2 2p^3 - 2s2p^3$	$g^2P - 3D^{\circ}$	1 - 2	P5
F IV	678.991	700		$2s^2 2p^3 - 2s2p^3$	$g^2P - 3D^{\circ}$	2 - 2	P5
F IV	679.214	1000		$2s^2 2p^3 - 2s2p^3$	$g^2P - 3D^{\circ}$	2 - 3	P5
F IV	722.028	500		$2s2p^2 - 2p^4$	$1D^{\circ} - 1D$	2 - 2	P5
F IV	815.629	10		$2s^2 2p^3 - 2s2p^3$	$1D - 3D^{\circ}$	2 - 3	P5
F IV	821.694	1		$2s^2 2p^3 - 2s2p^3$	$1S - 3P^{\circ}$	0 - 1	P5
F IV	903.64	35		$2s2p^2 - 2p^4$	$3S^{\circ} - 3P$	1 - 0	P5
F IV	905.14			$2s2p^2(^4P)3s - 2s^2 2p5d$	$3P - 1D^{\circ}$? 1 - 2	F6, K8
F IV	905.224	60		$2s2p^2 - 2p^4$	$3S^{\circ} - 3P$	1 - 1	P5
F IV	908.837	100		$2s2p^2 - 2p^4$	$3S^{\circ} - 3P$	1 - 2	P5
F IV	908.958	150		$2s2p^2 - 2p^4$	$1P^{\circ} - 1D$	1 - 2	P5
F IV	927.837	10		$2p3p - 2p4s$	$3D - 3P^{\circ}$	3 - 2	P5
F IV	993.29	10		$2p3d - 2p4f$	$3F^{\circ} - 3/2[3/2]$	3 - 4	P5
F IV	995.12	1		$2p3d - 2p4f$	$3F^{\circ} - 3/2[3/2]$	2 - 3	P5
F IV	996.62			$2p3d - 2p4f$	$3F^{\circ} - 3/2[3/2]$	4 - 4	P5
F IV	998.86	15		$2p3d - 2p4f$	$3F^{\circ} - 3/2[3/2]$	3 - 4	P5
F IV	999.14	60		$2p3d - 2p4f$	$3F^{\circ} - 3/2[3/2]$	4 - 5	P5
F IV	999.79	15		$2p3d - 2p4f$	$1D^{\circ} - 3/2[3/2]$	2 - 3	P5
F IV	1000.89	1		$2p3p - 2p4s$	$3P - 3P^{\circ}$	1 - 2	P5
F IV	1002.33	5		$2p3d - 2p4f$	$3F^{\circ} - 3/2[3/2]$	4 - 4	P5
F IV	1003.45	10		$2p3p - 2p4s$	$3P - 3P^{\circ}$	2 - 2	P5
F IV	1004.59	5		$2p3d - 2p4f$	$3F^{\circ} - 1/2[3/2]$	2 - 3	P5
F IV	1007.64	10		$2p3d - 2p4f$	$3F^{\circ} - 1/2[3/2]$	3 - 4	P5
F IV	1007.74	5		$2p3p - 2p4s$	$3P - 3P^{\circ}$	2 - 1	P5
F IV	1007.88	5		$2p3d - 2p4f$	$1D^{\circ} - 1/2[3/2]$	2 - 3	P5
F IV	1009.34	10		$2p3d - 2p4f$	$1D^{\circ} - 1/2[3/2]$	2 - 3	P5
F IV	1012.90	5		$2p3d - 2p4f$	$3F^{\circ} - 1/2[3/2]$	4 - 3	P5
F IV	1045.24	5		$2s^2 2p3p - 2s2p^2(^4P)3p$	$3P - 3P^{\circ}$	2 - 2	P5
F IV	1049.96	1		$2p3d - 2p4f$	$3D^{\circ} - 3/2[3/2]$	3 - 4	P5
F IV	1058.10	10		$2p3d - 2p4f$	$3D^{\circ} - 1/2[3/2]$	2 - 3	P5
F IV	1058.50	10		$2p3d - 2p4f$	$3D^{\circ} - 1/2[3/2]$	1 - 2	P5
F IV	1059.63	35		$2p3d - 2p4f$	$3D^{\circ} - 1/2[3/2]$	3 - 4	P5
F IV	1059.73	1		$2p3d - 2p4f$	$3D^{\circ} - 1/2[3/2]$	2 - 3	F7
F IV	1073.22	5		$2p3d - 2p4f$	$3P^{\circ} - 3/2[3/2]$	1 - 2	P5
F IV	1074.10	1		$2p3d - 2p4f$	$3P^{\circ} - 3/2[3/2]$	1 - 1	P5
F IV	1075.05	5		$2p3d - 2p4f$	$3P^{\circ} - 3/2[3/2]$	2 - 3	P5
F IV	1076.86	5		$2p3d - 2p4f$	$3P^{\circ} - 3/2[3/2]$	1 - 2	P5
F IV	1091.35	10		$2p3p - 2p4s$	$1D - 1P^{\circ}$	2 - 1	P5
F IV	1092.45	5		$2p3d - 2p4f$	$3P^{\circ} - 1/2[3/2]$	2 - 3	P5
F IV	1134.78	35		$2p3d - 2p4f$	$1F^{\circ} - 3/2[3/2]$	3 - 4	P5
F IV	1142.07	5		$2p3d - 2p4f$	$1F^{\circ} - 3/2[3/2]$	3 - 4	P5
F IV	1143.35	5		$2p3d - 2p4f$	$1F^{\circ} - 3/2[3/2]$	3 - 3	P5
F IV	1145.89	10		$2p3d - 2p4f$	$1P^{\circ} - 3/2[3/2]$	1 - 2	P5
F IV	1150.07	10		$2p3d - 2p4f$	$1P^{\circ} - 3/2[3/2]$	1 - 2	P5
F IV	1351.924	10		$2s^2 2p^2 - 2s2p^2$	$g^2P - 3S^{\circ}$	1 - 1	P5
F IV	1359.053	15		$2s^2 2p^2 - 2s2p^2$	$g^2P - 3S^{\circ}$	2 - 2	P5
F IV	1453.14	1		$2p^4 - 2s^2 2p3s$	$3P - 3P^{\circ}$	2 - 2	P5

FLUORINE V (F⁴⁺), Z = 9
Ground State 1s²2s²2p²P_{1/2} (5 electrons)
Ionization Potential 921 430 cm⁻¹; 114.24 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F V	119.986	10		2s ² 2p - 2s 2p(3P°) 4p	g ² P° - 2D	1/2 - 3/2	E10
F V	120.032	15		2s ² 2p - 2s 2p(3F°) 4p	g ² P° - 2D	3/2 - 5/2	E10
F V	122.042	10		2s 2p ² - 2s 2p(3P°) 5d	4P - 4D°	3/2 - 5/2	E14, K8
F V	123.665	10		2p - 5d	g ² P° - 2D	1/2 - 3/2	E10
F V	123.774	100		2p - 5d	g ² P° - 2D	3/2 - 5/2	E10
F V	131.516	10		2s ² 2p - 2s 2p(1P°) 3p	g ² P° - 2S	1/2 - 1/2	E10
F V	131.638	10		2s ² 2p - 2s 2p(1P°) 3p	g ² P° - 2S	3/2 - 1/2	E10
F V	132.207	10		2s 2p ² - 2s 2p(3P°) 4d	4P - 4P°	1/2 - 3/2	E10
F V	132.310	100		2s 2p ² - 2s 2p(3P°) 4d	4P - 4P°	3/2 - 1/2	E10
F V	132.389	10d		2s 2p ² - 2s 2p(3P°) 4d	4P - 4P°	? 3/2 - 1/2	E14, K8
F V	132.453	200		2s 2p ² - 2s 2p(3P°) 4d	4P - 4D°	1/2 - 3/2	E10
F V	132.484	300		2s 2p ² - 2s 2p(3P°) 4d	4P - 4D°	3/2 - 5/2	E10
F V	132.511	300		2s 2p ² - 2s 2p(3P°) 4d	4P - 4D°	5/2 - 3/2	E10
F V	132.699	100d		2s ² 2p - 2s 2p(1P°) 3p	g ² P° - 2P	1/2 - 1/2	E10
F V	132.819	200		2s ² 2p - 2s 2p(1P°) 3p	g ² P° - 2P	3/2 - 1/2	E10
F V	133.082	10		2s ² 2p - 2s 2p(1P°) 3p	g ² P° - 2D	1/2 - 3/2	E10
F V	133.208	100		2s ² 2p - 2s 2p(1P°) 3p	g ² P° - 2D	3/2 - 1/2	E10
F V	133.599	110		2s 2p ² - 2s 2p(3P°) 3p	4P - 4S°	3/2 - 1/2	E10
F V	133.662	100		2s 2p ² - 2s 2p(3P°) 3p	4P - 4S°	5/2 - 3/2	E10
F V	134.407	400		2p - 4d	g ² P° - 2D	1/2 - 3/2	E10
F V	134.539	500		2p - 4d	g ² P° - 2D	3/2 - 5/2	E10
F V	135.621	1		2s 2p ² - 2p ² (3P) 3p	4P - 4P°	3/2 - 5/2	E10
F V	135.692	10		2s 2p ² - 2p ² (3P) 3p	4P - 4P°	5/2 - 3/2	E10
F V	136.902	300		2s 2p ² - 2p ² (3P) 3p	4P - 4D°	3/2 - 1/2	E10
F V	136.955	10		2s 2p ² - 2p ² (3P) 3p	4P - 4D°	5/2 - 3/2	E10
F V	138.181	100d		2s 2p ² - 2s 2p(3P°) 4s	4P - 4P°	3/2 - 5/2	E14, K8
F V	138.255	10d		2s 2p ² - 2s 2p(3P°) 4s	4P - 4P°	5/2 - 3/2	E14, K8
F V	140.266	10		2p - 4s	g ² P° - 2S	1/2 - 1/2	E10
F V	140.414	100		2p - 4s	g ² P° - 2S	3/2 - 1/2	E10
F V	142.422	100		2s 2p ² - 2p ² (1D) 3p	2D - 2D°	? 3/2 - 1/2	E14, K8
F V	143.897	100		2s 2p ² - 2s 2p(3P°) 4d	2D - 2F°	5/2 - 3/2	E10
F V	143.965	15		2s 2p ² - 2s 2p(3P°) 4d	2D - 2F°	3/2 - 5/2	E10
F V	144.637	100		2s 2p ² - 2p ² (1D) 3p	2D - 2F°	5/2 - 3/2	E14, K8
F V	144.673	90		2s 2p ² - 2p ² (1D) 3p	2D - 2F°	3/2 - 5/2	E14, K8
F V	145.177	100d		2s 2p ² - 2s 2p(3P°) 4d	2D - 2D°	3/2 - 5/2	E10
F V	145.392	200		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2S	1/2 - 1/2	E10
F V	145.547	300		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2S	3/2 - 1/2	E10
F V	147.946	400		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2D	1/2 - 3/2	E10
F V	148.002	500		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2D	3/2 - 1/2	E10
F V	148.108	100		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2D	5/2 - 3/2	E10
F V	152.035	50		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 4D	1/2 - 1/2	E22
F V	152.174	50		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 4D	3/2 - 5/2	E22
F V	152.339	200		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2P	1/2 - 1/2	F10
F V	152.391	300		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2P	1/2 - 1/2	E10
F V	152.511	400		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2P	3/2 - 5/2	E10
F V	152.563	200		2s ² 2p - 2s 2p(3P°) 3p	g ² P° - 2P	5/2 - 1/2	E10
F V	157.515	100d		2s 2p ² - 2s 2p(1P°) 3d	2D - 2D°	5/2 - 3/2	E10
F V	158.537	400b		2s 2p ² - 2s 2p(1P°) 3d	2D - 2D°	3/2 - 1/2	E10
F V	159.558	1		2s 2p ² - 2s 2p(3P°) 4d	2P - 2D°	1/2 - 3/2	E10
F V	159.658	10		2s 2p ² - 2s 2p(3P°) 4d	2P - 2D°	3/2 - 1/2	E10
F V	162.013	200		2s 2p ² - 2s 2p(3P°) 3d	4P - 4P°	1/2 - 1/2	E10
F V	162.053	300		2s 2p ² - 2s 2p(3P°) 3d	4P - 4P°	1/2 - 3/2	E10
F V	162.082	300		2s 2p ² - 2s 2p(3P°) 3d	4P - 4P°	3/2 - 1/2	E10
F V	162.121	200		2s 2p ² - 2s 2p(3P°) 3d	4P - 4P°	3/2 - 3/2	F10
F V	162.172	300		2s 2p ² - 2s 2p(3P°) 3d	4P - 4P°	5/2 - 3/2	E10
F V	162.215	300		2s 2p ² - 2s 2p(3P°) 3d	4P - 4P°	5/2 - 3/2	E10
F V	162.270	400		2s 2p ² - 2s 2p(3P°) 3d	4P - 4P°	5/2 - 3/2	E10
F V	163.456	300		2s 2p ² - 2s 2p(3P°) 3d	4P - 4D°	1/2 - 1/2	E10
F V	163.501	400		2s 2p ² - 2s 2p(3P°) 3d	4P - 4D°	3/2 - 5/2	E10
F V	163.558	500		2s 2p ² - 2s 2p(3P°) 3d	4P - 4D°	5/2 - 3/2	E10

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F V	163.596	200		2s 2p ² - 2s 2p(2P°) 3d	4P - 4D°	3/2 - 5/2	E10
F V	165.983	900		2p - 3d	g ² P° - 2D	1/2 - 3/2	E10
F V	166.177	1000		2p - 3d	g ² P° - 2D	3/2 - 5/2	E10
F V	167.858	100		2s 2p ² - 2s 2p(1P°) 3d	2S - 2P°	1/2 - 3/2	E10
F V	171.214	10		2p ² - 2p ² (2P) 3d	4S° - 4P	3/2 - 5/2	E10
F V	171.241	100		2p ² - 2p ² (2P) 3d	4S° - 4P	5/2 - 7/2	E10
F V	171.302	200		2p ² - 2p ² (2P) 3d	4S° - 4P	3/2 - 5/2	E10
F V	173.020	100		2s 2p ² - 2s 2p(1P°) 3d	2P - 2P°	3/2 - 5/2	E10
F V	173.656	10		2p ² - 2p ² (1D) 3d	2D° - 2P	3/2 - 5/2	E14, K8
F V	173.714	10		2p ² - 2p ² (1D) 3d	2D° - 2P	5/2 - 7/2	E14, K8
F V	174.490	300		2p ² - 2p ² (1D) 3d	2D° - 2F	3/2 - 5/2	E10
F V	174.513	300		2p ² - 2p ² (1D) 3d	2D° - 2F	5/2 - 7/2	E10
F V	174.568	300		2s 2p ² - 2s 2p(1P°) 3d	2P - 2D°	1/2 - 3/2	E10
F V	174.698	400		2s 2p ² - 2s 2p(1P°) 3d	2P - 2D°	3/2 - 5/2	E10
F V	176.472	10		2p ² - 2p ² (1D) 3d	2D° - 2D	3/2 - 5/2	E10
F V	178.434	500		2s 2p ² - 2s 2p(2P°) 3d	2D - 2F°	3/2 - 5/2	E10
F V	178.590	400		2s 2p ² - 2s 2p(2P°) 3d	2D - 2F°	5/2 - 7/2	E10
F V	178.612	300		2s 2p ² - 2s 2p(1P°) 3s	2D - 2P°	3/2 - 5/2	E10
F V	182.979	400		2s 2p ² - 2s 2p(2P°) 3d	2D - 2D°	3/2 - 5/2	E10
F V	183.016	300		2s 2p ² - 2s 2p(2P°) 3d	2D - 2D°	5/2 - 7/2	E10
F V	183.208	10		2p ² - 2p ² (2P) 3d	2D° - 2P	3/2 - 5/2	E10
F V	186.715	400		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	3/2 - 5/2	E10
F V	186.788	400		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	1/2 - 3/2	E10
F V	186.842	500		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	3/2 - 5/2	E10
F V	186.879	300		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	5/2 - 7/2	E10
F V	186.968	400		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	3/2 - 5/2	E10
F V	187.008	400		2s 2p ² - 2s 2p(2P°) 3s	4P - 4P°	5/2 - 7/2	E10
F V	189.943	200		2p ² - 2p ² (1D) 3d	2P° - 2D	3/2 - 5/2	E10
F V	190.571	600		2p - 3s	g ² P° - 2S	1/2 - 1/2	E10
F V	190.839	700		2p - 3s	g ² P° - 2S	3/2 - 5/2	E10
F V	191.892	300		2s 2p ² - 2s 2p(2P°) 3d	2S - 2P°	1/2 - 3/2	E10
F V	191.973	400		2s 2p ² - 2s 2p(2P°) 3d	2S - 2P°	3/2 - 5/2	E10
F V	194.108	300		2s 2p ² - 2s 2p(1P°) 3s	2S - 2P°	1/2 - 3/2	E10
F V	196.713	200		2p ² - 2p ² (2P) 3s	4S° - 4P	3/2 - 5/2	E14, K8
F V	196.870	100		2p ² - 2p ² (2P) 3s	4S° - 4P	5/2 - 7/2	E14, K8
F V	197.615	1		2p ² - 2p ² (2P) 3d	2P - 2P	1/2 - 1/2	E10
F V	197.780	10		2p ² - 2p ² (2P) 3d	2P - 2P	3/2 - 5/2	E10
F V	198.476	100		2p ² - 2p ² (1D) 3s	2D° - 2D	3/2 - 5/2	E10
F V	198.765	1		2s 2p ² - 2s 2p(2P°) 3d	2P - 2P°	3/2 - 5/2	E10
F V	200.861	100		2s 2p ² - 2s 2p(1P°) 3s	2P - 2P°	1/2 - 3/2	E10
F V	205.552	400		2s 2p ² - 2s 2p(2P°) 3s	2D - 2P°	3/2 - 5/2	E10
F V	205.778	300		2s 2p ² - 2s 2p(2P°) 3s	2D - 2P°	5/2 - 7/2	E10
F V	206.430	200		2s 2p ² - 2s 2p(2P°) 3d	2P - 2D°	1/2 - 3/2	E10
F V	206.594	300		2s 2p ² - 2s 2p(2P°) 3d	2P - 2D°	3/2 - 5/2	E10
F V	213.684	10d		2s 2p ² - 2s 2p(2P°) 3s	2D - 4P°	3/2 - 5/2	E14, K8
F V	215.676	10		2p ² - 2p ² (1D) 3s	2P° - 2D	3/2 - 5/2	E10
F V	223.999	1		2p ² - 2s 2p(1P°) 3p	2D° - 2P	5/2 - 7/2	E10
F V	225.114	10d		2p ² - 2s 2p(1P°) 3p	2D° - 2D	3/2 - 5/2	E14, K8
F V	226.341	200		2s 2p ² - 2s 2p(2P°) 3s	2S - 2P°	1/2 - 3/2	E10
F V	226.608	90		2s 2p ² - 2s 2p(2P°) 3s	2S - 2P°	3/2 - 5/2	E10
F V	235.840	100		2s 2p ² - 2s 2p(2P°) 3s	2P - 2P°	3/2 - 5/2	E10
F V	242.324	300		2s 2p ² - 2s 2p ² 3p	2D - 2P°	3/2 - 5/2	E10
F V	242.439	200		2s 2p ² - 2s 2p ² 3p	2D - 2P°	3/2 - 1/2	E10
F V	464.367	400		2s ² 2p - 2s 2p ²	g ² P° - 2P	1/2 - 3/2	P5
F V	465.374	500		2s ² 2p - 2s 2p ²	g ² P° - 2P	3/2 - 5/2	P5
F V	465.976	600		2s ² 2p - 2s 2p ²	g ² P° - 2P	3/2 - 5/2	P5
F V	466.994	400		2s ² 2p - 2s 2p ²	g ² P° - 2P	3/2 - 1/2	P5
F V	506.159	300		2s ² 2p - 2s 2p ²	g ² P° - 2S	1/2 - 1/2	P5
F V	508.075	400		2s ² 2p - 2s 2p ²	g ² P° - 2S	3/2 - 5/2	P5
F V	513.969	150		2s 2p ² - 2p ³	2D - 2P°	3/2 - 5/2	P5
F V	514.082	100		2s 2p ² - 2p ³	2D - 2P°	3/2 - 1/2	P5
F V	524.594	200		2s 2p ² - 2p ²	4P - 4S°	1/2 - 3/2	P5
F V	525.292	300		2s 2p ² - 2p ²	4P - 4S°	3/2 - 5/2	P5
F V	526.297	400		2s 2p ² - 2p ²	4P - 4S°	5/2 - 7/2	P5
F V	539.91			2s ² 3d - 2s 2p(1P°) 3d	2D - 2D°	3/2 - 5/2	F6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F V	552.06			$2s^2 3d - 2s 2p(^1P^o) 3d$	$^3D - ^3F^o$? $\frac{1}{2} - \frac{3}{2}$	F6
F V	560.24			$2s^2 3p - 2s^2 4d$	$^3P^o - ^3D$? $\frac{3}{2} - \frac{5}{2}$	F6
F V	643.21			$2s^2 4f - 2s 2p(^3P^o) 5p$	$^3F^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	F6
F V	647.666	150		$2s 2p^2 - 2p^3$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	647.768	400		$2s 2p^2 - 2p^3$	$^3D - ^3G^o$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	647.868	500		$2s 2p^2 - 2p^3$	$^3D - ^3J^o$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	647.967	150		$2s 2p^2 - 2p^3$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	654.029	700		$2s^2 2p - 2s 2p^2$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P5
F V	657.227	500		$2s^2 2p - 2s 2p^2$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	657.333	800		$2s^2 2p - 2s 2p^2$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	667.218	35		$2s 2p^2 - 2p^3$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	P5
F V	667.315	15		$2s 2p^2 - 2p^3$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	P5
F V	694.40			$2s^2 3d - 2s^2 4f$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{5}{2}$	F6
F V	706.43			$2s 2p(^3P^o) 3d - 2s 2p(^3P^o) 4f$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{5}{2}$	F6
F V	712.64			$2s 2p(^3P^o) 3d - 2s 2p(^3P^o) 4f$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	F6
F V	744.95			$2s 2p(^3P^o) 3d - 2s 2p(^3P^o) 4f$	$^3F^o - ^3G$	$\frac{3}{2} - \frac{5}{2}$	F6
F V	754.359	35		$2s 2p^2 - 2p^3$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	P5
F V	754.490	60		$2s 2p^2 - 2p^3$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	P5
F V	757.037	100		$2s 2p^2 - 2p^3$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	757.158	35		$2s 2p^2 - 2p^3$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P5
F V	1082.313	100		$2s 2p^2 - 2p^3$	$^3P - ^3D^o$	$\frac{1}{2} - \frac{3}{2}$	P5
F V	1087.820	35		$2s 2p^2 - 2p^3$	$^3P - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	1088.387	150		$2s 2p^2 - 2p^3$	$^3P - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	P5
F V	1167.372	1		$2s^2 2p - 2s 2p^2$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P5

FLUORINE VI (F^{5+}), $Z = 9$ Ground State $1s^2 2s^2 ^1S_0$ (4 electrons)Ionization Potential $1\ 267\ 622\ \text{cm}^{-1}$; $157.161\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F VI	99.044	10		$2s 2p - 2s 3d$	$^3P^o - ^3D$	0 - 1	E9
F VI	99.105	15		$2s 2p - 2s 5d$	$^3P^o - ^3D$	2 - 3	E9
F VI	99.203	10		$2s^2 - 2s 4p$	$g^1S - ^1P^o$	0 - 1	E9
F VI	108.975	100		$2s 2p - 2s 4d$	$^3P^o - ^3D$	0 - 1	E9
F VI	109.040	150		$2s 2p - 2s 4d$	$^3P^o - ^3D$	2 - 3	E9
F VI	113.840	10d		$2p^2 - 2p 4d$	$^3P - ^3D^o$	2 - 3	E9
F VI	116.094	10		$2p^2 - 2p 4d$	$^1D - ^1F^o$	2 - 3	E9
F VI	120.116	100		$2s 2p - 2s 4d$	$^1P^o - ^1D$	1 - 2	E9
F VI	122.122	100		$2s 2p - 2p 3p$	$^3P^o - ^3P$	1 - 2	E9
F VI	122.169	10		$2s 2p - 2p 3p$	$^3P^o - ^3P$	1 - 1	E9
F VI	122.200	200		$2s 2p - 2p 3p$	$^3P^o - ^3P$	2 - 2	E9
F VI	122.251	15		$2s 2p - 2p 3p$	$^3P^o - ^3P$	2 - 1	E9
F VI	123.051	10		$2s 2p - 2p 3p$	$^3P^o - ^3S$	0 - 1	E9
F VI	123.090	10		$2s 2p - 2p 3p$	$^3P^o - ^3S$	1 - 1	E9
F VI	123.175	100		$2s 2p - 2p 3p$	$^3P^o - ^3S$	2 - 1	E9
F VI	124.387	300d		$2s 2p - 2p 3p$	$^3P^o - ^3D$	2 - 3	E9
F VI	124.440	10		$2s 2p - 2p 3p$	$^3P^o - ^3D$	1 - 1	E9
F VI	124.474	10		$2s 2p - 2p 3p$	$^3P^o - ^3D$	2 - 2	E9
F VI	126.923	500		$2s^2 - 2s 3p$	$g^1S - ^1P^o$	0 - 1	E9
F VI	135.397	300		$2s 2p - 2p 3p$	$^1P^o - ^1D$	1 - 2	E9
F VI	139.758	500		$2s 2p - 2s 3d$	$^3P^o - ^3D$	0 - 1	F9
F VI	139.800	600		$2s 2p - 2s 3d$	$^3P^o - ^3D$	1 - 2	E9
F VI	139.900	700		$2s 2p - 2s 3d$	$^3P^o - ^3D$	2 - 3	E9
F VI	141.154	200		$2s 2p - 2p 3p$	$^1P^o - ^1P$	1 - 1	E9
F VI	145.462	100		$2p^2 - 2p 3d$	$^3P - ^3P^o$	0 - 1	E9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F VI	145.489	100		$2p^2 - 2p3d$	$^3P - ^3P^{\circ}$	1 - 0	E9
F VI	145.585	100		$2p^2 - 2p3d$	$^3P - ^3P^{\circ}$	1 - 2	E9
F VI	145.630	100		$2p^2 - 2p3d$	$^3P - ^3P^{\circ}$	2 - 1	E9
F VI	145.691	300		$2p^2 - 2p3d$	$^3P - ^3P^{\circ}$	2 - 2	E9
F VI	146.576	200		$2p^2 - 2p3d$	$^3P - ^3D^{\circ}$	0 - 1	E9
F VI	146.613	300		$2p^2 - 2p3d$	$^3P - ^3D^{\circ}$	1 - 2	E9
F VI	146.676	400		$2p^2 - 2p3d$	$^3P - ^3D^{\circ}$	2 - 3	E9
F VI	146.718	200		$2p^2 - 2p3d$	$^3P - ^3D^{\circ}$	2 - 2	E9
F VI	148.653	400		$2p^2 - 2p3d$	$^1D - ^1F^{\circ}$	2 - 3	E9
F VI	153.678	200		$2s2p - 2s3s$	$^3P^{\circ} - ^3S$	0 - 1	E9
F VI	153.741	300		$2s2p - 2s3s$	$^3P^{\circ} - ^3S$	1 - 1	E9
F VI	153.880	400		$2s2p - 2s3s$	$^3P^{\circ} - ^3S$	2 - 1	E9
F VI	154.506	300		$2p^2 - 2p3d$	$^1D - ^1D^{\circ}$	2 - 2	E9
F VI	156.247	600		$2s2p - 2s3d$	$^1P^{\circ} - ^1D$	1 - 2	E9
F VI	161.174	120		$2p^2 - 2p3s$	$^3P - ^3P^{\circ}$	1 - 2	E9
F VI	161.257	100		$2p^2 - 2p3s$	$^3P - ^3P^{\circ}$	0 - 1	E9
F VI	161.308	300		$2p^2 - 2p3s$	$^3P - ^3P^{\circ}$	2 - 2	E9
F VI	161.341	90		$2p^2 - 2p3s$	$^3P - ^3P^{\circ}$	1 - 1	E9
F VI	161.414	100		$2p^2 - 2p3s$	$^3P - ^3P^{\circ}$	1 - 0	E9
F VI	161.477	120		$2p^2 - 2p3s$	$^3P - ^3P^{\circ}$	2 - 1	E9
F VI	163.138	200		$2p^2 - 2p3d$	$^1S - ^1P^{\circ}$	0 - 1	E9
F VI	164.015	100		$2p^2 - 2p3s$	$^1D - ^1P^{\circ}$	2 - 1	E9
F VI	173.145	100		$2s2p - 2s3s$	$^1P^{\circ} - ^1S$	1 - 0	E9
F VI	194.840	100		$2p^2 - 2s3p$	$^1D - ^1P^{\circ}$	2 - 1	E9
F VI	406.12			$2p3s - 2p4p$	$^3P^{\circ} - ^3D$	2 - 3	F6
F VI	444.47			$2s3p - 2s4d$	$^1P^{\circ} - ^1D$	1 - 2	F6
F VI	446.39			$2s3p - 2s4d$	$^3P^{\circ} - ^3D$	1 - 2	F6
F VI?	469.48						F6
F VI	477.55			$2s3p - 2s4s$	$^1P^{\circ} - ^1S$	1 - 0	F6
F VI	479.85			$2s3d - 2s4f$	$^3D - ^3F^{\circ}$	3 - 4	F6
F VI	509.26			$2s3p - 2s4s$	$^3P^{\circ} - ^3S$	2 - 1	F6
F VI	511.33			$2s3d - 2s4f$	$^1D - ^1F^{\circ}$	2 - 3	F6
F VI	535.207	60		$2s^2 - 2s2p$	$g^1S - ^1P^{\circ}$	0 - 1	P5
F VI	643.969	10		$2s2p - 2p^2$	$^3P^{\circ} - ^3P$	1 - 2	P5
F VI	644.999	10		$2s2p - 2p^2$	$^3P^{\circ} - ^3P$	0 - 1	P5
F VI	646.092	5		$2s2p - 2p^2$	$^3P^{\circ} - ^3P$	1 - 1	P5
F VI	646.360	35		$2s2p - 2p^2$	$^3P^{\circ} - ^3P$	2 - 2	P5
F VI	647.307	10		$2s2p - 2p^2$	$^3P^{\circ} - ^3P$	1 - 0	P5
F VI	648.496	10		$2s2p - 2p^2$	$^3P^{\circ} - ^3P$	2 - 1	P5
F VI	651.082	5		$2s2p - 2p^2$	$^1P^{\circ} - ^1S$	1 - 0	P5
F VI	1032.34	P		$2s^2 - 2s2p$	$g^1S - ^3P^{\circ}$	0 - 1	E5
F VI	1139.496	100		$2s2p - 2p^2$	$^1P^{\circ} - ^1D$	1 - 2	P5

FLUORINE VII (F^{6+}), $Z = 9$
 Ground State $1s^22s^2S_{1/2}$ (3 electrons)
 Ionization Potential $1\,493\,629\text{ cm}^{-1}$; 185.182 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F VII	86.728	10		$2s - 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E9
F VII	95.697	10		$2p - 4d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E9
F VII	95.775	100		$2p - 4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E9
F VII	112.935	400		$2s - 3p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E9
F VII	112.976	300		$2s - 3p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F VII	127.653	4		2p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E9
F VII	127.796	500		2p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E9
F VII	134.703	100		2p - 3s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E9
F VII	134.882	200		2p - 3s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E9
F VII	335.27			3s - 4p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F6
F VII	367.43			3p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F6
F VII	367.87			3p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F6
F VII	381.87			3d - 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	F6
F VII	338.65			3d - 4p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	F6
F VII	391.76			3p - 4s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F6
F VII	825.54			4f - 5g	$^2F^{\circ} - ^2G$	$\frac{1}{2} - \frac{3}{2}$	F6
F VII	881.110	10		2s - 2p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	P5
F VII	890.786	5		2s - 2p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	P5

FLUORINE VIII (F^{7+}), $Z = 9$ Ground State $1s^2 \ ^1S_0$ (2 electrons)Ionization Potential $7\ 693\ 810\ \text{cm}^{-1}$; $953.886\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F VIII	13.49			$1s^2 - 1s\ 5p$	$^2S - ^2P^{\circ}$	0 - 1	S3
F VIII	13.780			$1s^2 - 1s\ 4p$	$^2S - ^2P^{\circ}$	0 - 1	F36
F VIII	14.458			$1s^2 - 1s\ 3p$	$^2S - ^2P^{\circ}$	0 - 1	F36
F VIII	16.807			$1s^2 - 1s\ 2p$	$^2S - ^2P^{\circ}$	0 - 1	F36
F VIII	16.951			$1s^2 - 1s\ 2p$	$^2S - ^2P^{\circ}$	0 - 1	T12
F VIII	17.15	f		$1s^2 - 1s\ 2s$	$^2S - ^2S$	0 - 1	K8
F VIII	98.707	10		$1s\ 2p - 1s\ 3d$	$^3P^{\circ} - ^3D$	1 - 2	E1
F VIII	98.799	10		$1s\ 2p - 1s\ 3d$	$^3P^{\circ} - ^3D$	2 - 3	E1

FLUORINE IX (F^{8+}), $Z = 9$ Ground State $1s\ ^2S_{1/2}$ (1 electron)Ionization Potential $8\ 897\ 241\ \text{cm}^{-1}$; $1103.09\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F IX	11.560	P		1s - 6p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2
F IX	11.707	P		1s - 5p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	G2
F IX	11.988	P	10	1s - 4p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
F IX	12.644	P	30	1s - 3p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
F IX	14.984	P	100	1s - 2p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
F IX	48.96	P		2 - 7			G2
F IX	50.58	P		2 - 6			G2
F IX	53.53	P		2 - 5			G2
F IX	59.95	P		2 - 4			G2
F IX	80.91	P		2 - 3			G2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
F IX	123.97	P		3-7			G2
F IX	134.94	P		3-6			G2
F IX	158.12	P		3-5			G2
F IX	231.3	P		3-4			G2
F IX	267.19	P		4-7			G2
F IX	323.9	P		4-6			G2
F IX	499.8	P		4-5			G2
F IX	574.1	P		5-7			G2
F IX	920.3	P		5-6			G2
F IX	1526.3	P		6-7			G2

NEON I (Ne⁰⁺), Z = 10
Ground State 1s²2s²2p⁶ ¹S₀ (10 electrons)
Ionization Potential 173 929.70 cm⁻¹; 21.564 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne I	576.0052 st			2p ⁶ - 2p ⁵ (² P°)10d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	576.8650 st			2p ⁶ - 2p ⁵ (² P°)9d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	577.1090 st			2p ⁶ - 2p ⁵ (² P°)13d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	577.1692 st			2p ⁶ - 2p ⁵ (² P°)10s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	577.4886 st			2p ⁶ - 2p ⁵ (² P°)12d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	577.6047 st			2p ⁶ - 2p ⁵ (² P°)13s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	577.9749 st			2p ⁶ - 2p ⁵ (² P°)11d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	578.0715 st			2p ⁶ - 2p ⁵ (² P°)8d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	578.1270 st			2p ⁶ - 2p ⁵ (² P°)12s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	578.5129 st			2p ⁶ - 2p ⁵ (² P°)9s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	578.6056 st			2p ⁶ - 2p ⁵ (² P°)10d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	578.6185 st			2p ⁶ - 2p ⁵ (² P°)10d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	578.8224 st			2p ⁶ - 2p ⁵ (² P°)11s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	579.4722 st			2p ⁶ - 2p ⁵ (² P°)9d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	579.4888 st			2p ⁶ - 2p ⁵ (² P°)9d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	579.7711 st			2p ⁶ - 2p ⁵ (² P°)10s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	579.8411 st			2p ⁶ - 2p ⁵ (² P°)7d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	580.5119 st			2p ⁶ - 2p ⁵ (² P°)8s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	580.6893 st			2p ⁶ - 2p ⁵ (² P°)8d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	580.7137 st			2p ⁶ - 2p ⁵ (² P°)8d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	581.1219 st			2p ⁶ - 2p ⁵ (² P°)9s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	582.4691 st			2p ⁶ - 2p ⁵ (² P°)7d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	582.5064 st			2p ⁶ - 2p ⁵ (² P°)7d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	582.5982 st			2p ⁶ - 2p ⁵ (² P°)6d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	583.1261 st			2p ⁶ - 2p ⁵ (² P°)8s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	583.6893 st			2p ⁶ - 2p ⁵ (² P°)7s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	585.2472 st			2p ⁶ - 2p ⁵ (² P°)6d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	585.3042 st			2p ⁶ - 2p ⁵ (² P°)6d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	586.3140 st			2p ⁶ - 2p ⁵ (² P°)7s	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	587.2128 st	35		2p ⁶ - 2p ⁵ (² P°)5d	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	589.1792 st	35		2p ⁶ - 2p ⁵ (² P°)6s	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	589.9113 st	35		2p ⁶ - 2p ⁵ (² P°)5d	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	590.0108 st			2p ⁶ - 2p ⁵ (² P°)5d	g ¹ S - ½[½] ^o	0 - 1	K4
Ne I	591.8303 st	70		2p ⁶ - 2p ⁵ (² P°)6s	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	595.9200 st	100		2p ⁶ - 2p ⁵ (² P°)4d	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	598.7056 st	7		2p ⁶ - 2p ⁵ (² P°)4d	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	598.8908 st	35		2p ⁶ - 2p ⁵ (² P°)4d	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	600.0365 st	70		2p ⁶ - 2p ⁵ (² P°)5s	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	602.7263 st	170		2p ⁶ - 2p ⁵ (² P°)5s	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	615.6283 st	170	7	2p ⁶ - 2p ⁵ (² P°)3d	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	618.6716 st	170	6	2p ⁶ - 2p ⁵ (² P°)3d	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	619.1023 st	120	5	2p ⁶ - 2p ⁵ (² P°)3d	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	626.8232 st	200	4	2p ⁶ - 2p ⁵ (² P°)4s	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	629.7388 st	200	3	2p ⁶ - 2p ⁵ (² P°)4s	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	735.8962 st	1000	2	2p ⁶ - 2p ⁵ (² P°)3s	g ¹ S - ½[½] ^o	0 - 1	K4, B29
Ne I	743.7195 st	400	1	2p ⁶ - 2p ⁵ (² P°)3s	g ¹ S - ½[½] ^o	0 - 1	K4, B29

NEON II (Ne¹⁺), Z = 10
 Ground State 1s²2s²2p⁵ ²P_{3/2} (9 electrons)
 Ionization Potential 330 391.0 cm⁻¹; 40.962 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne II	324.570	20		2p ⁵ - 2p ⁴ (¹ D)4s	g ² P° - ² D	3/2 - 3/2	P14
Ne II	325.393	10		2p ⁵ - 2p ⁴ (¹ D)4s	g ² P° - ² D	1/2 - 3/2	P14
Ne II	326.542	40		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² D	3/2 - 3/2	P14
Ne II	326.787	50		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² S	3/2 - 1/2	P14
Ne II	327.262	30		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² P	3/2 - 3/2	P14
Ne II	327.355	20		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² D	1/2 - 3/2	P14
Ne II	327.626	20		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² S	1/2 - 1/2	P14
Ne II	328.090	20		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² P	1/2 - 1/2	P14
Ne II	330.146	5		2p ⁵ - 2p ⁴ (³ P)4d	g ² P° - ² F	3/2 - 3/2	P14
Ne II	330.205	5		2p ⁵ - 2p ⁴ (³ P)4d	g ² P° - ² F	3/2 - 3/2	P14
Ne II	330.626	5		2p ⁵ - 2p ⁴ (³ P)4d	g ² P° - ² P	1/2 - 3/2	P14
Ne II	330.790	20		2p ⁵ - 2p ⁴ (³ P)4d	g ² P° - ² D	3/2 - 3/2	P14
Ne II	331.069	1		2p ⁵ - 2p ⁴ (³ P)4d	g ² P° - ² P	1/2 - 1/2	P14, B29
Ne II	331.515	2		2p ⁵ - 2p ⁴ (³ P)4d	g ² P° - ² D	1/2 - 3/2	P14, B29
Ne II	352.2466 st	30		2p ⁵ - 2p ⁴ (³ P)4s	g ² P° - ² P	3/2 - 1/2	P14
Ne II	352.9561 st	90		2p ⁵ - 2p ⁴ (³ P)4s	g ² P° - ³ P	3/2 - 3/2	P14
Ne II	353.2149 st	50		2p ⁵ - 2p ⁴ (³ P)4s	g ² P° - ² P	1/2 - 1/2	P14
Ne II	353.9349 st	30		2p ⁵ - 2p ⁴ (³ P)4s	g ² P° - ² P	1/2 - 3/2	P14
Ne II	354.9622 st	60		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² F	3/2 - 3/2	P14
Ne II	355.4541 st	20		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ³ P	3/2 - 1/2	P14
Ne II	355.6559 st	40		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ⁴ P	3/2 - 3/2	P14
Ne II	355.839	1		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² F	3/2 - 3/2	P14, B29
Ne II	355.9476 st	40		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ³ P	1/2 - 3/2	P14
Ne II	356.1290 st	40		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ⁴ F	3/2 - 3/2	P14
Ne II	356.4410 st	30		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ³ P	1/2 - 1/2	P14
Ne II	356.5405 st	30	6	2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² D	3/2 - 3/2	P14
Ne II	356.7995 st	50	6	2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² D	3/2 - 3/2	P14
Ne II	356.8769 st	20		2p ⁵ - 2p ⁴ (³ P)3d	g ² F - ⁴ P	1/2 - 3/2	P14
Ne II	357.5355 st	40	6	2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² D	1/2 - 3/2	P14
Ne II	361.4326 st	90	5	2p ⁵ - 2p ⁴ (¹ S)3s	g ² P° - ² S	3/2 - 1/2	P14
Ne II	362.4554 st	60	5	2p ⁵ - 2p ⁴ (¹ S)3s	g ² P° - ² S	1/2 - 1/2	P14
Ne II	405.8538 st	150	4	2p ⁵ - 2p ⁴ (¹ D)3s	g ² P° - ² D	3/2 - 3/2	P14
Ne II	407.1376 st	120	4	2p ⁵ - 2p ⁴ (¹ D)3s	g ² P° - ² D	1/2 - 3/2	P14
Ne II	445.0397 st	200	3	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ² P	3/2 - 1/2	P14
Ne II	446.2256 st	300	3	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ³ P	3/2 - 3/2	P14
Ne II	446.5901 st	250	3	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ² P	1/2 - 1/2	P14
Ne II	447.8150 st	180	3	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ² P	1/2 - 3/2	P14
Ne II	454.6525 st	150	2	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ⁴ P	3/2 - 1/2	P14
Ne II	455.2738 st	200	2	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ⁴ P	3/2 - 3/2	P14
Ne II	456.2749 st	10	2	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ⁴ P	1/2 - 1/2	P14
Ne II	456.3483 st	120	2	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ⁴ P	3/2 - 3/2	P14
Ne II	456.8962 st	90	2	2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ⁴ P	1/2 - 3/2	P14
Ne II	460.7284 st	1000	1	2s ³ 2p ⁵ - 2s ² 2p ⁶	g ² P° - ² S	3/2 - 1/2	P14
Ne II	462.3908 st	500	1	2s ³ 2p ⁵ - 2s ² 2p ⁶	g ² P° - ² S	1/2 - 1/2	P14
Ne II	992.253	30	1	2s ² 2p ⁶ - 2s ² 2p ⁴ (¹ D)4p	² S - ² P°	1/2 - 1/2	P14
Ne II	993.884	60		2s ² 2p ⁶ - 2s ² 2p ⁴ (¹ D)4p	² S - ³ P°	1/2 - 3/2	P14
Ne II	1066.764	30		2p ⁴ (³ P)3s - 2p ⁴ (¹ D)4p	² P - ² P°	3/2 - 1/2	P14
Ne II	1068.649	70		2p ⁴ (³ P)3s - 2p ⁴ (¹ D)4p	² P - ² P°	3/2 - 3/2	P14
Ne II	1073.781	50		2p ⁴ (³ P)3s - 2p ⁴ (¹ D)4p	² P - ³ P°	1/2 - 1/2	P14
Ne II	1074.313	10		2p ⁴ (³ P)3s - 2p ⁴ (¹ D)4p	² P - ² D°	1/2 - 3/2	P14
Ne II	1075.688	20		2p ⁴ (³ P)3s - 2p ⁴ (¹ D)4p	² P - ² P°	1/2 - 3/2	P14
Ne II	1087.789	40		2s ² 2p ⁶ - 2s ² 2p ⁴ (³ P)5p	² S - ² P°	1/2 - 1/2	P14
Ne II	1090.628	50		2s ² 2p ⁶ - 2s ² 2p ⁴ (³ P)5p	² S - ² P°	1/2 - 3/2	P14
Ne II	1131.724	90		2s ² 2p ⁶ - 2s ² 2p ⁴ (¹ S)3p	² S - ² P°	1/2 - 1/2	P14
Ne II	1131.848	100		2s ² 2p ⁶ - 2s ² 2p ⁴ (¹ S)3p	² S - ² P°	1/2 - 1/2	P14
Ne II	1229.688	70		2p ⁴ (³ P)3s - 2p ⁴ (¹ S)3p	² P - ² P°	3/2 - 1/2	P14
Ne II	1229.832	90		2p ⁴ (³ P)3s - 2p ⁴ (¹ S)3p	² P - ² P°	3/2 - 3/2	P14
Ne II	1239.018	80		2p ⁴ (³ P)3s - 2p ⁴ (¹ S)3p	² P - ² P°	1/2 - 1/2	P14
Ne II	1239.167	60		2p ⁴ (³ P)3s - 2p ⁴ (¹ S)3p	² P - ² P°	1/2 - 3/2	P14
Ne II	1293.902	70		2s ² 2p ⁶ - 2s ² 2p ⁴ (³ P)4p	² S - ² P°	1/2 - 1/2	P14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne II	1298.046	80		$2s2p^6 - 2s^2 2p^4 (^3P) 4p$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1381.509	40		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^3D^o$	$\frac{3}{2} - \frac{5}{2}$	P14
Ne II	1381.894	10		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P14
Ne II	1385.937	30		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P14
Ne II	1387.515	80		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P14
Ne II	1387.665	20		$2p^4 (^3P) 3p - 2p^4 (^3P) 7s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P14
Ne II	1388.491	50		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1391.704	60		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1391.854	70		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P14
Ne II	1399.532	80		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1399.956	20		$2p^4 (^1D) 3s - 2p^4 (^1D) 4p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1400.809	40		$2p^4 (^1D) 3s - 2p^4 (^1D) 4p$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1400.868	20		$2p^4 (^1D) 3s - 2p^4 (^1D) 4p$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1403.135	50		$2p^4 (^1D) 3s - 2p^4 (^1D) 4p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1403.202	20		$2p^4 (^1D) 3s - 2p^4 (^1D) 4p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1403.679	80		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1405.373	80		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1409.747	60		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1411.306	10		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1413.956	70		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1415.716	70		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1418.375	90		$2p^4 (^1D) 3s - 2p^4 (^1D) 4p$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{7}{2}$	P14
Ne II	1418.687	20		$2p^4 (^1D) 3s - 2p^4 (^1D) 4p$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1418.745	80		$2p^4 (^1D) 3s - 2p^4 (^1D) 4p$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1423.564	80		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1428.579	90		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1436.086	90		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1441.188	40		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1446.183	20		$2p^4 (^3P) 3p - 2p^4 (^3P) 7s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	P14
Ne II	1449.132	40		$2p^4 (^3P) 3p - 2p^4 (^3P) 7s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1454.390	5		$2p^4 (^3P) 3p - 2p^4 (^3P) 7s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1460.716	30		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^3S^o$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1462.744	40		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1472.121	20		$2p^4 (^3P) 3p - 2p^4 (^3P) 7s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1473.894	10		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^2S^o$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1475.959	80		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1483.502	60		$2p^4 (^3P) 3s - 2p^4 (^3P) 4p$	$^3P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P14
Ne II	1499.006	40		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1557.487	30		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^4D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1567.526	70		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1569.015	40		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1596.397	30		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1597.971	80		$2p^4 (^1D) 3s - 2p^4 (^3P) 5p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1600.080	40		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1604.004	80		$2p^4 (^1D) 3s - 2p^4 (^3P) 5p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1604.091	70		$2p^4 (^1D) 3s - 2p^4 (^3P) 5p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1608.512	30		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^2D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1668.057	40		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1670.737	20		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^3P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1674.290	60		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1681.035	50		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1681.683	120	7	$2s2p^6 - 2s^2 2p^4 (^1D) 3p$	$^3S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1688.356	180	7	$2s2p^6 - 2s^2 2p^4 (^1D) 3p$	$^3S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1694.481	40		$2p^4 (^3P) 3p - 2p^4 (^3P) 6s$	$^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1694.600	80		$2p^4 (^1D) 3s - 2p^4 (^1S) 3p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1694.786	90		$2p^4 (^1D) 3s - 2p^4 (^1S) 3p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1694.878	60		$2p^4 (^1D) 3s - 2p^4 (^1S) 3p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1723.389	20		$2p^4 (^3P) 3p - 2p^4 (^3P) 5s$	$^4P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1730.645	80		$2p^4 (^3P) 3p - 2p^4 (^3P) 5s$	$^4P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1737.341	50		$2p^4 (^3P) 3p - 2p^4 (^3P) 5s$	$^4P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1738.736	80		$2p^4 (^3P) 3p - 2p^4 (^3P) 5s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1742.869	70		$2p^4 (^3P) 3p - 2p^4 (^3P) 5s$	$^4P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1744.277	50		$2p^4 (^3P) 3p - 2p^4 (^3P) 5s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1744.416	80		$2p^4 (^3P) 3p - 2p^4 (^3P) 5s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1751.216	60		$2p^4 (^3P) 3p - 2p^4 (^3P) 5s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne II	1751.698	80		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1756.835	80		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1758.105	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1758.555	80		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1758.590	20		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^4P^o - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1763.727	20		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1765.015	30		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1765.898	70		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^4P^o - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P. 3
Ne II	1767.900	10		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^4P^o - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1768.085	10		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1778.282	30		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1778.747	30		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1783.783	30		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1789.613	20		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1796.516	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1797.198	30		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1798.281	80		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1800.733	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1803.114	30		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1803.732	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1806.571	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1825.343	80		$2p^4(^1D)3p - 2p^4(^1D)5s$	$^4F^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1826.667	5		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1826.829	90		$2p^4(^1D)3p - 2p^4(^1D)5s$	$^3F^o - ^3D$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1831.481	10		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1833.910	80		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1842.341	70		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1843.908	80		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1845.996	80		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1847.249	5		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1848.823	70		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1849.381	90		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1853.115	90		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1853.453	20		$2p^4(^1D)3p - 2p^4(^1D)4d$	$^3F^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1854.035	90		$2p^4(^3P)3p - 2p^4(^1D)4s$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1854.976	20		$2p^4(^1D)3p - 2p^4(^1D)4d$	$^3F^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1857.565	30		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1857.972	70		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1858.408	80		$2p^4(^3P)3p - 2p^4(^1D)4s$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1859.017	20		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1859.361	80		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1861.137	50		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1871.097	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1872.291	50		$2p^4(^1D)3p - 2p^4(^1D)4d$	$^3F^o - ^3G$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1872.721	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1873.492	20		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1873.677	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1873.873	60		$2p^4(^1D)3p - 2p^4(^1D)4d$	$^3F^o - ^3G$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1876.003	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1877.387	30		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1877.679	40		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1879.884	50		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1881.693	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1882.478	60		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1883.796	80		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1888.107	100		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P. 3
Ne II	1889.710	100		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1891.366	60		$2p^4(^1D)3p - 2p^4(^1D)5s$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1891.730	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1893.876	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1895.072	10		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3S^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1895.840	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1897.810	40		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1899.802	40		$2p^4(^1D)3p - 2p^4(^1D)5s$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1900.189	40		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P - ^3D^o$	$\frac{1}{2} - \frac{3}{2}$	P14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne II	1900.695	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1904.510	70		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1904.691	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1906.502	60		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1907.493	200	9	$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P - ^3P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1914.729	30		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1916.083	50	9	$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P - ^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1920.181	80		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1923.226	5		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1924.166	70		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1927.549	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1928.786	60		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1929.643	60		$2p^4(^1D)3p - 2p^4(^1D)5s$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1930.028	300	9	$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P - ^3P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1930.335	60		$2p^4(^1D)3p - 2p^4(^1D)5s$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1932.754	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1933.529	90		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1933.642	10		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1936.417	30		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3S^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1938.826	200	9	$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1939.875	70		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1944.883	60		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1945.458	100		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1949.450	5		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1949.596	70		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1950.276	40		$2p^4(^3P)3p - 2p^4(^1D)3d$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1951.727	80		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3D^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1954.048	70		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3S^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1959.994	60		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4S^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1961.772	60		$2p^4(^1D)3p - 2p^4(^1D)4d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1971.621	20		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3S^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1977.657	70		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1982.576	40		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3S^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	P14
Ne II	1989.036	80		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	P14
Ne II	1994.099	90		$2p^4(^3P)3p - 2p^4(^3P)5s$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P14
Ne II	1995.280	50		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P14
Ne II	1998.667	20		$2p^4(^3P)3p - 2p^4(^3P)4d$	$^3S^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P14

NEON III (Ne²⁺), Z = 10Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)Ionization Potential 511 800 cm⁻¹; 63.45 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne III	251.12	200b	5	$2p^4 - 2p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 3	K10, M23
Ne III	251.54	200	5	$2p^4 - 2p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	1 - 2	K10, M23
Ne III	251.72	200	5	$2p^4 - 2p^3(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	0 - 1	K10, M23
Ne III	267.07	300b	4	$2p^4 - 2p^3(^3P^{\circ})3s$	$g^3P - ^3P^{\circ}$	2 - 2	K10, M23
Ne III	267.53	300b	4	$2p^4 - 2p^3(^3P^{\circ})3s$	$g^3P - ^3P^{\circ}$	1 - 2	K10, M23
Ne III	267.71	200	4	$2p^4 - 2p^3(^3P^{\circ})3s$	$g^3P - ^3P^{\circ}$	0 - 1	K10, M23
Ne III	282.49	10	8	$2p^4 - 2p^3(^3P^{\circ})3s$	$^1D - ^1P^{\circ}$	2 - 1	B29, M23
Ne III	283.15	300b	3	$2p^4 - 2p^3(^3D^{\circ})3s$	$g^3P - ^3D^{\circ}$	2 - 2	K10, M23
Ne III	283.17	600	3	$2p^4 - 2p^3(^3D^{\circ})3s$	$g^3P - ^3D^{\circ}$	2 - 3	K10, M23
Ne III	283.66	500b	3	$2p^4 - 2p^3(^3D^{\circ})3s$	$g^3P - ^3D^{\circ}$	1 - 2	K10, M23

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne III	283.87	300	3	$2p^4 - 2p^2(^3D^o)3s$	$g^2P - ^2D^o$	0 - 1	K10, M23
Ne III	301.12	400	7	$2p^4 - 2p^2(^3D^o)3s$	$^1D - ^1D^o$	2 - 2	B29, M23
Ne III	308.56	100	10	$2p^4 - 2p^2(^2P^o)3s$	$^1S - ^1P^o$	0 - 1	B29, M23
Ne III	313.05	400	2	$2p^4 - 2p^2(^4S^o)3s$	$g^2P - ^2S^o$	2 - 1	B29, M23
Ne III	313.68	300	2	$2p^4 - 2p^2(^4S^o)3s$	$g^2P - ^2S^o$	1 - 1	B29, M23
Ne III	313.92	100	2	$2p^4 - 2p^2(^6S^o)3s$	$g^2P - ^2S^o$	0 - 1	B29, M23
Ne III	379.31	700	6	$2s^2 2p^4 - 2s 2p^5$	$^1D - ^1P^o$	2 - 1	B29, M23
Ne III	427.84	300	9	$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^o$	0 - 1	B29, M23
Ne III	488.10	800	1	$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	2 - 1	B29, M23
Ne III	488.87	700	1	$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	1 - 0	B29, M23
Ne III	489.50	1000	1	$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	2 - 2	B29, M23
Ne III	489.64	400	1	$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	1 - 1	B29, M23
Ne III	490.31	700	1	$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	0 - 1	B29, M23
Ne III	491.35	900	1	$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	1 - 2	B29, M23
Ne III	1255.03	200	13	$2p^3(^4S^o)3s - 2p^3(^2D^o)3p$	$^2S^o - ^2P$	1 - 0	B29, M23
Ne III	1255.68	500	13	$2p^3(^4S^o)3s - 2p^3(^2D^o)3p$	$^2S^o - ^2P$	1 - 1	B29, M23
Ne III	1257.19	600	13	$2p^3(^4S^o)3s - 2p^3(^2D^o)3p$	$^2S^o - ^2P$	1 - 2	B29, M23

NEON IV (Ne^{3+}), $Z = 10$ Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)Ionization Potential $783\,300\text{ cm}^{-1}$; 97.11 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne IV	140.13	15		$2p^2 - 2p^2(^1D)6s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	142.93	15		$2p^3 - 2p^2(^1D)5d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	144.02	10		$2p^2 - 2p^2(^3P)5s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	144.15	10		$2p^2 - 2p^2(^3P)5s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	144.28	5		$2p^3 - 2p^2(^3P)5s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	146.26	10		$2p^3 - 2p^2(^1D)5s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	148.66	5		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	148.79	15b		$2p^2 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	148.94	20		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	149.59	10		$2p^3 - 2p^2(^1S)4d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	150.93	5		$2p^2 - 2p^2(^1D)5s$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	151.45	P		$2p^2 - 2p^2(^1D)4d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	151.82	75		$2p^3 - 2p^2(^1D)4d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	152.21	75		$2p^2 - 2p^2(^1D)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	154.49	25		$2p^3 - 2p^2(^1S)4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	156.48	25d		$2p^3 - 2p^2(^1D)4d$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	156.87	15		$2p^3 - 2p^2(^1D)4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	157.63	25		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	157.78	15		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	157.88	10		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	158.06	25		$2p^3 - 2p^2(^3P)4d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	158.11	10		$2p^3 - 2p^2(^3P)4d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	158.65	75		$2p^3 - 2p^2(^3P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	158.82	75		$2p^3 - 2p^2(^3P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	160.47	50		$2p^3 - 2p^2(^1D)4s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	163.56	60		$2p^3 - 2p^2(^3P)4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	163.60	10		$2p^3 - 2p^2(^3P)4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne IV	167.92	25b		$2p^3 - 2p^2(^3P)4s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	168.10	10		$2p^3 - 2p^2(^3P)4s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	172.49	200	3	$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	P8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne IV	172.53	250	3	$2p^2 - 2p^2(^3P)3d$	$g^4S^o - 4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	172.62	400	3	$2p^2 - 2p^2(^3P)3d$	$g^4S^o - 4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	174.12			$2p^2 - 2p^2(^3P)4s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	174.30	15		$2p^2 - 2p^2(^3P)4s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	174.88	50		$2p^2 - 2p^2(^1D)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	174.92	40		$2p^2 - 2p^2(^1D)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	176.01	250		$2p^2 - 2p^2(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	177.16	400		$2p^2 - 2p^2(^1D)3d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	180.40	75		$2p^2 - 2p^2(^1D)3d$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	181.61	100		$2p^2 - 2p^2(^1D)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	181.65	100		$2p^2 - 2p^2(^1D)3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne IV	182.83			$2p^2 - 2p^2(^1D)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	183.17	75		$2p^2 - 2p^2(^3P)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	183.25	60		$2p^2 - 2p^2(^3P)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	185.48	100		$2p^2 - 2p^2(^3P)3d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	186.58	750	7	$2p^2 - 2p^2(^3S)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	186.79	25		$2p^2 - 2p^2(^3P)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	186.92	75		$2p^2 - 2p^2(^3P)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	190.57	125		$2p^2 - 2p^2(^3P)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	190.65	75		$2p^2 - 2p^2(^3P)3d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne IV	194.28	500	11	$2p^2 - 2p^2(^1S)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	194.48	200		$2p^2 - 2p^2(^3P)3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne IV	194.62	250b		$2p^2 - 2p^2(^3P)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	204.27	75		$2p^2 - 2p^2(^1S)3s$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	204.53	125		$2s2p^4 - 2s2p^2(^3S^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	204.79	75		$2s2p^4 - 2s2p^2(^3S^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	204.91	25		$2s2p^4 - 2s2p^2(^3S^o)3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne IV	208.49	500	2	$2p^2 - 2p^2(^3P)3s$	$g^4S^o - 4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	208.73	500	2	$2p^2 - 2p^2(^3P)3s$	$g^4S^o - 4P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	208.90	400	2	$2p^2 - 2p^2(^3P)3s$	$g^4S^o - 4P$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	212.56	750	6	$2p^2 - 2p^2(^1D)3s$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	215.40	25		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	215.71	15		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	215.84	75		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	217.34	75		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	217.64	75		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	217.78	75		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	217.83	125		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	218.13	100		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne IV	218.18	50		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	218.34	75		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	218.48	100d		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F3
Ne IV	218.64	125		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	218.77	250		$2s2p^4 - 2s^22p^2(^3P)4p$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne IV	222.60	200		$2p^2 - 2p^2(^1D)3s$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	223.235	125		$2p^2 - 2p^2(^3P)3s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T3, P8
Ne IV	223.601	125		$2p^2 - 2p^2(^3P)3s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T3, P8
Ne IV	234.319	125		$2p^2 - 2p^2(^3P)3s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T3, P8
Ne IV	234.704	125		$2p^2 - 2p^2(^3P)3s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	T3, P8
Ne IV	247.42	50		$2s2p^4 - 2s2p^2(^3S^o)3s$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	247.81	40		$2s2p^4 - 2s2p^2(^3S^o)3s$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	248.00	40		$2s2p^4 - 2s2p^2(^3S^o)3s$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne IV	286.45	75		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	286.93	75		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	287.21	50		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne IV	293.12	75		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	293.43	50		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	293.65	25		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	293.95	5		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	294.10	15		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	294.39	15		$2s2p^4 - 2s^22p^2(^3P)3p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne IV	357.831	250	5	$2s^22p^3 - 2s2p^4$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E6, P8
Ne IV	358.72	1000d	5	$2s^22p^3 - 2s2p^4$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E6, P8
Ne IV	387.141	700	10	$2s^22p^3 - 2s2p^4$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	E6, P8
Ne IV	388.218	500	10	$2s^22p^3 - 2s2p^4$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E6, P8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne IV	421.609	750	9	$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	E6, P8
Ne IV	431.47	125		$2s 2p^4 - 2p^5$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	433.74	250		$2s 2p^4 - 2p^5$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	469.773	700	4	$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T3
Ne IV	469.820	1000	4	$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T3
Ne IV	469.866	900	4	$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T3
Ne IV	469.921	700	4	$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T3
Ne IV	521.741	125	8	$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T3, P8
Ne IV	521.820	125	8	$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T3, P8
Ne IV	536.97	5		$2s 2p^4 - 2p^5$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne IV	539.73	15		$2s 2p^4 - 2p^5$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne IV	541.127	400	1	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E6, P8
Ne IV	542.073	500	1	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E6, P8
Ne IV	543.891	750	1	$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E6, P8
Ne IV	603.00	10		$2s 2p^4 - 2p^5$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	605.60	10		$2s 2p^4 - 2p^5$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne IV	606.53	25		$2s 2p^4 - 2p^5$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	609.17	5		$2s 2p^4 - 2p^5$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne IV	758.32	15d		$2p^3 - 2s^2 2p^3 (^1D) 3d$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne IV	780.25	15d		$2p^3 - 2s^2 2p^3 (^1D) 3d$	$^3P^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne IV	786.14	5		$2p^3 - 2s^2 2p^3 (^1D) 3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	P8

NEON V (Ne⁴⁺), Z = 10Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)Ionization Potential 1 018 000 cm⁻¹; 126.21 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne V	118.8	50		$2p^3 - 2p 4d$	$g^3P - ^3P^o$	2 - 2	P8
Ne V	118.9	10		$2p^3 - 2p 4d$	$g^3P - ^3D^o$	2 - 3	P8
Ne V	122.52	20Cb		$2p^3 - 2p 4d$	$^1D - ^1F^o$	2 - 3	P8
Ne V	123.71	30		$2p^3 - 2p 4d$	$^1D - ^1D^o$	2 - 2	P8
Ne V	125.9	20		$2p^3 - 2p 4s$	$g^3P - ^3P^o$	2 - 2	P8
Ne V	128.79	10		$2s 2p^3 - 2s 2p^3 (^4P) 4d$	$^4S^o - ^4P$	2 - 3	P8
Ne V	129.03	50		$2p^3 - 2p 4s$	$^1D - ^1P^o$	2 - 1	P8
Ne V	136.21	20		$2s 2p^3 - 2s 2p^3 (^4P) 4s$	$^4S^o - ^4P$	2 - 3	P8
Ne V	140.72	50		$2s 2p^3 - 2s 2p^3 (^4P) 3d$	$^4S^o - ^4P$	2 - 1	P8
Ne V	140.76	150		$2s 2p^3 - 2s 2p^3 (^4P) 3d$	$^4S^o - ^4P$	2 - 2	P8
Ne V	140.79	150		$2s 2p^3 - 2s 2p^3 (^4P) 3d$	$^4S^o - ^4P$	2 - 3	P8
Ne V	142.44	100		$2p^3 - 2p 3d$	$g^3P - ^3P^o$	1 - 0	P8
Ne V	142.52	100		$2p^3 - 2p 3d$	$g^3P - ^3P^o$	1 - 1	P8
Ne V	142.66	40		$2p^3 - 2p 3d$	$g^3P - ^3P^o$	2 - 1	P8
Ne V	142.72	150		$2p^3 - 2p 3d$	$g^3P - ^3P^o$	7 - 2	P8
Ne V	143.22	50		$2p^3 - 2p 3d$	$g^3P - ^3D^o$	0 - 1	P8
Ne V	143.27	100		$2p^3 - 2p 3d$	$g^3P - ^3D^o$	1 - 2	P8
Ne V	143.34	150		$2p^3 - 2p 3d$	$g^3P - ^3D^o$	2 - 3	P8
Ne V	147.13	150		$2p^3 - 2p 3d$	$^1D - ^1F^o$	2 - 3	P8
Ne V	148.78	15b		$2p^3 - 2p 3d$	$^1D - ^1P^o$	2 - 1	P8
Ne V	151.42	120		$2p^3 - 2p 3d$	$^1D - ^1D^o$	2 - 2	P8
Ne V	156.61	20		$2p^3 - 2p 3d$	$^1S - ^1P^o$	0 - 1	P8
Ne V	164.02	100		$2s 2p^3 - 2s 2p^3 (^4P) 3s$	$^4S^o - ^4P$	2 - 3	P8
Ne V	164.15	100		$2s 2p^3 - 2s 2p^3 (^4P) 3s$	$^4S^o - ^4P$	2 - 2	P8
Ne V	164.29	80		$2s 2p^3 - 2s 2p^3 (^4P) 3s$	$^4S^o - ^4P$	2 - 1	P8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne V	167.47	150		$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	1 - 2	P8
Ne V	167.61	30		$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	0 - 1	P8
Ne V	167.67	250		$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	2 - 2	P8
Ne V	167.83	25		$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	1 - 0	P8
Ne V	167.92	25b		$2p^2 - 2p\ 3s$	$g^2P - ^2P^o$	2 - 1	P8
Ne V	173.93	500	6	$2p^2 - 2p\ 3s$	$^1D - ^1P^o$	2 - 1	P8
Ne V	184.73	100		$2p^2 - 2p\ 3s$	$^1S - ^1P^o$	0 - 1	P8
Ne V	195.37	50		$2s\ 2p^2 - 2s\ 2p^2(^4P)\ 3s$	$^3P^o - ^3P$	2 - 2	P8
Ne V	195.55	30		$2s\ 2p^2 - 2s\ 2p^2(^4P)\ 3s$	$^3P^o - ^3P$	2 - 1	P8
Ne V	195.62	20		$2s\ 2p^2 - 2s\ 2p^2(^4P)\ 3s$	$^3P^o - ^3P$	1 - 0	P8
Ne V	357.95	400	3	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2S^o$	0 - 1	P8
Ne V	358.48	500	3	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2S^o$	1 - 1	P8
Ne V	359.39	500	3	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2S^o$	2 - 1	P8
Ne V	365.61	1000	5	$2s^2\ 2p^2 - 2s\ 2p^2$	$^1D - ^1P^o$	2 - 1	P8
Ne V	416.20	800	4	$2s^2\ 2p^2 - 2s\ 2p^2$	$^1D - ^1D^o$	2 - 2	P8
Ne V	416.82	250		$2s^2\ 2p^2 - 2s\ 2p^2$	$^1S - ^1P^o$	0 - 1	P8
Ne V	420.39	100		$2s\ 2p^2 - 2p^4$	$^3D^o - ^3P$	1 - 0	P8
Ne V	420.94	150		$2s\ 2p^2 - 2p^4$	$^3D^o - ^3P$	2 - 1	P8
Ne V	422.21	150		$2s\ 2p^2 - 2p^4$	$^3L^o - ^3P$	3 - 2	P8
Ne V	422.34	50		$2s\ 2p^2 - 2p^4$	$^3D^o - ^3P$	2 - 2	P8
Ne V	480.41	250	2	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	0 - 1	P8
Ne V	481.28	150	2	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	1 - 0	P8
Ne V	481.36	250	2	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	1 - 2	P8
Ne V	482.99	500	2	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	2 - 2	P8
Ne V	487.07	30d		$2s\ 2p^2 - 2p^4$	$^3P^o - ^3P$	2 - 1	P8
Ne V	488.94	P		$2s\ 2p^2 - 2p^4$	$^3P^o - ^3P$	2 - 2	P8
Ne V	568.42	400	1	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	0 - 1	P8
Ne V	569.76	250	1	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	1 - 1	P8
Ne V	569.83	500	1	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	1 - 2	P8
Ne V	572.1i	250	1	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	2 - 2	P8
Ne V	572.34	800	1	$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	2 - 3	P8
Ne V	1137.0	P		$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2S^o$	1 - 2	E22
Ne V	1146.1	P		$2s^2\ 2p^2 - 2s\ 2p^2$	$g^2P - ^2S^o$	2 - 2	E22

NEON VI (Ne^{5+}), $Z = 10$ Ground State $1s^2 2s^2 2p\ ^2P^o_{1/2}$ (5 electrons)Ionization Potential $1\ 273\ 800\ cm^{-1}$; $157.93\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne VI	110.5	20		$2s^2\ 2p - 2s\ 2p(^2P^o)\ 3p$	$^3P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne VI	111.2	10		$2s^2\ 2p - 2s\ 2p(^2P^o)\ 3p$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne VI	113.9	10		$2s^2\ 2p - 2s\ 2p(^2P^o)\ 3p$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne VI	121.14	50d		$2s\ 2p^2 - 2s\ 2p(^2P^o)\ 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne VI	122.49	200b		$2p - 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P8
Ne VI	122.69	100		$2p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne VI	136.00	40		$2s\ 2p^2 - 2s\ 2p(^2P^o)\ 3s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne VI	138.39	30		$2p - 3s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne VI	138.64	30		$2p - 3s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P8
Ne VI	191.59	?	20	$2s\ 2p^2 - 2s^2\ 3p$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	K8, P8
Ne VI	191.77	?	20	$2s\ 2p^2 - 2s^2\ 3p$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	K8, P8
Ne VI	399.82	50		$2s^2\ 2p - 2s\ 2p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne VI	401.14	150		$2s^2\ 2p - 2s\ 2p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne VI	401.93	250		$2s^2\ 2p - 2s\ 2p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	P8
Ne VI	403.26	100		$2s^2\ 2p - 2s\ 2p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	P8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne VI	433.18	400		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 S$	$\frac{1}{2} - \frac{1}{2}$	B9
Ne VI	435.65	400		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 S$	$\frac{1}{2} - \frac{1}{2}$	B9
Ne VI	440.40	100		$2s 2p^2 - 2p^3$	$^3 D - ^3 P^o$	$\frac{1}{2} - \frac{1}{2}$	B9
Ne VI	440.60	10		$2s 2p^2 - 2p^3$	$^3 D - ^3 P^o$	$\frac{1}{2} - \frac{1}{2}$	B9
Ne VI	451.84	200		$2s 2p^2 - 2p^3$	$^3 P - ^3 S^o$	$\frac{1}{2} - \frac{1}{2}$	B9
Ne VI	452.74	300		$2s 2p^2 - 2p^3$	$^3 P - ^3 S^o$	$\frac{1}{2} - \frac{1}{2}$	B9
Ne VI	454.07	300		$2s 2p^2 - 2p^3$	$^3 P - ^3 S^o$	$\frac{1}{2} - \frac{1}{2}$	B9
Ne VI	558.59	50		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 D$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne VI	562.71	10		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 D$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne VI	562.80	150		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 D$	$\frac{1}{2} - \frac{1}{2}$	P8
Ne VI	993.0	P		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 P$	$\frac{1}{2} - \frac{1}{2}$	E22
Ne VI	997.4	P		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 P$	$\frac{1}{2} - \frac{1}{2}$	E22
Ne VI	999.6	P		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 P$	$\frac{1}{2} - \frac{1}{2}$	E22
Ne VI	1006.1	P		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 P$	$\frac{1}{2} - \frac{1}{2}$	E22
Ne VI	1010.6	P		$2s^3 2p - 2s 2p^3$	$g^3 P^o - ^3 P$	$\frac{1}{2} - \frac{1}{2}$	E22

NEON VII (Ne^{6+}), $Z = 10$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential $1\ 671\ 792\ cm^{-1}$; $207.27\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne VII	65.85			$2s^3 - 2s 6p$	$g^1 S - ^1 P^o$	0 - 1	T7
Ne VII	67.80	50		$2s 2p - 2s 8d$	$^3 P^o - ^3 D$	2 - 3	T7
Ne VII	68.28	160		$2s 2p - 2p 5p$	$^3 P^o - ^3 D$	2 - 3	T7
Ne VII	68.92	100		$2s 2p - 2s 7d$	$^3 P^o - ^3 D$	2 - 3	T7
Ne VII	70.990	300		$2s 2p - 2s 6d$	$^3 P^o - ^3 D$	1 - 2	T7
Ne VII	71.038	300		$2s 2p - 2s 6d$	$^3 P^o - ^3 D$	2 - 3	T7
Ne VII	74.23	80		$2s 2p - 2s 7d$	$^1 P^o - ^1 D$	1 - 2	T7
Ne VII	74.40			$2s 2p - 2s 5d$	$^3 P^o - ^3 D$	2 - 3	T7
Ne VII	74.962	380		$2s 2p - 2p 4p$	$^3 P^o - ^3 D$	2 - 3	T7
Ne VII	75.49	130		$2s 2p - 2s 5s$	$^3 P^o - ^3 S$	1 - 1	T7
Ne VII	75.55	120		$2s 2p - 2s 5s$	$^3 P^o - ^3 S$	2 - 1	T7
Ne VII	75.765	500		$2s^3 - 2s 4p$	$g^1 S - ^1 P^o$	0 - 1	T7
Ne VII	76.515	140		$2s 2p - 2s 6d$	$^1 P^o - ^1 D$	1 - 2	T7
Ne VII	77.25	220		$2p^3 - 2p 5d$	$^3 P - ^3 D^o$	1 - 2	T7
Ne VII	77.30	220		$2p^3 - 2p 5d$	$^3 P - ^3 D^o$	2 - 3	T7
Ne VII	80.533	520		$2s 2p - 2s 5d$	$^1 P^o - ^1 D$	1 - 2	T7
Ne VII	81.37	110		$2s 2p - 2p 4p$	$^1 P^o - ^1 P$	1 - 1	T7
Ne VII	82.198	500		$2s 2p - 2s 4d$	$^3 P^o - ^3 D$	1 - 2	T7
Ne VII	82.268	700		$2s 2p - 2s 4d$	$^3 P^o - ^3 D$	2 - 3	T7
Ne VII	84.212	200		$2s 2p - 2s 4s$	$^3 P^o - ^3 S$	1 - 1	T7
Ne VII	84.292	200		$2s 2p - 2s 4s$	$^3 P^o - ^3 S$	2 - 1	T7
Ne VII	85.19	150		$2p^3 - 2p 4d$	$^3 P - ^3 P^o$	1 - 2	T7
Ne VII	85.29	190		$2p^3 - 2p 4d$	$^3 P - ^3 P^o$	2 - 2	T7
Ne VII	85.43	340		$2p^3 - 2p 4d$	$^3 P - ^3 D^o$	2 - 3	T7
Ne VII	86.47			$2p^3 - 2p 4d$	$^1 D - ^1 P^o$	2 - 1	T7
Ne VII	86.818	190		$2p^3 - 2p 4d$	$^1 D - ^1 P^o$	2 - 3	T7
Ne VII	87.85	200		$2p^3 - 2p 4d$	$^1 D - ^1 P^o$	2 - 2	T7
Ne VII	89.02	130		$2p^3 - 2p 4s$	$^1 D - ^1 P^o$	2 - 1	T7
Ne VII	89.368	500		$2s 2p - 2s 4d$	$^1 P^o - ^1 D$	1 - 2	T7
Ne VII	91.564	260		$2s 2p - 2s 4s$	$^1 P^o - ^1 S$	1 - 0	T7
Ne VII	92.850	90		$2p^3 - 2p 4d$	$^1 S - ^1 P^o$	0 - 1	T7
Ne VII	94.29	400		$2s 2p - 2p 3p$	$^3 P^o - ^3 P$	1 - 2	T7
Ne VII	94.36	500		$2s 2p - 2p 3p$	$^3 P^o - ^3 P$	2 - 2	T7
Ne VII	94.40	400		$2s 2p - 2p 3p$	$^3 P^o - ^3 P$	2 - 1	T7
Ne VII	94.890	300		$2s 2p - 2p 3p$	$^3 P^o - ^3 S$	1 - 1	T7

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne VII	94.986	300		2s2p - 2p3p	³ P° . ³ S	2 - 1	T7
Ne VII	95.75	700		2s2p - 2p3p	³ P° . ³ D	2 - 3	T7
Ne VII	95.84	250		2s2p - 2p3p	³ P° . ³ D	1 - 2	T7
Ne VII	97.502	730		2s ³ - 2s3p	g ¹ S . ¹ P°	0 - 1	T7
Ne VII	103.09			2s2p - 2p3p	¹ P° . ¹ D	1 - 2	T7
Ne VII	106.040	300		2s2p - 2s3d	³ P° . ³ D	0 - 1	T7
Ne VII	106.086	800		2s2p - 2s3d	³ P° . ³ D	1 - 2	T7
Ne VII	106.192	800		2s2p - 2s3d	³ P° . ³ D	2 - 3	T7
Ne VII	107.099	200		2s2p - 2p3p	¹ P° . ¹ P	1 - 1	T7
Ne VII	109.820	320		2p ³ - 2p3d	³ P . ³ P°	1 - 2	T7
Ne VII	109.995	470		2p ³ - 2p3d	³ P . ³ P°	2 - 2	T7
Ne VII	110.562	460		2p ³ - 2p3d	³ P . ³ D°	1 - 2	T7
Ne VII	110.630	600		2p ³ - 2p3d	³ P . ³ D°	2 - 3	T7
Ne VII	111.152	220		2p ³ - 2p3d	¹ D . ¹ P°	2 - 1	T7
Ne VII	111.807	430		2p ³ - 2p3d	¹ D . ¹ F°	2 - 3	T7
Ne VII	115.331	600		2s2p - 2s3s	³ P° . ³ S	0 - 1	T7
Ne VII	115.392	660		2s2p - 2s3s	³ P° . ³ S	1 - 1	T7
Ne VII	115.522	700		2s2p - 2s3s	³ P° . ³ S	2 - 1	T7
Ne VII	115.955	330		2p ³ - 2p3d	¹ D . ¹ D°	2 - 2	T7
Ne VII	116.693	770		2s2p - 2s3d	¹ P° . ¹ D	1 - 2	T7
Ne VII	120.192	500		2p ³ - 2p3s	³ P . ³ P°	1 - 2	T7
Ne VII	120.337	700		2p ³ - 2p3s	³ P . ³ P°	2 - 2	T7
Ne VII	120.487	500		2p ³ - 2p3s	³ P . ³ P°	2 - 1	T7
Ne VII	121.13	500		2p ³ - 2p3s	¹ D . ¹ P°	2 - 1	T7
Ne VII	121.774	260		2p ³ - 2p3d	¹ S . ¹ P°	0 - 1	T7
Ne VII	127.663	710		2s2p - 2s3s	¹ P° . ¹ S	1 - 0	T7
Ne VII	133.64	150		2p ³ - 2p3s	¹ S . ¹ P°	0 - 1	T7
Ne VII	465.221	700		2s ³ - 2s2p	g ¹ S . ¹ P°	0 - 1	E6, B9
Ne VII	558.61	400b		2s2p - 2p ³	³ P° . ³ P	1 - 2	E6, B9
Ne VII	559.947	300		2s2p - 2p ³	³ P° . ³ P	0 - 1	E6, B9
Ne VII	561.378	200		2s2p - 2p ³	³ P° . ³ P	1 - 1	E6, B9
Ne VII	561.728	460		2s2p - 2p ³	³ P° . ³ P	2 - 2	E6, B9
Ne VII	562.992	200		2s2p - 2p ³	³ P° . ³ P	1 - 0	E6, B9
Ne VII	564.529	100		2s2p - 2p ³	³ P° . ³ P	2 - 1	E6, B9
Ne VII	895.18	P		2s ³ - 2s2p	g ¹ S . ³ P°	0 - 1	E2
Ne VII	1981.974	600		2s3s - 2s3p	³ S . ³ P°	1 - 2	B9
Ne VII	1992.060	300		2s3s - 2s3p	³ S . ³ P°	1 - 1	B9
Ne VII	1997.345	100		2s3s - 2s3p	³ S . ³ P°	1 - 0	B9

NEON VIII (Ne⁷⁺), Z = 10Ground State 1s²2s ²S_{1/2} (3 electrons)Ionization Potential 1 928 462 cm⁻¹; 239.09 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne VIII	11.905	40 -A		1s ² 2s - 1s2s3p	g ³ S . ³ P°	1/2 - 3/2	P10
Ne VIII	13.654	70 -A		1s ² 2s - 1s2s2p	g ³ S . ³ P°	1/2 - 3/2	P10
Ne VIII	13.710	70 -A		1s ² 2p - 1s2p ³	³ P° . ³ D	3/2 - 5/2	P10
Ne VIII	53.8i	20		2s - 10p	g ³ S . ³ P°	1/2 - 3/2	T7
Ne VIII	54.31	70		2s - 9p	g ³ S . ³ P°	1/2 - 3/2	T7
Ne VIII	55.01	130		2s - 8p	g ³ S . ³ P°	1/2 - 3/2	T7
Ne VIII	56.043	320		2s - 7p	g ³ S . ³ P°	1/2 - 3/2	T7
Ne VIII	57.747	470		2s - 6p	g ³ S . ³ P°	1/2 - 3/2	T7
Ne VIII	58.407	180		2p - 9d	³ P° . ³ D	3/2 - 5/2	T7
Ne VIII	59.19	290		2p - 8d	³ P° . ³ D	3/2 - 5/2	T7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne VIII	60.351	300		2p - 7d	$^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	60.413	400		2p - 7d	$^3P - ^3D$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	60.49	10		2p - 7s	$^3P - ^3S$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	60.796	630		2s - 3p	$^3S - ^3P$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	62.297	350		2p - 6d	$^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	62.361	500		2p - 6d	$^3P - ^3D$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	62.58	150		2p - 6s	$^3P - ^3S$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	65.822	600		2p - 5d	$^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	65.895	700		2p - 5d	$^3P - ^3D$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	66.259	300		2p - 5s	$^3P - ^3S$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	66.330	350		2p - 5s	$^3P - ^3S$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	67.382	770		2s - 4p	$^3S - ^3P$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	73.470	700		2p - 4d	$^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	73.565	750		2p - 4d	$^3P - ^3D$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	74.541	650		2p - 4s	$^3P - ^3S$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	74.637	650		2p - 4s	$^3P - ^3S$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	88.092	850		2s - 3p	$^3S - ^3P$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	98.115	850		2p - 3d	$^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	98.260	870		2p - 3d	$^3P - ^3D$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	102.911	790		2p - 3s	$^3P - ^3S$	$\frac{1}{2} - \frac{3}{2}$	T7
Ne VIII	103.085	830		2p - 3s	$^3P - ^3S$	$\frac{3}{2} - \frac{5}{2}$	T7
Ne VIII	770.409	1000		2s - 2p	$^3S - ^3P$	$\frac{1}{2} - \frac{3}{2}$	E6, B9
Ne VIII	780.324	500		2s - 2p	$^3S - ^3P$	$\frac{3}{2} - \frac{5}{2}$	E6, B9

NEON IX (Ne⁸⁺), Z = 10
 Ground State 1s² ¹S₀ (2 electrons)
 Ionization Potential 9 645 005 cm⁻¹; 1195.797 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne IX	10.513	50		1s ² - 1s8p	$g^1S - ^3P$	0 - 1	P10
Ne IX	10.565	70		1s ² - 1s7p	$g^1S - ^1P$	0 - 1	P10
Ne IX	10.646	120		1s ² - 1s6p	$g^1S - ^1P$	0 - 1	P10
Ne IX	10.765	230		1s ² - 1s5p	$g^1S - ^1P$	0 - 1	P10
Ne IX	11.001	350		1s ² - 1s4p	$g^1S - ^1P$	0 - 1	P10
Ne IX	11.544	570		1s ² - 1s3p	$g^1S - ^1P$	0 - 1	P10
Ne IX	12.393	50		1s2s - 2s2p	$^3S - ^3P$	1 - 2	P10
Ne IX	12.355	50		1s2p - 2p ²	$^1P - ^1D$	1 - 2	P10
Ne IX	13.447	1000		1s ² - 1s2p	$g^1S - ^1P$	0 - 1	P10
Ne IX	13.549	150		1s ² - 1s2p	$g^1S - ^3P$	0 - 1	P10
Ne IX	13.71	?	f	1s ² - 1s2s	$g^1S - ^3S$	0 - 1	K8
Ne IX	46.3	P		1s2s - 1s7p	$^3S - ^3P$	1 - 2	F20
Ne IX	47.7	P		1s2s - 1s6p	$^3S - ^3P$	1 - 2	F20
Ne IX	48.0	P		1s2p - 1s7d	$^3P - ^3D$	2 - 3	F20
Ne IX	49.5	P		1s2p - 1s6d	$^3P - ^3D$	2 - 3	F20
Ne IX	50.3	P		1s2s - 1s5p	$^3S - ^3P$	1 - 2	F20
Ne IX	52.4	P		1s2p - 1s5d	$^3P - ^3D$	2 - 3	F20
Ne IX	56.1	P		1s2s - 1s4p	$^3S - ^3P$	1 - 2	F20
Ne IX	58.468	100		1s2p - 1s4d	$^3P - ^3D$	2 - 3	P10
Ne IX	74.4	P		1s2s - 1s3p	$^3S - ^3P$	1 - 2	F20
Ne IX	78.300	100		1s2p - 1s3d	$^3P - ^3D$	2 - 3	P10

NEON X (Ne^{8+}), $Z = 10$
 Ground State $1s^2 S_{1/2}$ (1 electron)
 Ionization Potential $10\ 986\ 875\ \text{cm}^{-1}$; $1362.16\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ne X	9.291	P		$1s-7p$	2^2S-1^2P	$\frac{1}{2}-\frac{3}{2}$	G2
Ne X	9.362	P		$1s-6p$	2^2S-1^2P	$\frac{1}{2}-\frac{3}{2}$	G2
Ne X	9.481	P		$1s-5p$	2^2S-1^2P	$\frac{1}{2}-\frac{3}{2}$	G2
Ne X	9.708	P	10	$1s-4p$	1^2S-1^2P	$\frac{1}{2}-\frac{3}{2}$	G2, K8
Ne X	10.239	P	30	$1s-3p$	2^2S-1^2P	$\frac{1}{2}-\frac{3}{2}$	G2, K8
Ne X	12.134	P	100	$1s-2p$	2^2S-1^2P	$\frac{1}{2}-\frac{3}{2}$	G2, K8
Ne X	39.65	P		2-7			G2
Ne X	40.96	P		2-6			G2
Ne X	43.35	P		2-5			G2
Ne X	48.55	P		2-4			G2
Ne X	65.52	P		2-3			G2
Ne X	100.41	P		3-7			G2
Ne X	109.28	P		3-6			G2
Ne X	128.06	P		3-5			G2
Ne X	187.3	P		3-4			G2
Ne X	216.41	P		4-7			G2
Ne X	262.3	P		4-6			G2
Ne X	404.8	P		4-5			G2
Ne X	465.0	P		5-7			G2
Ne X	745.4	P		5-6			G2
Ne X	1236.3	P		6-7			G2

SODIUM, $Z = 11$

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na	67.027	100					S21
Na	70.320	10					S21
Na	71.386	10					S21
Na	73.128	10					S21
Na	77.076	10					S21
Na	78.023	10					S21
Na	86.890	10					S21
Na	87.524	200					S21
Na	93.070	10					S21
Na	95.796	10					S21
Na	96.018	100					S21
Na	96.572	10					S21
Na	104.314	10					S21
Na	104.440	10					S21
Na	106.345	200					S21
Na	106.703	100					S21
Na	110.474	10					S21
Na	110.577	100					S21
Na	112.526	10					S21
Na	112.641	10					S21
Na	113.061	100					S21
Na	120.220	100					S21
Na	120.298	100					S21
Na	120.430	10					S21
Na	122.330	10					S21
Na	127.953	100					S21
Na	128.112	300					S21
Na	138.628	200					S21
Na	193.807	10					S22
Na	217.385	10					S22
Na	425.245	10					S22
Na	515.952	100					S22

SODIUM I (Na^0), $Z = 11$ Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)Ionization Potential $41\,449.44\text{ cm}^{-1}$; 5.139 eV

SODIUM II (Na^{2+}), $Z = 11$
 Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
 Ionization Potential $381\ 395\ \text{cm}^{-1}$; $47.286\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na II	269.993	10		$2p^6 - 2p^5(^2P^o) 7s$	$g^4S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	270.947	7		$2p^6 - 2p^5(^2P^o) 7s$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	271.373	5		$2p^6 - 2p^5(^2P^o) 6d$	$g^4S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	273.940	12		$2p^6 - 2p^5(^2P^o) 6s$	$g^4S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	274.023	12		$2p^6 - 2p^5(^2P^o) 5d$	$g^4S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	274.931	20		$2p^6 - 2p^5(^2P^o) 6s$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	275.003	20		$2p^6 - 2p^5(^2P^o) 5d$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	275.218	5		$2p^6 - 2p^5(^2P^o) 5d$	$g^4S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	281.691	25		$2p^6 - 2p^5(^2P^o) 5s$	$g^4S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	281.788	25		$2p^6 - 2p^5(^2P^o) 4d$	$g^4S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	282.709	35		$2p^6 - 2p^5(^2P^o) 5s$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	282.803	35		$2p^6 - 2p^5(^2P^o) 4d$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	283.258	15		$2p^6 - 2p^5(^2P^o) 4d$	$g^4S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	300.153	160	4	$2p^6 - 2p^5(^2P^o) 3d$	$g^4S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	300.202	160		$2p^6 - 2p^5(^2P^o) 4s$	$g^4S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	301.318	90		$2p^6 - 2p^5(^2P^o) 4s$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	301.436	100	3	$2p^6 - 2p^5(^2P^o) 3d$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	302.446	60		$2p^6 - 2p^5(^2P^o) 3d$	$g^4S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	372.674	200	2	$2p^6 - 2p^5(^2P^o) 3s$	$g^4S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	C18
Na II	376.377	200	1	$2p^6 - 2p^5(^2P^o) 3s$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	1276.597	30		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	2 - 2	C18
Na II	1281.308	15		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	2 - 1	C18
Na II	1285.117	12		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	2 - 1	C18
Na II	1285.686	25		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	1 - 0	C18
Na II	1289.213	60		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	1 - 2	C18
Na II	1293.974	60		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	1 - 1	C18
Na II	1297.856	12		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	1 - 1	C18
Na II	1298.142	15		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	2 - 2	C18
Na II	1299.618	30		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	2 - 1	C18
Na II	1301.782	15		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 6d$	$\frac{3}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{3}{2}]^o$	1 - 1	C18
Na II	1303.957	15		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	0 - 1	C18
Na II	1304.546	15		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	1 - 0	C18
Na II	1306.618	20		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	2 - 2	C18
Na II	1307.935	10		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	0 - 1	C18
Na II	1311.158	10		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	C18
Na II	1312.026	30		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	1 - 1	C18
Na II	1312.587	20		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	2 - 3	C18
Na II	1322.295	12		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	0 - 1	C18
Na II	1327.742	50		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	2 - 1	C18
Na II	1328.497	12		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 6d$	$\frac{3}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{1}{2}]^o$	1 - 1	C18
Na II	1338.575	35		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	1 - 0	C18
Na II	1341.369	35		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	1 - 1	C18
Na II	1342.401	20		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	1 - 2	C18
Na II	1347.543	45		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	1 - 1	C18
Na II	1351.799	12		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	1 - 1	C18
Na II	1352.118	35		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	0 - 1	C18
Na II	1359.055	20		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	1 - 0	C18
Na II	1366.242	15		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	C18
Na II	1374.688	90		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 7s$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]^o$	2 - 1	C18
Na II	1375.618	15		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	C18
Na II	1381.236	30		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 6d$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]^o$	2 - 1	C18
Na II	1384.794	10		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 7s$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]^o$	1 - 1	C18
Na II	1392.316	10		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 6s$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]^o$	1 - 1	C18
Na II	1392.940	15		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 6s$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]^o$	1 - 0	C18
Na II	1398.143	12		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 5d$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]^o$	1 - 2	C18
Na II	1399.070	30		$2p^5(^2P^o) 3s - 2p^5(^2P^o) 4p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	1 - 1	C18
Na II	1399.860	12		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 7s$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]^o$	2 - 1	C18
Na II	1407.675	90		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 7s$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]^o$	2 - 1	C18
Na II	1410.374	12		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 7s$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]^o$	1 - 1	C18
Na II	1411.536	7		$2p^5(^2P^o) 3p - 2p^5(^2P^o) 6d$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]^o$	2 - 1	C18

Element	Wavelength	Intensity	Multiplet	Configuration	Terms	J - J	References
Na II	1418.579	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)7s$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1420.216	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1421.839	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)6d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1422.996	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)7s$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1425.499	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)6d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1426.048	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1429.963	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)6d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1431.015	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)7s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1431.278	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)7s$	$\frac{1}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1435.776	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)6d$	$\frac{3}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	0-i	C18
Na II	1442.907	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)6d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1455.969	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)7s$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	0-1	C18
Na II	1462.166	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)6d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1470.916	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)6d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1481.578	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	3-2	C18
Na II	1483.507	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1484.677	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	3-3	C18
Na II	1485.987	25		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1494.729	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1495.212	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1496.011	40		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	1-0	C18
Na II	1497.731	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1501.995	25		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1506.407	60f		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1506.914	60		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	3-2	C18
Na II	1510.701	35		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	3-2	C18
Na II	1513.102	70		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1515.229	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1515.709	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1518.505	35		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1519.629	60		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1525.311	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1527.555	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1527.965	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1528.742	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-3	C18
Na II	1530.307	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1534.163	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1534.538	25		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-0	C18
Na II	1534.737	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1539.895	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1546.722	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1547.066	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1549.352	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	3-1	C18
Na II	1549.507	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1550.348	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{1}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{1}{2}]^o$	1-0	C18
Na II	1551.793	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1551.934	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1552.203	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1556.370	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1556.753	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1558.678	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1568.673	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1569.264	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1573.430	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1574.110	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1574.664	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1575.749	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1576.118	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-0	C18
Na II	1578.807	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	0-1	C18
Na II	1581.108	25		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	0-1	C18
Na II	1581.835	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1584.173	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1588.983	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1591.321	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1591.712	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-0	C18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na II	1621.940	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1622.347	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-0	C18
Na II	1626.372	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1652.921	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1668.569	35		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1571.886	35		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1673.649	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-0	C18
Na II	1743.309	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1746.996	0		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1752.185	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C13
Na II	1756.817	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-3	C18
Na II	1759.572	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-3	C18
Na II	1763.325	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1763.841	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-0	C18
Na II	1768.603	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1776.571	90		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	3-2	C18
Na II	1778.243	40		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	3-3	C18
Na II	1778.905	0		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	3-2	C18
Na II	1779.906	0		$2p^5(^2P^o)3p - 2p^5(^2P^o)6s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	0-1	C18
Na II	1783.043	60		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1783.475	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	0-1	C18
Na II	1785.989	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	3-3	C18
Na II	1787.189	80		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	3-4	C18
Na II	1788.846	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-2	C18
Na II	1790.562	2		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-3	C18
Na II	1791.224	35		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-2	C18
Na II	1791.862	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1795.772	1		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1798.410	80		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-3	C18
Na II	1800.048	25		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1801.256	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1803.833	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1805.998	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-2	C18
Na II	1806.061	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-3	C18
Na II	1807.092	90		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1808.375	60		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-2	C18
Na II	1814.474	25		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1818.473	5		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1818.628	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-2	C18
Na II	1819.024	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-0	C18
Na II	1821.695	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1822.568	5		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1824.098	0		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1825.730	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-1	C18
Na II	1830.124	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1831.172	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	0-1	C18
Na II	1831.402	1		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1833.873	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1835.217	80		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	0-1	C18
Na II	1835.367	2		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-3	C18
Na II	1837.522	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2-2	C18
Na II	1837.890	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1839.270	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-1	C18
Na II	1839.835	25		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-0	C18
Na II	1840.032	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-2	C18
Na II	1841.822	60		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-3	C18
Na II	1845.016	70		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1851.194	70		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1-2	C18
Na II	1853.166	80		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-2	C18
Na II	1857.265	25		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1857.576	40		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-1	C18
Na II	1863.898	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-2	C18
Na II	1865.139	35		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-1	C18
Na II	1866.452	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1-2	C18
Na II	1871.517	40		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2-2	C18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na II	1873.369	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2 - 3	C18
Na II	1874.098	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2 - 2	C18
Na II	1875.075	60		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	1877.365	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1 - 2	C18
Na II	1879.240	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	C18
Na II	1883.460	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1 - 1	C18
Na II	1883.804	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1 - 0	C18
Na II	1885.091	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2 - 2	C18
Na II	1885.742	45		$2p^5(^2P^o)3p - 2p^5(^2P^o)5s$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1 - 2	C18
Na II	1889.317	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2 - 1	C18
Na II	1899.523	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1 - 2	C18
Na II	1903.831	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1 - 1	C18
Na II	1906.112	15		$2p^5(^2P^o)3p - 2p^5(^2P^o)4d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1 - 0	C18

SODIUM III (Na^{2+}), $Z = 11$
 Ground State $1s^2 2s^2 2p^5 \ ^2P^o_{3/2}$ (9 electrons)
 Ionization Potential $577\,800\text{ cm}^{-1}$; 71.64 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na III	183.575	10		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	183.747	100		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	184.218	10		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S22
Na III	188.870	200		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	189.346	100		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S22
Na III	194.032	100		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	194.166	10		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S22
Na III	194.306	100d		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	195.538	10		$2p^5 - 2p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	202.184	400		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	202.490	200		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	202.720	300		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	202.760	300		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S22
Na III	203.050	300		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S22
Na III	203.282	200		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S22
Na III	203.324	200		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S22
Na III?	206.871	10					S22
Na III?	207.458	10					S22
Na III	214.235	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	214.596	200		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S22
Na III	214.868	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S22
Na III	215.042	200		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	215.230	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S22
Na III	215.340	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III?	215.498	10					S22
Na III	215.671	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S22
Na III	215.870	100		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S22, K8
Na III?	216.120	100					S22
Na III	229.868	300		$2p^5 - 2p^4(^1S)3s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S22
Na III	230.593	200		$2p^5 - 2p^4(^1S)3s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	S22
Na III	250.515	800		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	251.371	600		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S22
Na III	266.893	500		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S22
Na III	267.642	800		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S22
Na III	267.868	600		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na III	268.623	500		$2p^2 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S22
Na III	272.441	10d		$2p^2 - 2p^4(^2P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S22
Na III	378.143	1000		$2s^2 2p^2 - 2s 2p^3$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E6, S22
Na III	380.107	800		$2s^2 2p^2 - 2s 2p^3$	$g^2P^o - ^4S$	$\frac{1}{2} - \frac{3}{2}$	E6, S22
Na III	1100.49	100		$2p^4(^2P)3p - 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1122.30	10		$2p^4(^2P)3p - 2p^4(^1D)3d$	$4P^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	T4
Na III	1153.04	40		$2p^4(^2P)3p - 2p^4(^1D)3d$	$4P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1180.40	160		$2p^4(^1D)3p - 2p^4(^1S)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	T4
Na III	1221.12	!00		$2p^4(^2P)3p - 2p^4(^1D)3d$	$^4D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1223.44	80d		$2p^4(^2P)3p - 2p^4(^1D)3d$	$^4D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1224.73	80		$2p^4(^2P)3p - 2p^4(^1D)3d$	$^4D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1235.40	80a		$2p^4(^2P)3p - 2p^4(^1D)3d$	$^4D^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1256.68	20		$2p^4(^2P)3p - 2p^4(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1265.66	40		$2p^4(^2P)3p - 2p^4(^1D)3d$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1337.39	120d		$2p^4(^2P)3p - 2p^4(^1D)3d$	$^3P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1427.27	10		$2p^4(^2P)3s - 2p^4(^1D)3p$	$^3P - ^3D^o$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1436.21	240		$2p^4(^2P)3s - 2p^4(^1D)3p$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1458.15	60		$2p^4(^2P)3s - 2p^4(^1D)3p$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1529.67	20		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1541.19	20		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1548.68	160		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1602.91	100		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1604.47	120		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1610.97	80		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1613.77	160		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1621.94	100		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1624.07	240		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1633.64	80		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1650.91	20		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1658.71	40		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1669.52	60d		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1669.52	60d		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1678.74	20		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1691.70	20		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1718.48	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1719.60	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1731.08	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^2F$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1741.33	20		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1746.39	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1752.06	20		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^3D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1752.65	60		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1754.97	10		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1761.05	20		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1762.13	10		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1763.84	60		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1767.21	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1773.00	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1775.32	10		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1782.92	240		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1791.23	200		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1791.80	160		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1801.27	140		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1810.74	80		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1811.70	100		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1814.35	60		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^2F$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1816.83	40		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1819.01	40		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^2F$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1821.68	240		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^2F$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1824.52	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1825.44	200		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^o - ^2F$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1835.22	300		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1838.11	120		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1843.43	40		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^3D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1844.36	400		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^3P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1845.10	240		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^3P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	T4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na III	1847.54	200		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2F^{\circ} - ^2D$	$\frac{5}{2} - \frac{3}{2}$	T4
Na III	1849.58	700		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^{\circ} - ^4D$	$\frac{5}{2} - \frac{3}{2}$	T4
Na III	1850.24	400		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2F^{\circ} - ^2D$	$\frac{5}{2} - \frac{3}{2}$	T4
Na III	1850.39	360		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^{\circ} - ^4D$	$\frac{5}{2} - \frac{3}{2}$	T4
Na III	1855.91	300		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^{\circ} - ^4D$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1856.73	400		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4P^{\circ} - ^4D$	$\frac{5}{2} - \frac{3}{2}$	T4
Na III	1857.57	100		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{5}{2} - \frac{1}{2}$	T4
Na III	1859.20	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1859.61	10		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1861.19	300		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1862.40	120		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1869.43	20		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1872.45	20		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1873.32	80		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2F^{\circ} - ^2D$	$\frac{5}{2} - \frac{3}{2}$	T4
Na III	1874.22	10		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1885.75	80		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1887.48	300		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1890.75	240		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	T4
Na III	1899.70	60		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1913.17	160		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1918.46	120		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1920.12	120		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1926.27	900		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1927.21	300		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1933.87	600		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1935.54	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1939.32	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1941.61	10		$2p^4(^2P)3s - 2p^4(^2P)3p$	$^4P - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1941.77	10		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1942.19	120		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1943.40	120		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2F^{\circ} - ^2G$	$\frac{5}{2} - \frac{3}{2}$	T4
Na III	1944.99	60d		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1946.43	400d		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2F^{\circ} - ^2G$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1946.82	10		$2p^4(^2P)3s - 2p^4(^2P)3p$	$^4P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1950.79	300		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1951.21	800		$2p^4(^2P)3s - 2p^4(^2P)3p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1955.31	160		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1956.48	10		$2p^4(^2P)3p - 2p^4(^2P)4s$	$^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1960.76	400		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1965.04	360		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1975.43	10		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1976.62	20		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	T4
Na III	1977.14	20		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1980.95	10		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	T4
Na III	1985.58	600		$2p^4(^2P)3s - 2p^4(^2P)3p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	T4
Na III	1995.62	60		$2p^4(^2P)3p - 2p^4(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T4

SODIUM IV (Na³⁺), Z = 11
Ground State 1s²2s²2p⁴ ³P₂ (8 electrons)
Ionization Potential 797 800 cm⁻¹; 98.91 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na IV	129.464	10		2p ⁴ - 2p ³ (³ D°)5d	g ³ P - ³ D°	2-3	S22
Na IV	132.211	10		2p ⁴ - 2p ³ (³ P°)4d	g ³ P - ³ D°	2-3	S21,S22
Na IV	132.465	10d		2p ⁴ - 2p ³ (³ P°)4d	g ³ P - ³ D°	0-1	S21,S22
Na IV	132.740	10		2p ⁴ - 2p ³ (³ D°)5s	g ³ P - ³ D°	2-3	S21,S22
Na IV	136.435	10		2p ⁴ - 2p ³ (³ D°)4d	g ³ P - ³ S°	2-1	S21,S22
Na IV	136.550	100		2p ⁴ - 2p ³ (³ D°)4d	g ³ P - ³ P°	2-2	S21,S22
Na IV	136.645	10		2p ⁴ - 2p ³ (³ D°)4d	g ³ P - ³ S°	1-1	S21,S22
Na IV	136.748	10		2p ⁴ - 2p ³ (³ D°)4d	g ³ P - ³ P°	1-2	S21,S22
Na IV	136.854	100		2p ⁴ - 2p ³ (³ D°)4d	g ³ P - ³ D°	2-3	S21,S22
Na IV	137.062	10		2p ⁴ - 2p ³ (³ D°)4d	g ³ P - ³ D°	1-2	S21,S22
Na IV	137.144	10		2p ⁴ - 2p ³ (³ D°)4d	g ³ P - ³ D°	0-1	S22
Na IV	137.714	10		2p ⁴ - 2p ³ (³ P°)4d	¹ D - ¹ F°	2-3	S21,S22
Na IV	137.945	10		2p ⁴ - 2p ³ (³ P°)4d	¹ D - ¹ D°	2-2	S21,S22
Na IV	139.867	200b		2p ⁴ - 2p ³ (³ P°)4s	g ³ P - ³ P°	2-2	S20,S22
Na IV	142.232	200b		2p ⁴ - 2p ³ (³ D°)4d	¹ D - ¹ F°	2-3	S22
Na IV	142.363	100		2p ⁴ - 2p ³ (³ D°)4d	¹ D - ¹ D°	2-2	S21,S22
Na IV	142.688	10		2p ⁴ - 2p ³ (³ D°)4d	¹ D - ¹ P°	2-1	S21,S22
Na IV	144.979	10		2p ⁴ - 2p ³ (³ D°)4s	g ³ P - ³ D°	2-3	S21,S22
Na IV	145.846	10		2p ⁴ - 2p ³ (³ P°)4s	¹ D - ¹ F°	2-1	S21,S22
Na IV	146.060	300		2p ⁴ - 2p ³ (⁴ S°)4d	g ³ P - ³ D°	2-3	S21,S22
Na IV	146.298	100		2p ⁴ - 2p ³ (⁴ S°)4d	g ³ P - ³ D°	1-2	S21,S22
Na IV	146.398	10		2p ⁴ - 2p ³ (⁴ S°)4d	g ³ P - ³ D°	0-1	S21,S22
Na IV	150.297	400		2p ⁴ - 2p ³ (³ P°)3d	g ³ P - ³ D°	2-3	S22
Na IV	150.545	300		2p ⁴ - 2p ³ (³ P°)3d	g ³ P - ³ D°	1-2	S22
Na IV	150.647	200		2p ⁴ - 2p ³ (³ P°)3d	g ³ P - ³ D°	0-1	S22
Na IV	150.695	200		2p ⁴ - 2p ³ (³ P°)3d	g ³ P - ³ P°	2-2	S22
Na IV	150.968	200b		2p ⁴ - 2p ³ (³ P°)3d	g ³ P - ³ P°	1-2	S22
Na IV	151.048	10		2p ⁴ - 2p ³ (³ P°)3d	g ³ P - ³ P°	0-1	S22
Na IV	151.303	100b		2p ⁴ - 2p ³ (³ D°)4s	¹ D - ¹ D°	2-2	S22
Na IV	155.090	100		2p ⁴ - 2p ³ (⁴ S°)4s	g ³ P - ³ S°	2-1	S22
Na IV	155.248	200		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ S°	2-1	S22
Na IV	155.354	10		2p ⁴ - 2p ³ (⁴ S°)4s	g ³ P - ³ S°	1-1	S22
Na IV	155.445	300		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ P°	2-1	S22
Na IV	155.515	400		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ P°	2-2	S22
Na IV	155.622	10		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ S°	0-1	S22
Na IV	155.693	200d		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ P°	1-0	S22
Na IV	155.781	100		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ P°	1-2	S22
Na IV	155.832	10		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ P°	0-1	S22
Na IV	156.536	800		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ D°	2-3	S22
Na IV	156.780	500		2p ⁴ - 2p ³ (³ D°)3d	g ³ P - ³ D°	1-2	S22
Na IV	156.887	300		2p ⁴ - 2p ³ (³ P°)3d	g ³ P - ³ D°	0-1	S22
Na IV	157.090	400		2p ⁴ - 2p ³ (³ P°)3d	¹ D - ¹ F°	2-3	S22
Na IV	157.599	100		2p ⁴ - 2p ³ (³ P°)3d	¹ D - ¹ P°	2-1	S22
Na IV	157.782	300		2p ⁴ - 2p ³ (³ P°)3d	¹ D - ¹ D°	2-2	S22
Na IV	162.445	800		2p ⁴ - 2p ³ (³ D°)3d	¹ D - ¹ F°	2-3	S22
Na IV	163.187	600		2p ⁴ - 2p ³ (³ D°)3d	¹ D - ¹ D°	2-2	S22
Na IV	163.840	400		2p ⁴ - 2p ³ (³ D°)5d	¹ D - ¹ P°	2-1	S22
Na IV?	164.841	400					S22
Na IV	168.084	1000		2p ⁴ - 2p ³ (⁴ S°)3d	g ³ P - ³ D°	2-3	S22
Na IV	168.409	800		2p ⁴ - 2p ³ (⁴ S°)3d	g ³ P - ³ D°	1-2	S22
Na IV	168.544	500		2p ⁴ - 2p ³ (⁴ S°)3d	g ³ P - ³ D°	0-1	S22
Na IV	174.008	10		2p ⁴ - 2p ³ (³ D°)3d	¹ S - ¹ P°	0-1	S22
Na IV	181.758	800		2p ⁴ - 2p ³ (³ P°)3s	g ³ P - ³ P°	2-2	S22
Na IV	182.128	600		2p ⁴ - 2p ³ (³ P°)3s	g ³ P - ³ P°	1-2	S22
Na IV	182.282	400		2p ⁴ - 2p ³ (³ P°)3s	g ³ P - ³ P°	0-1	S22
Na IV	190.126	600		2p ⁴ - 2p ³ (³ P°)3s	¹ D - ¹ P°	2-1	S22
Na IV	190.440	1000		2p ⁴ - 2p ³ (³ D°)3s	g ³ P - ³ D°	2-3	S22
Na IV	190.835	800		2p ⁴ - 2p ³ (³ D°)3s	g ³ P - ³ D°	1-2	S22
Na IV	191.000	600		2p ⁴ - 2p ³ (³ D°)3s	g ³ P - ³ D°	0-1	S22
Na IV	199.769	600		2p ⁴ - 2p ³ (³ D°)3s	¹ D - ¹ D°	2-2	S22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na IV	203.959	200		$2p^4 - 2p^3(^3P^o)3s$	$^1S - ^1P^o$	0 - 1	S22
Na IV	205.487	600		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 1	S22
Na IV	205.956	400		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1 - 1	S22
Na IV	206.155	300		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	0 - 1	S22
Na IV	319.638	1000		$2s^22p^4 - 2s2p^5$	$^1D - ^1P^o$	2 - 1	E6, S22
Na IV	360.761	600		$2s^22p^4 - 2s2p^5$	$^1S - ^1P^o$	0 - 1	S22
Na IV	408.682	800		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 1	E6, S22
Na IV	409.615	800		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 0	E6, S22
Na IV	410.371	1000		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 2	E6, S22
Na IV	410.540	600		$2s^22p^4 - 2s2p^5$	$g^3P - ^3F^o$	1 - 1	E6, S22
Na IV	411.333	700		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	0 - 1	E6, S22
Na IV	412.240	800		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 2	E6, S22

SODIUM V (Na^{4+}), $Z = 11$
 Ground State $1s^22s^22p^3\ ^4S_{3/2}$ (7 electrons)
 Ionization Potential $1\ 116\ 200\ cm^{-1}$; $138.39\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na V	100.88	10		$2p^3 - 2p^2(^1D)5d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	100.945	10		$2p^3 - 2p^2(^1D)5d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	103.482	10		$2p^3 - 2p^2(^1D)5d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	106.278	100		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	106.302	100		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	106.399	100		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	S21
Na V	106.490	100		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	107.934	200b		$2p^3 - 2p^2(^1D)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	108.017	200		$2p^3 - 2p^2(^1D)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{1}{2}$	S21
Na V	110.817	200b		$2s^22p^3 - 2s2p^3(^3D^o)3p$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	110.878	200		$2s^22p^3 - 2s2p^3(^3D^o)3p$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	110.921	10		$2p^3 - 2p^2(^1D)4d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	111.512	100		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	111.552	10		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	111.879	10		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{1}{2}$	S21
Na V	112.009	300b		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	112.077	10		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	S21
Na V	112.186	10		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	S21
Na V	112.347	10		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	113.574	10		$2p^3 - 2p^2(^1D)4s$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	113.952	10		$2s^22p^3 - 2s2p^3(^3D^o)3p$	$^3P^o - ^3F$?	$\frac{3}{2} - \frac{3}{2}$ S21, K8
Na V	114.700	100d		$2p^3 - 2p^2(^3P)4d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	114.738	100		$2p^3 - 2p^2(^3P)4d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Na V	117.703	10		$2p^3 - 2p^2(^3P)4s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S22
Na V	117.876	10		$2p^3 - 2p^2(^3P)4s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	S22
Na V	117.990	400		$2s^22p^3 - 2s2p^3(^3S^o)3p$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	120.040	100		$2p^3 - 2p^2(^1D)3d$	$g^4S^o - ^3D$?	$\frac{3}{2} - \frac{3}{2}$ S21, K8
Na V	121.263	10		$2p^3 - 2p^2(^3P)4s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	125.178	400		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	S21
Na V	125.216	400		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	125.286	500		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	125.428	300		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	125.461	300		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	125.899	200		$2p^3 - 2p^23d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Na V	126.090	10		$2s2p^4 - 2s2p^3(^3D^o)3d$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	S21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
Na V	126.210	160		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	126.368	13		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	126.458	10		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	126.557	200		2p ² - 2p ² (¹ D) 3d	³ D° - ³ P	3/2 - 3/2	S21
Na V	126.608	100		2p ² - 2p ² (¹ D) 3d	³ D° - ³ P	3/2 - 3/2	S21
Na V	126.779	10b		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	⁴ P - ⁴ P°	3/2 - 3/2	S21
Na V	126.814	100b		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	⁴ P - ⁴ P°	3/2 - 3/2	S21
Na V	126.920	10		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	⁴ P - ⁴ P°	3/2 - 3/2	S21
Na V	126.985	10		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	⁴ P - ⁴ P°	3/2 - 3/2	S21
Na V	127.036	10		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	⁴ P - ⁴ P°	3/2 - 3/2	S21
Na V	127.444	400		2p ² - 2p ² (¹ D) 3d	³ D° - ³ D	3/2 - 3/2	S21
Na V	127.473	400		2p ² - 2p ² (¹ D) 3d	³ D° - ³ D	3/2 - 3/2	S21
Na V	128.025	400		2p ² - 2p ² (¹ D) 3d	³ D° - ³ F	3/2 - 3/2	S21
Na V	128.051	400		2p ² - 2p ² (¹ D) 3d	³ D° - ³ F	3/2 - 3/2	S21
Na V	129.942	100		2p ² - 2p ² (¹ D) 3d	³ P° - ³ S	3/2 - 3/2	S21
Na V	130.680	200		2p ² - 2p ² (¹ D) 3d	³ P° - ³ P	3/2 - 3/2	S21
Na V	130.723	100		2p ² - 2p ² (¹ D) 3d	³ P° - ³ P	3/2 - 3/2	S21
Na V	131.345	300		2p ² - 2p ² (³ P) 3d	³ D° - ³ D	3/2 - 3/2	S21
Na V	131.413	200		2p ² - 2p ² (³ P) 3d	³ D° - ³ D	3/2 - 3/2	S21
Na V	131.635	300d		2p ² - 2p ² (¹ D) 3d	³ P° - ³ D	3/2 - 3/2	S21
Na V	133.162	500		2p ² - 2p ² (³ P) 3d	³ D° - ³ F	3/2 - 3/2	S21
Na V	133.348	400		2p ² - 2p ² (³ P) 3d	³ D° - ³ F	3/2 - 3/2	S21
Na V	134.183	10		2p ² - 2p ² (³ P) 3d	³ D° - ³ P	3/2 - 3/2	S21
Na V	134.272	200		2p ² - 2p ² (³ P) 3d	³ D° - ³ P	3/2 - 3/2	S21
Na V	135.791	300		2p ² - 2p ² (³ P) 3d	³ P° - ³ D	3/2 - 3/2	S21
Na V	135.854	300		2p ² - 2p ² (³ P) 3d	³ P° - ³ D	3/2 - 3/2	S21
Na V	138.812	200		2p ² - 2p ² (³ P) 3d	³ P° - ³ P	3/2 - 3/2	S21
Na V	138.917	300		2p ² - 2p ² (³ P) 3d	³ P° - ³ P	3/2 - 3/2	S21
Na V	140.171	10		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	³ D - ³ F°	3/2 - 3/2	S21
Na V	140.258	10		2s 2p ⁴ - 2s 2p ³ (³ D°) 3d	³ D - ³ F°	3/2 - 3/2	S21
Na V	142.232	200b		2s 2p ⁴ - 2s 2p ³ (³ P°) 3s	⁴ P - ⁴ P°	3/2 - 3/2	S21
Na V	142.415	10		2s 2p ⁴ - 2s 2p ³ (³ P°) 3s	⁴ P - ⁴ P°	3/2 - 3/2	S21
Na V	144.330	200		2s 2p ⁴ - 2s 2p ³ (³ S°) 3d	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	144.546	200		2s 2p ⁴ - 2s 2p ³ (³ S°) 3d	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	144.661	100		2s 2p ⁴ - 2s 2p ³ (³ S°) 3d	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	147.897	200		2p ² - 2p ² 3s	³ P° - ³ S	3/2 - 3/2	S21
Na V	148.642	400		2p ² - 2p ² (³ P) 3s	g ⁴ S° - ⁴ P	3/2 - 3/2	S21
Na V	148.856	300		2p ² - 2p ² (³ P) 3s	g ⁴ S° - ⁴ P	3/2 - 3/2	S21
Na V	149.301	200		2p ² - 2p ² (³ P) 3s	g ⁴ S° - ⁴ P	3/2 - 3/2	S21
Na V	150.968	200b		2s 2p ⁴ - 2s 2p ³ (³ D°) 3s	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	151.127	400		2p ² - 2p ² (¹ D) 3s	³ D° - ³ D	3/2 - 3/2	S21
Na V	151.188	100		2s 2p ⁴ - 2s 2p ³ (³ D°) 3s	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	151.303	100b		2s 2p ⁴ - 2s 2p ³ (³ D°) 3s	⁴ P - ⁴ D°	3/2 - 3/2	S21
Na V	157.036	200		2p ² - 2p ² (¹ D) 3s	³ P° - ³ D	3/2 - 3/2	S21
Na V	157.209	300		2p ² - 2p ² (³ P) 3s	³ D° - ³ P	3/2 - 3/2	S21
Na V	157.511	200		2p ² - 2p ² (³ P) 3s	³ D° - ³ P	3/2 - 3/2	S21
Na V	163.616	300		2p ² - 2p ² (³ P) 3s	³ P° - ³ P	3/2 - 3/2	S21
Na V	163.930	200		2p ² - 2p ² (³ P) 3s	³ P° - ³ P	3/2 - 3/2	S21
Na V	167.510	100		2s 2p ⁴ - 2s 2p ³ (³ D°) 3s	³ D - ³ D°	3/2 - 3/2	S21
Na V	170.631	100		2s 2p ⁴ - 2s 2p ³ (³ S°) 3s	⁴ P - ⁴ S°	3/2 - 3/2	S21
Na V	170.923	100		2s 2p ⁴ - 2s 2p ³ (³ S°) 3s	⁴ P - ⁴ S°	3/2 - 3/2	S21
Na V	171.076	100d		2s 2p ⁴ - 2s 2p ³ (³ S°) 3s	⁴ P - ⁴ S°	3/2 - 3/2	S21
Na V	307.152	800		2s ² 2p ² - 2s 2p ⁴	³ D° - ³ P	3/2 - 3/2	E6, S21
Na V	308.264	1000		2s ² 2p ² - 2s 2p ⁴	³ D° - ³ P	3/2 - 3/2	E6, S21
Na V	330.718	10		2s ² 2p ² - 2s 2p ⁴	³ D° - ³ S	3/2 - 3/2	S21
Na V	332.550	800		2s ² 2p ² - 2s 2p ⁴	³ P° - ³ P	3/2 - 3/2	S21
Na V	333.910	900		2s ² 2p ² - 2s 2p ⁴	³ P° - ³ P	3/2 - 3/2	S21
Na V	360.319	800		2s ² 2p ² - 2s 2p ⁴	³ P° - ³ S	3/2 - 3/2	S21
Na V	360.367	800		2s ² 2p ² - 2s 2p ⁴	³ P° - ³ S	3/2 - 3/2	S21
Na V	367.557	200		2s 2p ⁴ - 2p ⁵	³ D - ³ P°	3/2 - 3/2	S21
Na V	369.743	300		2s 2p ⁴ - 2p ⁵	³ D - ³ P°	3/2 - 3/2	S21
Na V	400.722	1000		2s ² 2p ² - 2s 2p ⁴	³ D° - ³ D	3/2 - 3/2	E6, S21
Na V	436.946	10		2p ² - 2s ² 2p ² (³ P) 3d	³ P° - ⁴ P	3/2 - 3/2	S22, K8
Na V	445.046	500		2s ² 2p ² - 2s 2p ⁴	³ P° - ³ D	3/2 - 3/2	S21
Na V	445.190	600		2s ² 2p ² - 2s 2p ⁴	³ P° - ³ D	3/2 - 3/2	S21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na v	459.897	600		$2s^2 2p^3 - 2s 2p^4$	$g^4 S^{\circ} - ^4 P$	$\frac{3}{2} - \frac{1}{2}$	E6, S21
Na v	461.051	850		$2s^2 2p^3 - 2s 2p^4$	$g^4 S^{\circ} - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	E6, S21
Na v	463.263	1000		$2s^2 2p^3 - 2s 2p^4$	$g^4 S^{\circ} - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	E6, S21
Na v	510.102	10		$2s 2p^4 - 2p^5$	$^3 P - ^3 P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S21
Na v	511.193	100		$2s 2p^4 - 2p^5$	$^3 P - ^3 P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S21
Na v	514.350	10		$2s 2p^4 - 2p^5$	$^3 P - ^3 P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S21

SODIUM VI (Na^{5+}), $Z = 11$ Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)Ionization Potential $1\ 388\ 500\ cm^{-1}$; $172.15\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VI	80.345	10		$2p^2 - 2p 6d$	$^1 D - ^1 F^{\circ}$	2 - 3	S21
Na VI	80.645	10d		$2s 2p^3 - 2s 2p^3(^4P) 5d$	$^3 S^{\circ} - ^3 P$	2 - 3	S21
Na VI	81.498	200b		$2p^2 - 2p 5d$	$g^3 P - ^3 P^{\circ}$	2 - 2	S21
Na VI	81.543	100d		$2p^2 - 2p 5d$	$g^3 P - ^3 D^{\circ}$	2 - 3	S21
Na VI	81.584	100d - A		$2s 2p^3 - 2s 2p^3(^3D) 5d$	$^3 D^{\circ} - ^3 F$	3 - 4	S21
Na VI	83.639	100		$2p^2 - 2p 5d$	$^1 D - ^1 F^{\circ}$	2 - 3	S21
Na VI	87.141	100b		$2s 2p^3 - 2s 2p^3(^4P) 4d$	$^3 S^{\circ} - ^3 P$	2 - 2	S21
Na VI	87.211	700b		$2s 2p^3 - 2s 2p^3(^4P) 4d$	$^3 S^{\circ} - ^3 P$	2 - 3	S21
Na VI	88.038	100		$2p^2 - 2p 4d$	$g^3 P - ^3 P^{\circ}$	1 - 2	S21
Na VI	88.143	200d		$2p^2 - 2p 4d$	$g^3 P - ^3 P^{\circ}$	2 - 2	S21
Na VI	88.223	100		$2p^2 - 2p 4d$	$g^3 P - ^3 D^{\circ}$	0 - 1	S21
Na VI	88.246	200		$2p^2 - 2p 4d$	$g^3 P - ^3 D^{\circ}$	1 - 2	S21
Na VI	88.270	300d		$2p^2 - 2p 4d$	$g^3 P - ^3 D^{\circ}$	2 - 3	S21
Na VI	88.340	100d		$2p^2 - 2p 4d$	$g^3 P - ^3 D^{\circ}$	2 - 2	S21
Na VI	88.387	10		$2s 2p^3 - 2s 2p^3(^3D) 4d$	$^3 D^{\circ} - ^3 P$	3 - 2	S21
Na VI	88.460	100		$2s 2p^3 - 2s 2p^3(^3D) 4d$	$^3 D^{\circ} - ^3 F$	3 - 4	S21
Na VI	88.583	100		$2p^2 - 2p 4d$	$g^3 P - ^1 D^{\circ}$?	S21, K8
Na VI	90.468	300		$2p^2 - 2p 4d$	$^1 D - ^1 F^{\circ}$	2 - 3	S21
Na VI	90.746	10		$2s 2p^3 - 2s 2p^3(^4P) 4s$	$^3 S^{\circ} - ^3 P$	2 - 3	S21
Na VI	91.268	100		$2p^2 - 2p 4d$	$^1 D - ^1 D^{\circ}$	2 - 2	S21
Na VI	91.414	10d		$2s 2p^3 - 2s 2p^3(^3D) 4d$	$^3 P^{\circ} - ^3 F$	2 - 2	S21
Na VI	91.475	10		$2p^2 - 2p 4d$	$^1 D - ^3 F^{\circ}$	2 - 2	S21
Na VI	91.737	10		$2p^2 - 2p 4s$	$g^3 P - ^3 P^{\circ}$	1 - 2	S21
Na VI	91.836	10		$2p^2 - 2p 4s$	$g^3 P - ^3 P^{\circ}$	2 - 2	S21
Na VI	92.608	10d		$2s 2p^3 - 2s 2p^3(^3D) 5d$	$^1 P^{\circ} - ^3 F$?	S21, K8
Na VI	94.208	100		$2s 2p^3 - 2p^3(^4S^{\circ}) 3p$	$^3 D^{\circ} - ^3 P$	3 - 2	S21
Na VI	94.827	10d		$2s 2p^3 - 2s 2p^3(^4P) 4d$	$^3 D^{\circ} - ^3 D$	3 - 3	S21
Na VI	95.182	100		$2s 2p^3 - 2s 2p^3(^4P) 4d$	$^3 D^{\circ} - ^3 F$	3 - 4	S21
Na VI	95.263	100		$2s 2p^3 - 2s 2p^3(^4P) 4d$	$^3 D^{\circ} - ^3 F$	2 - 3	S21
Na VI	95.319	10		$2s 2p^3 - 2s 2p^3(^4P) 4d$	$^3 D^{\circ} - ^3 F$	1 - 2	S21
Na VI	95.933	300		$2s^2 2p^3 - 2s 2p^3(^3D) 3p$	$^1 D - ^1 D^{\circ}$	2 - 2	S21
Na VI	96.124	10		$2s^2 2p^3 - 2s 2p^3(^3D) 3p$	$g^3 P - ^3 D^{\circ}$	0 - 1	S21
Na VI	96.196	100		$2s^2 2p^3 - 2s 2p^3(^3D) 3p$	$g^3 P - ^3 D^{\circ}$	1 - 2	S21
Na VI	96.307	100		$2s^2 2p^3 - 2s 2p^3(^3D) 3p$	$g^3 P - ^3 D^{\circ}$	2 - 3	S21
Na VI	96.475	300		$2s^2 2p^3 - 2s 2p^3(^3D) 3p$	$^1 D - ^1 F^{\circ}$	2 - 3	S21
Na VI	97.636	10		$2s 2p^3 - 2p^3(^4S^{\circ}) 3p$	$^3 P^{\circ} - ^3 P$	2 - 2	S21
Na VI	98.3	20		$2s 2p^3 - 2s 2p^3(^4P) 4d$	$^3 P^{\circ} - ^3 D$	2 - 3	S21
Na VI	99.004	10		$2s 2p^3 - 2s 2p^3(^4P) 4s$	$^3 D^{\circ} - ^3 P$	3 - 2	S21
Na VI	99.500	10		$2s^2 2p^3 - 2s 2p^3(^4P) 3p$	$g^3 P - ^3 P^{\circ}$	1 - 2	S21
Na VI	99.617	100		$2s^2 2p^3 - 2s 2p^3(^4P) 3p$	$g^3 P - ^3 P$	2 - 2	S21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VI	99.680	100b		$2s^2 2p^2 - 2s 2p^3(^4P) 3p$	$g^3P - ^3P'$	2-1	S21
Na VI	100.469	200		$2s^2 2p^2 - 2s 2p^3(^4P) 3p$	$g^3P - ^3D'$	1-2	S21
Na VI	100.519	300		$2s^2 2p^2 - 2s 2p^3(^4P) 3p$	$g^3P - ^3D'$	2-3	S21
Na VI	100.590	100		$2s^2 2p^2 - 2s 2p^3(^4P) 3p$	$g^3P - ^3D'$	2-2	S21
Na VI	101.348	10		$2s 2p^3 - 2s 2p^3(^3D) 4d$	$^1P' - ^3D'$? 1-2	S21, K8
Na VI	103.002	10		$2s^2 2p^2 - 2s 2p^3(^4P) 3p$	$g^3P - ^3S'$	0-1	S21
Na VI	103.078	100		$2s^2 2p^2 - 2s 2p^3(^4P) 3p$	$g^3P - ^3S'$	1-1	S21
Na VI	103.210	200		$2s^2 2p^2 - 2s 2p^3(^4P) 3p$	$g^3P - ^3S'$	2-1	S21
Na VI	105.040	300		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3S' - ^3P$	2-1	S21
Na VI	106.077	300		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3S' - ^3P$	2-2	S21
Na VI	106.125	400		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3S' - ^3P$	2-3	S21
Na VI	106.580	10		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3S' - ^3D'$	2-3	S21
Na VI	107.014	200		$2p^3 - 2p 3d$	$g^3P - ^3P'$	0-1	S21
Na VI	107.061	300b		$2p^3 - 2p 3d$	$g^3P - ^3P'$	1-0	S21
Na VI	107.093	300b		$2p^3 - 2p 3d$	$g^3P - ^3P'$	1-1	S21
Na VI	107.158	100b		$2p^3 - 2p 3d$	$g^3P - ^3P'$	1-2	S21
Na VI	107.227	300		$2p^3 - 2p 3d$	$g^3P - ^3P'$	2-1	S21
Na VI	107.288	400		$2p^3 - 2p 3d$	$g^3P - ^3P'$	2-2	S21
Na VI	107.535	300		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3D' - ^3D'$	3-3	S21
Na VI	107.553	300		$2p^3 - 2p 3d$	$g^3P - ^3D'$	0-1	S21
Na VI	107.608	400		$2p^3 - 2p 3d$	$g^3P - ^3D'$	1-2	S21
Na VI	107.683	500		$2p^3 - 2p 3d$	$g^3P - ^3D'$	2-3	S21
Na VI	107.742	200		$2p^3 - 2p 3d$	$g^3P - ^3D'$	2-2	S21
Na VI	107.734	200b		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3D' - ^3P$	3-2	S21
Na VI	108.555	400		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3D' - ^3F$	3-4	S21
Na VI	108.678	10		$2p^3 - 2p 3d$	$g^3P - ^3D'$	1-2	S21
Na VI	109.763	10		$2p^3 - 2p 3d$	$^3D - ^3P'$	2-1	S21
Na VI	109.896	500		$2p^3 - 2p 3d$	$^3D - ^3F'$	2-3	S21
Na VI	110.085	200		$2s 2p^3 - 2s 2p^3(^4P) 4d$	$^1P' - ^3D'$? 1-2	S21, K8
Na VI	110.750	200		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3P' - ^3S$	2-1	S21
Na VI	111.725	100		$2p^3 - 2p 3d$	$^3D - ^3D'$	2-3	S21
Na VI	111.793	100		$2p^3 - 2p 3d$	$^3D - ^3D'$	2-2	S21
Na VI	112.009	300b		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3P' - ^3D'$	2-3	S21
Na VI	112.448	300b		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3P' - ^3P$	2-2	S21
Na VI	112.950	400		$2p^3 - 2p 3d$	$^3D - ^3D'$	2-2	S21
Na VI	113.125	400		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3P' - ^3F$	2-3	S21
Na VI	114.666	400		$2p^3 - 2p 3d$	$^3S - ^3P'$	0-1	S21
Na VI	115.729	200		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3D' - ^3D'$	3-3	S21
Na VI	115.780	10d		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3D' - ^3D'$	2-2	S21
Na VI	117.491	400		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3D' - ^3F$	3-4	S21
Na VI	117.609	300		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3D' - ^3F$	2-3	S21
Na VI	117.699	300		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3D' - ^3F$	1-2	S21
Na VI	118.500	10		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3D' - ^3P$	2-1	S21
Na VI	118.585	10		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3D' - ^3P$	3-2	S21
Na VI	119.204	10b		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3D' - ^3P$	2-1	S21
Na VI	119.684	300		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3D' - ^3F$	2-3	S21
Na VI	120.355	10		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3S' - ^3P$? 1-1	S21, K8
Na VI	120.931	300		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3P' - ^3D'$	2-3	S21
Na VI	120.973	200		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3P' - ^3D'$	1-2	S21
Na VI	121.004	100		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3P' - ^3D'$	1-2	S21
Na VI	121.004	10d		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3P' - ^3D'$	0-1	S21
Na VI	121.773	400		$2s 2p^3 - 2s 2p^3(^4P) 3s$	$^3S' - ^3P$	2-3	S21
Na VI	121.913	320		$2s 2p^3 - 2s 2p^3(^4P) 3s$	$^3S' - ^3P$	2-2	S21
Na VI	122.018	300b		$2s 2p^3 - 2s 2p^3(^4P) 3s$	$^3S' - ^3P$	2-1	S21
Na VI	123.134	400		$2s 2p^3 - 2s 2p^3(^3D) 3s$	$^3D' - ^3D'$	3-3	S21
Na VI	123.744	400		$2F^3 - 2p 3s$	$g^3P - ^3P'$	1-2	S21
Na VI	123.868	300		$2p^3 - 2p 3s$	$g^3P - ^3P'$	0-1	S21
Na VI	123.929	500		$2p^3 - 2p 3s$	$g^3P - ^3P'$	2-2	S21
Na VI	123.970	200		$2p^3 - 2p 3s$	$g^3P - ^3P'$	1-1	S21
Na VI	124.059	400		$2s 2p^3 - 2s 2p^3(^4P) 3d$	$^3P' - ^3P$	2-2	S21
Na VI	124.153	400		$2p^3 - 2p 3s$	$g^3P - ^3P'$	2-1	S21
Na VI	124.850	10		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3P' - ^3P$	1-1	S21
Na VI	125.383	10		$2s 2p^3 - 2s 2p^3(^3D) 3d$	$^3P' - ^3D'$	1-2	S21
Na VI	127.837	400		$2p^3 - 2p 3s$	$^3D - ^3P'$	2-1	S21
Na VI	129.040	200		$2s 2p^3 - 2s 2p^3(^3D) 3s$	$^3P' - ^3D'$	2-3	S21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VI	133.825	200		$2s 2p^2 - 2s 2p^2 (^4P) 3s$	$^3D^o - ^3P$	3-2	S21
Na VI	134.021	100d		$2s 2p^2 - 2s 2p^2 (^4P) 3s$	$^3D^o - ^3P$	2-1	S21
Na VI	134.135	10		$2s 2p^2 - 2s 2p^2 (^4P) 3s$	$^3D^o - ^3P$	1-0	S21
Na VI	134.532	300		$2p^2 - 2p 3s$	$^1S - ^1P^o$	0-1	S21
Na VI	137.589	10		$2s 2p^2 - 2s 2p^2 (^4P) 3d$	$^3S^o - ^3P$	1-2	S21
Na VI	138.693	200		$2s 2p^2 - 2s 2p^2 (^3D) 3s$	$^1D^o - ^1D$	2-2	S21
Na VI	140.833	200		$2s 2p^2 - 2s 2p^2 (^4P) 3s$	$^3P^o - ^3P$	2-2	S21
Na VI	141.040	10		$2s 2p^2 - 2s 2p^2 (^4P) 3s$	$^3P^o - ^3P$	2-1	S21
Na VI	146.398	10		$2s 2p^2 - 2s 2p^2 (^3D) 3s$	$^1P^o - ^1D$	1-2	S21
Na VI	149.442	10		$2s 2p^2 - 2s^2 2p (^3P^o) 3p$	$^3D^o - ^3P$	3-2	S21
Na VI	149.621	10		$2s 2p^2 - 2s^2 2p (^3P^o) 3p$	$^3D^o - ^3P$	2-1	S21
Na VI	191.205	10		$2s 2p^2 - 2s^2 2p 3p$	$^1P^o - ^3P$	1-2	S22, K8
Na VI	311.921	400		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3S^o$	0-1	S21
Na VI	312.608	300		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3S^o$	1-1	S21
Na VI	313.748	500		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3S^o$	2-1	S21
Na VI	317.641	600		$2s^2 2p^2 - 2s 2p^2$	$^1D - ^1P^o$	2-1	E6, S21
Na VI	361.250	800d		$2s^2 2p^2 - 2s 2p^2$	$^1D - ^1D^o$	2-2	E6, S21
Na VI	362.444	400		$2s^2 2p^2 - 2s 2p^2$	$^1S - ^1P^o$	0-1	S21
Na VI	363.774	200		$2s 2p^2 - 2p^4$	$^3D^o - ^3P$	1-0	S21
Na VI	364.477	300		$2s 2p^2 - 2p^4$	$^3D^o - ^3P$	2-1	S21
Na VI	366.110	400		$2s 2p^2 - 2p^4$	$^3D^o - ^3P$	3-2	S21
Na VI	366.240	10		$2s 2p^2 - 2p^4$	$^3D^o - ^3P$	2-2	S21
Na VI	414.370	200		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3P^o$	0-1	S21
Na VI	415.505	400		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3P^o$	1-2	S21
Na VI	417.535	600		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3P^o$	2-2	S21
Na VI	421.465	100		$2s 2p^2 - 2p^4$	$^3P^o - ^3P$	2-1	S21
Na VI	423.821	200		$2s 2p^2 - 2p^4$	$^3P^o - ^3P$	2-2	S21
Na VI	436.96			$2s 2p^2 - 2p^4$	$^1P^o - ^1S$	1-0	F6
Na VI?	440.266	300					S21
Na VI	489.580	500		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3D^o$	0-1	E6, S21
Na VI	491.240	300		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3D^o$	1-1	E6, S21
Na VI	491.340	600		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3D^o$	1-2	E6, S21
Na VI	494.160	300		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3D^o$	2-2	E6, S21
Na VI	494.382	700		$2s^2 2p^2 - 2s 2p^2$	$^3P^o - ^3D^o$	2-3	E7, S21
Na VI	516.00			$2s 2p^2 - 2p^4$	$^1D^o - ^1D$	2-2	F7
Na VI?	528.730	10					S21
Na VI	632.90	10		$2s 2p^2 - 2p^4$	$^3S^o - ^3P$	1-1	S21
Na VI	638.21	10		$2s 2p^2 - 2p^4$	$^3S^o - ^3P$	1-2	S21
Na VI	641.87	10		$2s 2p^2 - 2p^4$	$^1P^o - ^1D$	1-2	F6

SODIUM VII (Na^{6+}), $Z = 11$ Ground State $1s^2 2s^2 2p^2 \ ^3P_{1/2}^o$ (5 electrons)Ionization Potential 1 681 500 cm^{-1} ; 208.47 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VII	62.725	10d		$2p - 6d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	63.185	10		$2s^2 2p - 2s 2p (^3P^o) 5p$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21, S20
Na VII	63.227	10		$2s^2 2p - 2s 2p (^3P^o) 5p$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	63.361	10		$2s^2 2p - 2s 2p (^3P^o) 5p$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	63.442	10		$2s^2 2p - 2s 2p (^3P^o) 5p$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	63.778	10		$2p - 7d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	64.113	10		$2s^2 2p - 2s 2p (^1P^o) 4p$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	64.904	10		$2s 2p^2 - 2s 2p (^3P^o) 6d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	65.388	100		$2p - 6d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	65.474	100		$2p - 6d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VII	67.826	100d		$2s^2 2p^2 - 2s 2p(^2P^o) 5d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	67.877	100d		$2s^2 2p^2 - 2s 2p(^2P^o) 5d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	67.912	2G0d		$2s^2 2p^2 - 2s 2p(^2P^o) 5d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	68.422	10d		$2p - 5d$	$g^2P^o - ^2I$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	68.519	100d		$2p - 5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	68.866	10		$2s^2 2p - 2s 2p(^2P^o) 4p$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	68.908	100		$2s^2 2p - 2s 2p(^2P^o) 4p$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	69.314	10		$2s^2 2p - 2s 2p(^2P^o) 4p$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	69.395	10d		$2s^2 2p - 2s 2p(^2P^o) 4p$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	72.020	100		$2s^2 2p^2 - 2s 2p(^2P^o) 5d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	72.079	100		$2s^2 2p^2 - 2s 2p(^2P^o) 5d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	72.865	200		$2s^2 2p^2 - 2s 2p(^1P^o) 4d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	74.097	100		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	74.180	200		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	74.217	200		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	74.255	300		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	74.268	300		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^4P - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	74.861	300		$2p - 4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	74.980	300b		$2p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	76.501	10		$2s^2 2p^2 - 2s 2p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	76.565	10		$2s^2 2p^2 - 2s 2p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	76.626	10d		$2s^2 2p^2 - 2s 2p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	76.827	10		$2p^2 - 2p^2(^2P) 4d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	76.862	10		$2p^2 - 2p^2(^2P) 4d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	77.353	100		$2p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	77.558	10		$2s^2 2p - 2p^2(^2P) 3s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S21, K8
Na VII	78.459	10		$2s^2 2p^2 - 2s 2p(^1P^o) 4s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	78.771	10		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	78.907	300		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	78.982	200		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	79.477	200		$2s^2 2p - 2s 2p(^1P^o) 3p$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	79.571	100		$2s^2 2p - 2s 2p(^1P^o) 3p$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	79.620	100		$2s^2 2p - 2s 2p(^2P^o) 4d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S21, K8
Na VII	79.761	10		$2s^2 2p - 2s 2p(^1P^o) 3p$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	79.786	10		$2s^2 2p - 2s 2p(^1P^o) 3p$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	79.893	300d		$2s^2 2p - 2s 2p(^1P^o) 3p$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	80.008	300		$2s^2 2p - 2s 2p(^1P^o) 3p$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	80.133	10		$2s^2 2p^2 - 2p^2(^2P) 3p$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	80.174	10		$2s^2 2p^2 - 2p^2(^2P) 3p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	80.245	100		$2s^2 2p^2 - 2p^2(^2P) 3p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	81.430	100		$2s^2 2p^2 - 2p^2(^2P) 3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	81.498	200b		$2s^2 2p^2 - 2s 2p(^2P^o) 4s$	$^2D - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	81.855	400		$2s^2 2p^2 - 2p^2(^2P) 3p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	82.516	10		$2p^2 - 2s 2p(^2P^o) 5p$	$^4S^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S21, K8
Na VII	82.636	10		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	82.685	10		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	83.180	100		$2p^2 - 2p^2(^2P) 4d$	$^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21, K8
Na VII	84.221	400		$2s^2 2p^2 - 2p^2(^1D) 3p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	84.832	10		$2s^2 2p^2 - 2s 2p(^2P^o) 4d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	85.260	300		$2s^2 2p^2 - 2p^2(^1D) 3p$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	85.297	300		$2s^2 2p^2 - 2p^2(^1D) 3p$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	85.458	400		$2s^2 2p - 2s 2p(^2P^o) 3p$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	86.596	400		$2s^2 2p - 2s 2p(^2P^o) 3p$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	86.652	500		$2s^2 2p - 2s 2p(^2P^o) 3p$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	86.758	300b		$2s^2 2p - 2s 2p(^2P^o) 3p$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	87.141	100b		$2s^2 2p^2 - 2s 2p(^2P^o) 4s$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	87.471	10		$2s^2 2p^2 - 2p^2(^2P) 3p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	88.698	200		$2s^2 2p - 2s 2p(^2P^o) 3p$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	88.747	300		$2s^2 2p - 2s 2p(^2P^o) 3p$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	88.865	400		$2s^2 2p - 2s 2p(^2P^o) 3p$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	88.914	200		$2s^2 2p - 2s 2p(^2P^o) 3p$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S20
Na VII	90.173	100		$2s^2 2p^2 - 2p^2(^1D) 3p$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	90.252	400b		$2s^2 2p^2 - 2p^2(^1D) 3p$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	90.830	10		$2s^2 2p^2 - 2s 2p(^1P^o) 3d$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	S20
Na VII	91.064	200		$2s^2 2p^2 - 2s 2p(^1P^o) 3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VII	92.003	500		2s 2p ² - 2s 2p(1P°) 3d	2D° - 2F°	3/2 - 5/2	S20
Na VII	92.774	200		2s 2p ² - 2s 2p(3P°) 3d	4P° - 4P°	1/2 - 3/2	S20
Na VII	92.809	100		2s 2p ² - 2s 2p(3P°) 3d	4P° - 4P°	3/2 - 5/2	S20
Na VII	92.843	100		2s 2p ² - 2s 2p(3P°) 3d	4P° - 4P°	5/2 - 7/2	S20
Na VII	92.883	100		2s 2p ² - 2s 2p(3P°) 3d	4P° - 4P°	7/2 - 9/2	S20
Na VII	92.930	200		2s 2p ² - 2s 2p(3F°) 3d	4P° - 4P°	1/2 - 3/2	S20
Na VII	92.976	400		2s 2p ² - 2s 2p(3F°) 3d	4P° - 4P°	3/2 - 5/2	S20
Na VII	93.393	400		2s 2p ² - 2s 2p(3F°) 3d	4P° - 4D°	1/2 - 3/2	S20
Na VII	93.434	400		2s 2p ² - 2s 2p(3F°) 3d	4P° - 4D°	3/2 - 5/2	S20
Na VII	93.486	500		2s 2p ² - 2s 2p(3F°) 3d	4P° - 4D°	5/2 - 7/2	S20
Na VII	93.528	100		2s 2p ² - 2s 2p(3P°) 3d	4P° - 4D°	1/2 - 3/2	S20
Na VII	94.020	10		2s 2p ² - 2s 2p(3P°) 3p	2P° - 2D°	3/2 - 5/2	S20
Na VII	94.288	600		2p - 3d	g ² P° - 2D	1/2 - 3/2	S20
Na VII	94.468	700		2p - 3d	g ² P° - 2D	3/2 - 5/2	S20
Na VII	96.845	100		2p ² - 2p ² (3P) 3d	4S° - 4P	3/2 - 5/2	S20
Na VII	96.872	200		2p ² - 2p ² (3P) 3d	4S° - 4P	5/2 - 7/2	S20
Na VII	96.922	500		2p ² - 2p ² (3P) 3d	4S° - 4P	7/2 - 9/2	S20
Na VII	97.790	100		2s 2p ² - 2s 2p(1P°) 3d	2P° - 2P°	1/2 - 1/2	S20
Na VII	97.907	200		2s 2p ² - 2s 2p(1P°) 3d	2P° - 2P°	3/2 - 3/2	S20
Na VII	98.016	100		2p ² - 2p ² (1D) 3d	2D° - 2P	3/2 - 3/2	S20
Na VII	98.080	300b		2s 2p ² - 2s 2p(1P°) 3d	2P° - 2D°	1/2 - 3/2	S20
Na VII	98.188	300		2s 2p ² - 2s 2p(1P°) 3d	2P° - 2D°	3/2 - 5/2	S20
Na VII	98.378	500		2p ² - 2p ² (1D) 3d	2D° - 2F	3/2 - 5/2	S20
Na VII	98.394	300		2p ² - 2p ² (1D) 3d	2D° - 2F	5/2 - 7/2	S20
Na VII	99.421	400		2s 2p ² - 2s 2p(3P°) 3d	2D° - 2F°	3/2 - 5/2	S20
Na VII	99.556	400		2s 2p ² - 2s 2p(3F°) 3d	2D° - 2F°	5/2 - 7/2	S20
Na VII	99.680	100b		2p ² - 2p ² (1D) 3d	2D° - 2D	3/2 - 3/2	S20
Na VII	100.337	100		2p ² - 2s ² 3d	2P° - 2D	3/2 - 3/2	S21, K8
Na VII	100.718	200		2s 2p ² - 2s 2p(1P°) 3s	2D° - 2P°	3/2 - 3/2	S20
Na VII	101.201	10		2p ² - 2s 2p(3P°) 4p	2P° - 2D	3/2 - 5/2	S21, K8
Na VII	101.785	300		2s 2p ² - 2s 2p(3P°) 3d	2D° - 2D°	3/2 - 3/2	S20
Na VII	101.816	300		2s 2p ² - 2s 2p(3P°) 3d	2D° - 2D°	5/2 - 5/2	S20
Na VII	102.226	100		2p ² - 2p ² (3P) 3d	2D° - 2D	3/2 - 3/2	S20
Na VII	102.390	100		2p ² - 2p ² (3P) 3d	2D° - 2F	3/2 - 5/2	S20
Na VII	102.448	10		2p ² - 2p ² (3P) 3d	2D° - 2F	5/2 - 7/2	S20
Na VII	103.354	100		2p ² - 2p ² (1D) 3d	2P° - 2P	3/2 - 3/2	S20
Na VII	103.400	10		2p ² - 2p ² (1D) 3d	2P° - 2P	1/2 - 1/2	S20
Na VII	103.779	300		2s 2p ² - 2s 2p(3F°) 3s	4P° - 4P°	3/2 - 5/2	S20
Na VII	103.842	200		2s 2p ² - 2s 2p(3P°) 3s	4P° - 4P°	5/2 - 7/2	S20
Na VII	103.891	400d		2s 2p ² - 2s 2p(3P°) 3s	4P° - 4P°	7/2 - 9/2	S20
Na VII	104.000	200		2s 2p ² - 2s 2p(3P°) 3s	4P° - 4P°	3/2 - 5/2	S20
Na VII	104.036	220		2s 2p ² - 2s 2p(3P°) 3s	4P° - 4P°	5/2 - 7/2	S20
Na VII	104.871	200		2s 2p ² - 2s 2p(3P°) 3d	2S° - 2P°	1/2 - 1/2	S20
Na VII	104.955	300		2s 2p ² - 2s 2p(3P°) 3d	2S° - 2P°	3/2 - 3/2	S20
Na VII	105.111	300		2p - 3s	g ² P° - 2S	1/2 - 1/2	S20
Na VII	105.205	200		2p ² - 2p ² (1D) 3d	2P° - 2D	3/2 - 3/2	S20
Na VII	105.354	400		2p - 3s	g ² P° - 2S	3/2 - 5/2	S20
Na VII	107.061	300b		2s 2p ² - 2s 2p(3P°) 3d	2P° - 2P°	1/2 - 1/2	S20
Na VII	107.093	300b		2p ² - 2p ² (3P) 3d	2P° - 2P	1/2 - 1/2	S20
Na VII	108.079	10		2p ² - 2p ² (3P) 3d	2P° - 2D	3/2 - 3/2	S20
Na VII	108.159	10		2s 2p ² - 2s 2p(3P°) 3d	2P° - 2F°	3/2 - 5/2	S21, K8
Na VII	108.193	200		2p ² - 2p ² (3P) 3s	4S° - 4P	3/2 - 3/2	S20
Na VII	108.377	100		2p ² - 2p ² (3P) 3s	4S° - 4P	5/2 - 5/2	S20
Na VII	108.733	200		2p ² - 2p ² (1D) 3s	2D° - 2D	3/2 - 3/2	S20
Na VII	108.829	100		2p ² - 2p ² (1D) 3s	2D° - 2D	5/2 - 5/2	S20
Na VII	109.362	100		2s 2p ² - 2s 2p(1P°) 3s	2P° - 2P°	1/2 - 1/2	S20
Na VII	109.519	200		2s 2p ² - 2s 2p(1P°) 3s	2P° - 2F°	3/2 - 3/2	S20
Na VII	110.647	200		2s 2p ² - 2s 2p(3P°) 3d	2P° - 2D°	1/2 - 1/2	S20
Na VII	110.778	300		2s 2p ² - 2s 2p(3P°) 3d	2P° - 2D°	3/2 - 3/2	S20
Na VII	110.817	200		2s 2p ² - 2s 2p(3P°) 3d	2P° - 2F°	3/2 - 5/2	S20
Na VII	111.211	300		2s 2p ² - 2s 2p(3P°) 3s	2D° - 2P°	3/2 - 3/2	S20
Na VII	111.390	200		2s 2p ² - 2s 2p(3P°) 3s	2D° - 2P°	5/2 - 5/2	S20
Na VII	115.361	10		2p ² - 2p ² (1D) 3s	2P° - 2D	3/2 - 3/2	S20
Na VII	115.475	10		2p ² - 2p ² (1D) 3s	2P° - 2D	5/2 - 5/2	S20
Na VII	118.840	10		2p ² - 2s 2p(1P°) 3p	2D° - 2P	3/2 - 3/2	S20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VII	118.902	10		$2p^2 - 2s2p(^1P^o)3p$	$^1D^o - ^1P^o$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	119.614	100		$2s2p^2 - 2s2p(^3P^o)3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	119.100	10		$2p^2 - 2s2p(^1P^o)3p$	$^1D^o - ^1D$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	119.204	10b		$2s2p^2 - 2s2p(^3P^o)3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	122.018	300b		$2s2p^2 - 2s2p(^3P^o)3s$	$^1P - ^1P^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	122.252	100		$2s2p^2 - 2s2p(^3P^o)3s$	$^1P - ^1P^o$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	124.532	10		$2s2p^2 - 2s^23p$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	126.779	10		$2p^2 - 2s2p(^3P^o)3p$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	126.814	100		$2p^2 - 2s2p(^1P^o)3p$	$^3P^o - ^1P$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	139.867	200b		$2p^2 - 2s2p(^3P^o)3p$	$^3D^o - ^1P$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	350.645	500		$2s^22p - 2s2p^2$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F4, S20
Na VII	352.274	600		$2s^22p - 2s2p^2$	$g^3P^o - ^1P$	$\frac{1}{2} - \frac{1}{2}$	E6, S20
Na VII	353.234	800		$2s^22p - 2s2p^2$	$g^3P^o - ^1P$	$\frac{1}{2} - \frac{3}{2}$	E6, S20
Na VII	354.950	400		$2s^22p - 2s2p^2$	$g^3P^o - ^1P$	$\frac{1}{2} - \frac{1}{2}$	E6, S20
Na VII	378.22			$2s^22p - 2s2p^2$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F3
Na VII	381.500	300		$2s^22p - 2s2p^2$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	385.061	10		$2s2p^2 - 2p^2$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	385.254	10		$2s2p^2 - 2p^2$	$^3D - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	S20
Na VII	396.15	200		$2s2p^2 - 2p^2$	$^1P - ^3S^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	397.90	500		$2s2p^2 - 2p^2$	$^1P - ^3S^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	399.182	400		$2s2p^2 - 2p^2$	$^1P - ^3S^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	425.493	100		$2p^2(^3P)3p - 2s2p(^3P^o)5p$	$^3D^o - ^1D$? $\frac{1}{2} - \frac{3}{2}$	S22, K8
Na VII	483.216	200		$2s2p^2 - 2p^2$	$^3D - ^1D^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	483.328	300		$2s2p^2 - 2p^2$	$^3D - ^1D^o$	$\frac{1}{2} - \frac{3}{2}$	S20
Na VII	486.740	400		$2s^22p - 2s2p^2$	$g^3P^o - ^1D$	$\frac{1}{2} - \frac{3}{2}$	E6, S20
Na VII	491.950	400d		$2s^22p - 2s2p^2$	$g^3P^o - ^1D$	$\frac{1}{2} - \frac{3}{2}$	E6, S20
Na VII	777.83			$2s2p^2 - 2p^2$	$^1P - ^1D^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Na VII	786.36			$2s2p^2 - 2p^2$	$^1P - ^1D^o$	$\frac{1}{2} - \frac{3}{2}$	F3

SODIUM VIII (Na^{7+}), $Z = 11$ Ground State $1s^22s^2\ ^1S_0$ (4 electrons)Ionization Potential 2 130 800 cm^{-1} ; 264.18 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VIII	51.316	10		$2s2p - 2p6p$	$^3P^o - ^1D$	2 - 3	S20
Na VIII	51.789	10		$2s^2 - 2s6p$	$g^1S - ^1P^o$	0 - 1	S20
Na VIII	53.750	10		$2s2p - 2p5p$	$^3P^o - ^3P^o$	2 - 2	S20
Na VIII	54.380	100		$2s^2 - 2s5p$	$g^1S - ^1P^o$	0 - 1	S20
Na VIII	55.345	10		$2s2p - 2s6d$	$^3P^o - ^1D$	1 - 2	S20
Na VIII	55.396	100		$2s2p - 2s6d$	$^3P^o - ^1D$	2 - 3	S20
Na VIII	57.096	10		$2p^2 - 2p6d$	$^3P - ^3P^o$	2 - 2	S20
Na VIII	57.119	10		$2p^2 - 2p6d$	$^3P - ^3D^o$	2 - 3	S20
Na VIII	57.230	10d		$2s2p - 2p5p$	$^1P^o - ^1D$	1 - 2	S20
Na VIII	58.070	10		$2s2p - 2s5d$	$^3P^o - ^1D$	1 - 2	S20
Na VIII	59.009	100		$2s2p - 2p4p$	$^3P^o - ^3P$	2 - 2	S20
Na VIII	59.101	10		$2s2p - 2s6d$	$^1P^o - ^1D$	1 - 2	S20
Na VIII	59.204	300		$2s2p - 2p4p$	$^3P^o - ^1D$	2 - 3	S20
Na VIII	59.249	10		$2s2p - 2p4p$	$^3P^o - ^1D$	2 - 2	S20
Na VIII	59.759	200		$2s^2 - 2s4p$	$g^1S - ^1P^o$	0 - 1	S20
Na VIII	59.992	10		$2p^2 - 2p5d$	$^3P - ^3D^o$	0 - 1	S20
Na VIII	60.053	100		$2p^2 - 2p5d$	$^3P - ^3P^o$	2 - 2	S20
Na VIII	60.073	100		$2p^2 - 2p5d$	$^3P - ^3D^o$	2 - 3	S20
Na VIII	61.088	200		$2p^2 - 2p5d$	$^1D - ^1F^o$	2 - 3	S20
Na VIII	61.347	1		$2p^2 - 2p5d$	$^1D - ^1D^o$	2 - 2	S20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VIII	62.276	100		2s 2p - 2s 5d	¹ P° - ¹ D	1 - 2	S20
Na VIII	63.114	100		2s 2p - 2p 4p	¹ P° - ¹ D	1 - 2	S20
Na VIII	63.695	10		2s 2p - 2p 4p	¹ P° - ¹ P	1 - 1	S20
Na VIII	64.205	200		2s 2p - 2s 4d	³ P° - ³ D	0 - 1	S20
Na VIII	64.237	400		2s 2p - 2s 4d	³ P° - ³ D	1 - 2	S20
Na VIII	64.302	500		2s 2p - 2s 4d	³ P° - ³ D	2 - 3	S20
Na VIII	65.672	10		2s 2p - 2s 4s	³ P° - ³ S	1 - 1	S20
Na VIII	65.730	10		2s 2p - 2s 4s	³ P° - ³ S	2 - 1	S20
Na VIII	66.059	200		2s ² - 2p 3d	^g 1S - ¹ P°	0 - 1	S20
Na VIII	66.358	10		2p ² - 2p 4d	³ P - ³ P°	1 - 1	S20
Na VIII	66.433	200d		2p ² - 2p 4d	³ P - ³ P°	2 - 2	S20
Na VIII	66.498	400		2p ² - 2p 4d	³ P - ³ P°	2 - 3	S20
Na VIII	67.48	200		2p ² - 2p 4d	¹ D - ¹ P°	2 - 1	S20
Na VIII	67.672	400		2p ² - 2p 4d	¹ D - ¹ F°	2 - 3	S20
Na VIII	68.193	100		2p ² - 2p 4d	¹ D - ¹ D°	2 - 2	S20
Na VIII	69.120	300		2s 2p - 2s 4d	¹ P° - ¹ D	1 - 2	S20
Na VIII	70.741	10		2s 2p - 2s 4s	¹ P° - ¹ S	1 - 0	S20
Na VIII	74.956	300		2s 2p - 2p 3p	³ P° - ³ P	0 - 1	S20
Na VIII	74.980	300b		2s 2p - 2p 3p	³ P° - ³ P	1 - 1	S20
Na VIII	75.043	400		2s 2p - 2p 3p	³ P° - ³ P	2 - 2	S20
Na VIII	75.096	300		2s 2p - 2p 3p	³ P° - ³ P	2 - 1	S20
Na VIII	75.385	100		2s 2p - 2p 3p	³ P° - ³ S	0 - 1	S20
Na VIII	75.428	200		2s 2p - 2p 3p	³ P° - ³ S	1 - 1	S20
Na VIII	75.518	300		2s 2p - 2p 3p	³ P° - ³ S	2 - 1	S20
Na VIII	76.123	500		2s 2p - 2p 3p	³ P° - ³ D	2 - 3	S20
Na VIII	76.173	100		2s 2p - 2p 3p	³ P° - ³ D	1 - 1	S20
Na VIII	76.217	200		2s 2p - 2p 3p	³ P° - ³ D	2 - 2	S20
Na VIII	77.267	600		2s ² - 2s 3p	^g 1S - ¹ P°	0 - 1	S20
Na VIII	80.756	10		2s 2p - 2p 3p	¹ P° - ¹ S	1 - 0	S20
Na VIII	81.210	500		2s 2p - 2p 3p	¹ P° - ¹ D	1 - 2	S20
Na VIII	83.240	700		2s 2p - 2s 3d	³ P° - ³ D	0 - 1	S20
Na VIII	83.288	800		2s 2p - 2s 3d	³ P° - ³ D	1 - 2	S20
Na VIII	83.391	900		2s 2p - 2s 3d	³ P° - ³ D	2 - 3	S20
Na VIII	84.050	500		2s 2p - 2p 3p	¹ P° - ¹ P	1 - 1	S20
Na VIII	85.826	200		2p ² - 2p 3d	³ P - ³ P°	0 - 1	S20
Na VIII	85.861	300		2p ² - 2p 3d	³ P - ³ P°	1 - 0	S20
Na VIII	85.887	300		2p ² - 2p 3d	³ P - ³ P°	1 - 1	S20
Na VIII	85.936	100		2p ² - 2p 3d	³ P - ³ P°	1 - 2	S20
Na VIII	85.992	300		2p ² - 2p 3d	³ P - ³ P°	2 - 1	S20
Na VIII	86.039	500		2p ² - 2p 3d	³ P - ³ P°	2 - 2	S20
Na VIII	86.381	400		2p ² - 2p 3d	³ P - ³ D°	0 - 1	S20
Na VIII	86.417	500		2p ² - 2p 3d	³ P - ³ D°	1 - 2	S20
Na VIII	86.479	600		2p ² - 2p 3d	³ P - ³ D°	2 - 3	S20
Na VIII	86.530	100		2p ² - 2p 3d	³ P - ³ D°	2 - 2	S20
Na VIII	86.758	300b		2p ² - 2p 3d	¹ D - ¹ P°	2 - 1	S20
Na VIII	87.211	700b		2p ² - 2p 3d	¹ D - ¹ F°	2 - 3	S20
Na VIII	89.759	200		2s 2p - 2s 3s	³ P° - ³ S	0 - 1	S20
Na VIII	89.818	300		2s 2p - 2s 3s	³ P° - ³ S	1 - 1	S20
Na VIII	89.948	400		2s 2p - 2s 3s	³ P° - ³ S	2 - 1	S20
Na VIII	90.252	400b		2p ² - 2p 3d	¹ D - ¹ D°	2 - 2	S20
Na VIII	90.536	500		2s 2p - 2s 3d	¹ P° - ¹ D	1 - 2	S20
Na VIII	93.120	100		2p ² - 2p 3s	³ P - ³ P°	1 - 2	S20
Na VIII	93.197	10		2p ² - 2p 3s	³ P - ³ P°	0 - 1	S20
Na VIII	93.242	200		2p ² - 2p 3s	³ P - ³ P°	2 - 2	S20
Na VIII	93.339	10		2p ² - 2p 3s	³ P - ³ P°	1 - 0	S20
Na VIII	93.670	400		2p ² - 2p 3d	¹ S - ¹ P°	0 - 1	S20
Na VIII	93.898	200		2p ² - 2p 3s	¹ D - ¹ P°	2 - 1	S20
Na VIII	95.551	200		2p ² - 2p 3d	¹ S - ³ P°	0 - 1	S21, K8
Na VIII	98.080	300b		2s 2p - 2s 3s	¹ P° - ¹ S	1 - 0	S20
Na VIII	102.043	10		2p ² - 2p 3s	¹ S - ¹ P°	0 - 1	S20
Na VIII	107.158	100b		2p ² - 2s 3p	¹ D - ¹ P°	2 - 1	S20
Na VIII	117.909	10		2p ² - 2s 3p	¹ S - ¹ P°	0 - 1	S20
Na VIII	411.145	100		2s ² - 2s 2p	^g 1S - ¹ P°	0 - 1	S20
Na VIII	492.329	10		2s 2p - 2p ²	³ P° - ³ P	1 - 2	S20
Na VIII	492.79			2s 2p - 2p ²	¹ P° - ¹ S	1 - 0	F3

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na VIII	495.81			2s 2p - 2p ²	² P° - ² P°	1 - 1	F3
Na VIII	496.249	100		2s 2p - 2p ²	² P° - ² P°	2 - 2	S20
Na VIII	499.78			2s 2p - 2p ²	² P° - ² P°	2 - 1	F3
Na VIII	789.6 P			2s ² - 2s 2p	g ¹ S - ² P°	0 - 1	E22

SODIUM IX (Na⁸⁺), Z = 11Ground State 1s²2s ²S_{1/2} (3 electrons)Ionization Potential 2 418 700 cm⁻¹; 299.87 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na IX	44.723	10		2s - 7p	g ² S - ² P°	½ - ½	S20
Na IX	46.090	100		2s - 6p	g ² S - ² P°	½ - ½	S20
Na IX	47.776	10		2p - 7d	² P° - ² D	½ - ½	S20
Na IX	47.836	100		2p - 7d	² P° - ² D	½ - ½	S20
Na IX	48.553	200		2s - 5p	g ² S - ² P°	½ - ½	S20
Na IX	49.326	100		2p - 6d	² P° - ² D	½ - ½	S20
Na IX	49.386	200		2p - 6d	² P° - ² D	½ - ½	S20
Na IX	52.116	100		2p - 5d	² P° - ² D	½ - ½	S20
Na IX	52.186	200		2p - 5d	² P° - ² D	½ - ½	S20
Na IX	52.487	1		2p - 5s	² P° - ² S	½ - ½	S20
Na IX	53.860	300		2s - 4p	g ² S - ² P°	½ - ½	S20
Na IX	58.201	300b		2p - 4d	² P° - ² D	½ - ½	S20
Na IX	58.279	600		2p - 4d	² P° - ² D	½ - ½	S20
Na IX	58.954	100		2p - 4s	² P° - ² S	½ - ½	S20
Na IX	59.042	200		2p - 4s	² P° - ² S	½ - ½	S20
Na IX	70.615	700		2s - 3p	g ² S - ² P°	½ - ½	S20
Na IX	70.553	600		2s - 3p	g ² S - ² P°	½ - ½	S20
Na IX	77.764	700		2p - 3d	² P° - ² D	½ - ½	S20
Na IX	77.911	800		2p - 3d	² P° - ² D	½ - ½	S20
Na IX	81.175	500		2p - 3s	² P° - ² S	½ - ½	S20
Na IX	81.350	500		2p - 3s	² P° - ² S	½ - ½	S20
Na IX	681.72	10		2s - 2p	g ² S - ² P°	½ - ½	S20
Na IX	694.17			2s - 2p	g ² S - ² P°	½ - ½	F3

SODIUM X (Na⁹⁺), Z = 11Ground State 1s² ¹S₀ (2 electrons)Ionization Potential 11 817 051 cm⁻¹; 1465.091 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na X	9.43			1s ² - 1s 3p	g ¹ S - ¹ P°	0 - 1	S3
Na X	11.00			1s ² - 1s 2p	g ¹ S - ¹ P°	0 - 1	S3
Na X	11.08			1s ² - 1s 2p	g ¹ S - ² P°	0 - 1	S3
Na X	11.20 ?	f		1s ² - 1s 2s	g ¹ S - ² S	0 - 1	K8

SODIUM XI (Na^{10+}), $Z = 11$
 Ground State $1s\ ^2S_{1/2}$ (1 electron)
 Ionization Potential $13\ 297\ 676\ \text{cm}^{-1}$; $1648.66\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Na XI	7.677	P		$1s-7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Na XI	7.735	P		$1s-6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Na XI	7.833	P		$1s-5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Na XI	8.021	P	10	$1s-4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Na XI	8.459	P	30	$1s-3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Na XI	10.025	P	100	$1s-2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Na XI	32.76	P		2-7			G2
Na XI	33.85	P		2-6			G2
Na XI	35.82	P		2-5			G2
Na XI	40.11	P		2-4			G2
Na XI	54.14	P		2-3			G2
Na XI	82.97	P		3-7			G2
Na XI	90.31	P		3-6			G2
Na XI	105.82	P		3-5			G2
Na XI	154.8	P		3-4			G2
Na XI	178.83	P		4-7			G2
Na XI	216.8	P		4-6			G2
Na XI	334.5	P		4-5			G2
Na XI	384.3	P		5-7			G2
Na XI	616.0	P		5-6			G2
Na XI	1021.6	P		6-7			G2

Mg

Mg

MAGNESIUM, Z = 12

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg	54.131	10					S21
Mg	70.512	10					S21
Mg	70.563	10					S21
Mg	70.762	100d					S21
Mg	70.787	100d					S21
Mg	71.621	10d					S21
Mg	71.724	10d					S21
Mg	75.112	100					S21
Mg	75.528	10d					S21
Mg	75.666	300					S21
Mg	76.169	100					S21
Mg	78.643	100d					S21
Mg	78.668	100d					S21
Mg	82.111	10					S21
Mg	85.091	10					S21
Mg	87.660	10					S21
Mg	89.256	100					S21
Mg	89.556	10					S21
Mg	90.165	10					S21
Mg	90.463	10					S21
Mg	91.013	10					S21
Mg	91.129	10d					S21
Mg	92.685	10					S21
Mg	93.720	100d					S21
Mg	94.721	100					S21
Mg	100.196	100					S21
Mg	100.545	200					S21
Mg	101.322	100					S21
Mg	101.398	10					S21
Mg	104.342	300					S21
Mg	105.066	500					S21
Mg	106.453	200					S21
Mg	109.420	100					S21
Mg	117.880	10					S21
Mg	127.013	10					S21
Mg	137.509	10					S21
Mg	139.705	10					S21
Mg	151.808	10					S22
Mg	341.790	10					S22
Mg	376.665	100					S22
Mg	430.767	10					S22
Mg	1579.05	10d					S22

MAGNESIUM I (Mg^{0+}), $Z = 12$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential 61 671.02 cm^{-1} ; 7.646 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg I	1625.22	P		$3s^2 - 3s 29p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1625.50	P		$3s^2 - 3s 28p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1625.81	P		$3s^2 - 3s 27p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1626.16	P		$3s^2 - 3s 26p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1626.4	P		$3s^2 - 3s 26p$	$g^1S - 3P^o$	0 - 1	C7
Mg I	1626.56	P		$3s^2 - 3s 25p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1626.8	P		$3s^2 - 3s 25p$	$g^1S - 3P^o$	0 - 1	C7
Mg I	1627.02	P		$3s^2 - 3s 24p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1627.3	P		$3s^2 - 3s 24p$	$g^1S - 3P^o$	0 - 1	C7
Mg I	1627.53	P		$3s^2 - 3s 23p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1627.8	P		$3s^2 - 3s 23p$	$g^1S - 3P^o$	0 - 1	C7
Mg I	1628.12	P		$3s^2 - 3s 22p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1628.5	P		$3s^2 - 3s 22p$	$g^1S - 3P^o$	0 - 1	C7
Mg I	1628.80	P		$3s^2 - 3s 21p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1629.2	P		$3s^2 - 3s 21p$	$g^1S - 3P^o$	0 - 1	C7
Mg I	1629.59	P		$3s^2 - 3s 20p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1629.7	P		$3s^2 - 3s 20p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1630.52	P		$3s^2 - 3s 19p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1630.6	P		$3s^2 - 3s 19p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1631.62	P		$3s^2 - 3s 18p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1631.7	P		$3s^2 - 3s 18p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1632.93	P		$3s^2 - 3s 17p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1633.0	P		$3s^2 - 3s 17p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1634.52	P		$3s^2 - 3s 16p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1634.7	P		$3s^2 - 3s 16p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1636.48	P		$3s^2 - 3s 15p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1636.6	P		$3s^2 - 3s 15p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1638.90	P		$3s^2 - 3s 14p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1639.1	P		$3s^2 - 3s 14p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1641.97	P		$3s^2 - 3s 13p$	$g^1S - 1P^o$	0 - 1	C7
Mg I	1642.2	P		$3s^2 - 3s 13p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1645.930	0		$3s^2 - 3s 12p$	$g^1S - 1P^o$	0 - 1	G19
Mg I	1646.3	P		$3s^2 - 3s 12p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1651.165	10		$3s^2 - 3s 11p$	$g^1S - 1P^o$	0 - 1	G19
Mg I	1651.7	P		$3s^2 - 3s 11p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1658.311	20		$3s^2 - 3s 10p$	$g^1S - 1P^o$	0 - 1	G19
Mg I	1659.0	P		$3s^2 - 3s 10p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1668.431	50		$3s^2 - 3s 9p$	$g^1S - 1P^o$	0 - 1	G19
Mg I	1669.51	P		$3s^2 - 3s 9p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1683.412	100		$3s^2 - 3s 8p$	$g^1S - 1P^o$	0 - 1	G19
Mg I	1685.13	P		$3s^2 - 3s 8p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1707.064	150		$3s^2 - 3s 7p$	$g^1S - 1P^o$	0 - 1	G19
Mg I	1710.07	P		$3s^2 - 3s 7p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1747.795	200		$3s^2 - 3s 6p$	$g^1S - 1P^o$	0 - 1	G19
Mg I	1753.84	P		$3s^2 - 3s 6p$	$g^1S - 3P^o$	0 - 1	K8
Mg I	1827.934	300		$3s^2 - 3s 5p$	$g^1S - 1P^o$	0 - 1	G19
Mg I	1843.32	P		$3s^2 - 3s 5p$	$g^1S - 3P^o$	0 - 1	K8

MAGNESIUM II (Mg^{II}), $Z = 12$
 Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)
 Ionization Potential $121\,267.61\text{ cm}^{-1}$; 15.035 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg II	884.6967 P			3s - 8p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{3}{2}$	R17
Mg II	884.7189 P			3s - 8p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{1}{2}$	R17
Mg II	907.3752 P			3s - 7p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{3}{2}$	R17
Mg II	907.4115 P			3s - 7p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{1}{2}$	R17
Mg II	946.7032 P	80		3s - 6p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{3}{2}$	R17,G19
Mg II	946.7694 P	90		3s - 6p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{1}{2}$	R17,G19
Mg II	1025.9681 P	140		3s - 5p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{3}{2}$	R17,G19
Mg II	1026.1133 P	120		3s - 5p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{1}{2}$	R17,G19
Mg II	1239.9252 P	250		3s - 4p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{3}{2}$	R17,G19
Mg II	1240.3947 P	200		3s - 4p	$g^2S - 2p^o$	$\frac{1}{2} - \frac{1}{2}$	R17,G19
Mg II	1248.511	60		3p - 10s	$2p^o - 2S$	$\frac{1}{2} - \frac{1}{2}$	G19
Mg II	1249.932	80		3p - 10s	$2p^o - 2S$	$\frac{3}{2} - \frac{5}{2}$	G19
Mg II	1271.2388 P	80		3p - 8d	$2p^o - 2D$	$\frac{1}{2} - \frac{3}{2}$	R17,G19
Mg II	1271.9402 P	90		3p - 9s	$2p^o - 2S$	$\frac{1}{2} - \frac{1}{2}$	R17,G19
Mg II	1272.7212 P	80		3p - 8d	$2p^o - 2D$	$\frac{3}{2} - \frac{5}{2}$	R17,G19
Mg II	1273.4232 P	110		3p - 9s	$2p^o - 2S$	$\frac{3}{2} - \frac{1}{2}$	R17,G19
Mg II	1306.7139 P	110		3p - 7d	$2p^o - 2D$	$\frac{1}{2} - \frac{3}{2}$	R17,G19
Mg II	1307.8754 P	120		3p - 8s	$2p^o - 2S$	$\frac{1}{2} - \frac{1}{2}$	R17,G19
Mg II	1308.2809 P	120		3p - 7d	$2p^o - 2D$	$\frac{3}{2} - \frac{1}{2}$	R17,G19
Mg II	1309.4434 P	140		3p - 8s	$2p^o - 2S$	$\frac{3}{2} - \frac{1}{2}$	R17,G19
Mg II	1365.5442 P	140		3p - 6d	$2p^o - 2D$	$\frac{1}{2} - \frac{3}{2}$	R17,G19
Mg II	1367.2568 P	130		3p - 6d	$2p^o - 2D$	$\frac{3}{2} - \frac{1}{2}$	R17,G19
Mg II	1367.7082 P	150		3p - 7s	$2p^o - 2S$	$\frac{1}{2} - \frac{1}{2}$	R17,G19
Mg II	1369.4231 P	180		3p - 7s	$2p^o - 2S$	$\frac{3}{2} - \frac{1}{2}$	R17,G19
Mg II	1475.9998 ?	200		3p - 5d	$2p^o - 2D$	$\frac{1}{2} - \frac{3}{2}$	R17,G19
Mg II	1478.0037 P	250		3p - 5d	$2p^o - 2D$	$\frac{3}{2} - \frac{1}{2}$	R17,G19
Mg II	1480.8797 P	200		3p - 6s	$2p^o - 2S$	$\frac{1}{2} - \frac{1}{2}$	R17,G19
Mg II	1482.8903 P	300		3p - 6s	$2p^o - 2S$	$\frac{3}{2} - \frac{1}{2}$	R17,G19
Mg II	1734.8523 P	400		3p - 4d	$2p^o - 2D$	$\frac{1}{2} - \frac{3}{2}$	R17,G19
Mg II	1737.6283 P	500		3p - 4d	$2p^o - 2D$	$\frac{3}{2} - \frac{1}{2}$	R17,G19
Mg II	1750.6617 P	400		3p - 5s	$2p^o - 2S$	$\frac{1}{2} - \frac{1}{2}$	R17,G19
Mg II	1753.4744 P	500		3p - 5s	$2p^o - 2S$	$\frac{3}{2} - \frac{1}{2}$	R17,G19

MAGNESIUM III (Mg^{2+}), $Z = 12$
 Ground State $1s^2 2s^2 2p^6\ ^1S_0$ (10 electrons)
 Ionization Potential $646\,410\text{ cm}^{-1}$; 80.143 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg III	158.530	100		$2p^6 - 2p^5(^2P^o)8d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	S22,M22
Mg III	159.209	100		$2p^6 - 2p^5(^2P^o)7d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	S22,M22
Mg III	159.755	100		$2p^6 - 2p^5(^2P^o)7d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	S22,M22
Mg III	161.135	10		$2p^6 - 2p^5(^2P^o)6d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	S22,M22
Mg III	163.586	10		$2p^6 - 2p^5(^2P^o)6s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	S22,M22
Mg III	164.159	10		$2p^6 - 2p^5(^2P^o)6s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	S22,M22
Mg III	164.384	200		$2p^6 - 2p^5(^2P^o)5d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	S22,M22
Mg III	164.954	200		$2p^6 - 2p^5(^2P^o)5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	S22,M22
Mg III	165.195	10		$2p^6 - 2p^5(^2P^o)5d$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	S22,M22
Mg III	169.150	100		$2p^6 - 2p^5(^2P^o)5s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	S22,M22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - I	References
Mg III	169.746	100		$2p^6 - 2p^5(^3P^o) 5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	S22, M22
Mg III	170.802	500		$2p^6 - 2p^5(^3P^o) 4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	S22, M22
Mg III	171.395	400		$2p^6 - 2p^5(^3P^o) 4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	S22, M22
Mg III	171.896	10		$2p^6 - 2p^5(^3P^o) 4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	S22, M22
Mg III	182.240	300		$2p^6 - 2p^5(^3P^o) 4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	S22, M22
Mg III	182.973	230		$2p^6 - 2p^5(^3P^o) 4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	S22, M22
Mg III	186.510	900	4	$2p^6 - 2p^5(^3P^o) 3d$	$g^1S - 1P^o$	0-1	S22, A5
Mg III	187.194	800	3	$2p^6 - 2p^5(^3P^o) 3d$	$g^1S - 3D^o$	0-1	S22, A5
Mg III	188.526	300		$2p^6 - 2p^5(^3P^o) 3d$	$g^1S - 3P^o$	0-1	S22, A5
Mg III	231.750	1000	2	$2p^6 - 2p^5(^3P^o) 3s$	$g^1S - 1P^o$	0-1	S22, A5
Mg III	234.258	850	1	$2p^6 - 2p^5(^3P^o) 3s$	$g^1S - 1P^o$	0-1	S22, A5
Mg III	721.592	4		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$1P^o - \frac{1}{2}[\frac{1}{2}]$	1-0	A5
Mg III	725.347	7		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{1}{2}[\frac{1}{2}]$	1-1	A5
Mg III	728.337	20		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	2-2	A5
Mg III	732.625	20		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	2-2	A5
Mg III	734.441	60		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	2-3	A5
Mg III	736.563	30		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	1-1	A5
Mg III	739.276	40		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	1-2	A5
Mg III	741.932	20		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	0-1	A5
Mg III	744.342	40		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	2-1	A5
Mg III	750.745	12		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$1P^o - \frac{1}{2}[\frac{1}{2}]$	1-1	A5
Mg III	751.121	40		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$1P^o - \frac{1}{2}[\frac{1}{2}]$	1-2	A5
Mg III	751.207	40		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	1-1	A5
Mg III	753.247	12		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$1P^o - \frac{1}{2}[\frac{1}{2}]$	1-1	A5
Mg III	756.808	7		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	0-1	A5
Mg III	760.981	7		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$1P^o - \frac{3}{2}[\frac{3}{2}]$	1-2	A5
Mg III	762.756	12		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$1P^o - \frac{3}{2}[\frac{3}{2}]$	1-1	A5
Mg III	765.655	20		$2p^5(^3P^o) 3s - 2p^5(^3P^o) 4p$	$1P^o - \frac{3}{2}[\frac{3}{2}]$	1-2	A5
Mg III	821.369	4		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3S - \frac{3}{2}[\frac{3}{2}]^o$	1-1	A5
Mg III	823.788	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3S - \frac{3}{2}[\frac{3}{2}]^o$	1-2	A5
Mg III	865.935	4		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3D - \frac{1}{2}[\frac{1}{2}]^o$	1-0	A5
Mg III	871.720	40		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3D - \frac{3}{2}[\frac{3}{2}]^o$	3-2	A5
Mg III	873.586	20		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3D - \frac{3}{2}[\frac{3}{2}]^o$	2-1	A5
Mg III	876.312	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3D - \frac{3}{2}[\frac{3}{2}]^o$	2-2	A5
Mg III	878.847	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$1D - \frac{1}{2}[\frac{1}{2}]^o$	2-1	A5
Mg III	880.107	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3D - \frac{3}{2}[\frac{3}{2}]^o$	1-1	A5
Mg III	886.158	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$1P - \frac{1}{2}[\frac{1}{2}]^o$	1-1	A5
Mg III	889.888	20		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3P - \frac{1}{2}[\frac{1}{2}]^o$	2-1	A5
Mg III	894.744	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3P - \frac{1}{2}[\frac{1}{2}]^o$	1-1	A5
Mg III	895.324	12		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$1D - \frac{3}{2}[\frac{3}{2}]^o$	2-1	A5
Mg III	896.640	4		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3P - \frac{1}{2}[\frac{1}{2}]^o$	1-0	A5
Mg III	898.207	12		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$1D - \frac{3}{2}[\frac{3}{2}]^o$	2-2	A5
Mg III	902.923	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$1P - \frac{3}{2}[\frac{3}{2}]^o$	1-1	A5
Mg III	909.730	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 5s$	$3P - \frac{3}{2}[\frac{3}{2}]^o$	2-2	A5
Mg III	1229.389	4		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 4s$	$3S - \frac{3}{2}[\frac{3}{2}]^o$	1-1	A5
Mg III	1239.827	4		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 4s$	$3S - \frac{1}{2}[\frac{1}{2}]^o$	1-0	A5
Mg III	1263.375	7		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 4s$	$3S - \frac{3}{2}[\frac{3}{2}]^o$	1-1	A5
Mg III	1271.784	2		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3P^o - \frac{1}{2}[\frac{1}{2}]$	1-2	A5
Mg III	1274.831	100		$2p^5(^3P^o) 3p - 2p^5(^3P^o) 4s$	$3S - \frac{3}{2}[\frac{3}{2}]^o$	1-2	A5
Mg III	1280.702	2		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3P^o - \frac{1}{2}[\frac{1}{2}]$	2-3	A5
Mg III	1306.59			$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	0-1	A5
Mg III	1308.654	2		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	1-2	A5
Mg III	1310.271	2		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3F^o - \frac{1}{2}[\frac{1}{2}]$	2-3	A5
Mg III	1310.633	7		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	1-2	A5
Mg III	1310.720	2		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	1-1	A5
Mg III	1314.50			$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$1F^o - \frac{1}{2}[\frac{1}{2}]$	3-4	A5
Mg III	1318.078	12		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	2-3	A5
Mg III	1320.022	4		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3P^o - \frac{3}{2}[\frac{3}{2}]$	2-2	A5
Mg III	1327.512	4		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3F^o - \frac{3}{2}[\frac{3}{2}]$	4-4	A5
Mg III	1329.583	60		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3F^o - \frac{3}{2}[\frac{3}{2}]$	4-5	A5
Mg III	1332.310	4		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3F^o - \frac{3}{2}[\frac{3}{2}]$	3-3	A5
Mg III	1334.359	30		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3F^o - \frac{3}{2}[\frac{3}{2}]$	3-4	A5
Mg III	1335.951	2		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3D^o - \frac{1}{2}[\frac{1}{2}]$	1-2	A5
Mg III	1346.46			$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$1D^o - \frac{1}{2}[\frac{1}{2}]$	2-3	A5
Mg III	1348.342	7		$2p^5(^3P^o) 3d - 2p^5(^3P^o) 5f$	$3F^o - \frac{3}{2}[\frac{3}{2}]$	2-3	A5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg III	1389.132	12		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^3D^o - \frac{1}{2}[\frac{1}{2}]$	3-3	A5
Mg III	1349.365	2		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^3F^o - \frac{3}{2}[\frac{1}{2}]$	2-2	A5
Mg III	1350.156	12		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3D - \frac{1}{2}[\frac{1}{2}]^o$	2-1	A5
Mg III	1352.80			$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^1F^o - \frac{3}{2}[\frac{1}{2}]$	3-4	A5
Mg III	1353.804	7		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^3D^o - \frac{1}{2}[\frac{1}{2}]$	2-3	A5
Mg III	1353.915	2		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^1F^o - \frac{3}{2}[\frac{1}{2}]$	3-3	A5
Mg III	1371.769	4		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^1P^o - \frac{1}{2}[\frac{1}{2}]$	1-2	A5
Mg III	1376.713	7		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^3D^o - \frac{3}{2}[\frac{1}{2}]$	1-2	A5
Mg III	1378.700	40		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3D - \frac{1}{2}[\frac{1}{2}]^o$	1-0	A5
Mg III	1378.891	2		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^3D^o - \frac{3}{2}[\frac{1}{2}]$	1-2	A5
Mg III	1386.691	2		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^1D^o - \frac{3}{2}[\frac{1}{2}]$	2-3	A5
Mg III	1389.504	4		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^3D^o - \frac{3}{2}[\frac{1}{2}]$	3-4	A5
Mg III	1391.271	200		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3D - \frac{3}{2}[\frac{1}{2}]^o$	2-1	A5
Mg III	1393.391	350		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3D - \frac{3}{2}[\frac{1}{2}]^o$	3-2	A5
Mg III	1395.642	4		$2p^3(^3P^o)3d - 2p^3(^3P^o)5f$	$^3D^o - \frac{3}{2}[\frac{1}{2}]$	2-3	A5
Mg III	1402.82			$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^1D - \frac{1}{2}[\frac{1}{2}]^o$	2-1	A5
Mg III	1405.170	80		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3D - \frac{3}{2}[\frac{1}{2}]^o$	2-2	A5
Mg III	1407.880	40		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3D - \frac{3}{2}[\frac{1}{2}]^o$	1-1	A5
Mg III	1421.538	20		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^1P - \frac{1}{2}[\frac{1}{2}]^o$	1-1	A5
Mg III	1422.118	7		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3D - \frac{3}{2}[\frac{1}{2}]^o$	1-2	A5
Mg III	1431.136	100		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3P - \frac{1}{2}[\frac{1}{2}]^o$	2-1	A5
Mg III	1435.550	40		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^1P - \frac{1}{2}[\frac{1}{2}]^o$	1-0	A5
Mg III	1439.770	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3P - \frac{1}{2}[\frac{1}{2}]^o$	0-1	A5
Mg III	1443.738	60		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3P - \frac{1}{2}[\frac{1}{2}]^o$	1-1	A5
Mg III	1446.254	40		$2p^3(^3P^o)3s - 2p^3(^3P^o)3p$	$^3P^o - ^1S$	1-0	A5
Mg III	1447.260	30		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^1D - \frac{3}{2}[\frac{1}{2}]^o$	2-1	A5
Mg III	1458.172	20		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3P - \frac{1}{2}[\frac{1}{2}]^o$	1-0	A5
Mg III	1462.305	20		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^1D - \frac{3}{2}[\frac{1}{2}]^o$	2-2	A5
Mg III	1467.188	12		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^1P - \frac{3}{2}[\frac{1}{2}]^o$	1-1	A5
Mg III	1474.898	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3S - ^3D^o$	1-2	A5
Mg III	1477.416	2		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3P - \frac{3}{2}[\frac{1}{2}]^o$	2-1	A5
Mg III	1482.67			$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^1P - \frac{3}{2}[\frac{1}{2}]^o$	1-2	A5
Mg III	1486.624	12		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3P - \frac{3}{2}[\frac{1}{2}]^o$	0-1	A5
Mg III	1493.097	12		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3P - \frac{3}{2}[\frac{1}{2}]^o$	2-2	A5
Mg III	1506.826	7		$2p^3(^3P^o)3p - 2p^3(^3P^o)4s$	$^3P - \frac{3}{2}[\frac{1}{2}]^o$	1-2	A5
Mg III	1550.82			$2p^3(^3P^o)3s - 2p^3(^3P^o)3p$	$^1P^o - ^1S$	1-0	A5
Mg III	1572.712	400		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3S - ^3P^o$	1-2	A5
Mg III	1586.237	200		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3S - ^3P^o$	1-1	A5
Mg III	1592.360	60		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3S - ^3P^o$	1-0	A5
Mg III	1626.093	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^1P^o$	2-1	A5
Mg III	1635.946	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3D^o$	3-2	A5
Mg III	1642.826	20		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3D^o$	3-3	A5
Mg III	1648.822	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^1P^o$	1-1	A5
Mg III	1652.218	12		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3D^o$	2-2	A5
Mg III	1659.244	12		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3D^o$	2-3	A5
Mg III	1663.287	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^1D^o$	2-2	A5
Mg III	1675.710	2		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3D^o$	1-2	A5
Mg III	1679.470	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3D^o$	2-1	A5
Mg III	1687.071	250		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^1D^o$	1-2	A5
Mg III	1697.282	250		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^1F^o$	3-3	A5
Mg III	1703.108	7		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^1D - ^1P^o$	2-1	A5
Mg III	1703.731	20		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3D^o$	1-1	A5
Mg III	1704.368	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3F^o$	3-2	A5
Mg III	1714.783	12		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^1F^o$	2-3	A5
Mg III	1722.041	100		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3F^o$	2-2	A5
Mg III	1730.733	40		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3F^o$	3-3	A5
Mg III	1730.778	7		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^1P - ^1P^o$	1-1	A5
Mg III	1731.786	20		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^1D - ^3D^o$	2-2	A5
Mg III	1738.835	600		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3F^o$	3-4	A5
Mg III	1739.475	7		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^1D - ^3D^o$	2-3	A5
Mg III	1743.947	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^1D - ^1D^o$	2-2	A5
Mg III	1745.009	2		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3P - ^1P^o$	2-1	A5
Mg III	1747.561	200		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3F^o$	1-2	A5
Mg III	1748.932	500		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3F^o$	2-3	A5
Mg III	1757.176	4		$2p^3(^3P^o)3p - 2p^3(^3P^o)3d$	$^3D - ^3P^o$	3-2	A5

Element	Wave λ_{vac}	Intensity	Multiplet	Configuration	Term	J - J	References
Mg III	1737.888	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^1P^o$	0 - 1	A5
Mg III	1761.74			$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1D - ^2D^o$	2 - 1	A5
Mg III	1763.305	30		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^1P^o$	1 - 1	A5
Mg III	1772.982	350		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1P - ^1D^o$	1 - 2	A5
Mg III	1773.959	2		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2P^o - \frac{1}{2}[\frac{1}{2}]$	1 - 2	A5
Mg III	1775.942	4		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2D - ^2P^o$	2 - 2	A5
Mg III	1783.253	150		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2D^o$	2 - 3	A5
Mg III	1787.927	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^1D^o$	2 - 2	A5
Mg III	1791.375	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1P - ^2D^o$	1 - 1	A5
Mg III	1791.40			$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1P^o - \frac{1}{2}[\frac{1}{2}]$	2 - 3	A5
Mg III	1793.207	4		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1D - ^2P^o$	2 - 1	A5
Mg III	1794.582	300		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1P - ^2D^o$	1 - 2	A5
Mg III	1830.662	350		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1D - ^1F^o$	2 - 3	A5
Mg III	1831.087	4		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2D - ^2P^o$	1 - 2	A5
Mg III	1819.954	2		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	2 - 4	A5
Mg III	1820.421	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2D^o$	0 - 1	A5
Mg III	1820.896	2		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2D - ^2P^o$	1 - 1	A5
Mg III	1826.750	2		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2D^o$	1 - 1	A5
Mg III	1828.974	2		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2D - ^2P^o$	1 - 0	A5
Mg III	1838.336	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1D - ^2F^o$	2 - 3	A5
Mg III	1839.878	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1P - ^2F^o$	1 - 2	A5
Mg III	1846.121	7		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2P^o - \frac{1}{2}[\frac{1}{2}]$	0 - 1	A5
Mg III	1846.707	7		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2P^o - \frac{1}{2}[\frac{1}{2}]$	1 - 2	A5
Mg III	1847.561	2		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^1F^o$	2 - 3	A5
Mg III	1849.591	2		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	2 - 2	A5
Mg III	1850.060	7		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	2 - 3	A5
Mg III	1854.139	4		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2P^o - \frac{1}{2}[\frac{1}{2}]$	1 - 2	A5
Mg III	1855.99			$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2F^o$	2 - 2	A5
Mg III	1858.186	250		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^2P$	2 - 1	A5
Mg III	1858.451	7		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1F^o - \frac{1}{2}[\frac{1}{2}]$	3 - 4	A5
Mg III	1865.388	1		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2P^o - \frac{1}{2}[\frac{1}{2}]$	2 - 2	A5
Mg III	1865.636	12		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2P^o - \frac{1}{2}[\frac{1}{2}]$	2 - 3	A5
Mg III	1868.225	40		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1D - ^2P^o$	2 - 2	A5
Mg III	1872.956	4		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2P^o - \frac{1}{2}[\frac{1}{2}]$	2 - 2	A5
Mg III	1875.268	1		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2P^o - \frac{1}{2}[\frac{1}{2}]$	2 - 1	A5
Mg III	1879.492	200		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^2P$	2 - 2	A5
Mg III	1882.308	7		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	4 - 4	A5
Mg III	1886.764	2		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	4 - 3	A5
Mg III	1887.308	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1D - ^2P^o$	2 - 1	A5
Mg III	1890.380	40		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	4 - 5	A5
Mg III	1891.970	7		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	3 - 3	A5
Mg III	1896.304	20		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^1P$	2 - 1	A5
Mg III	1897.226	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)4s$	$^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	A5
Mg III	1900.043	20		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	3 - 4	A5
Mg III	1901.360	4		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2D^o - \frac{1}{2}[\frac{1}{2}]$	1 - 2	A5
Mg III	1901.572	20		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^2P$	1 - 1	A5
Mg III	1908.500	100		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^2P$	1 - 0	A5
Mg III	1918.777	20		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2P^o$	2 - 2	A5
Mg III	1921.374	2		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1P - ^2P^o$	1 - 1	A5
Mg III	1922.540	2		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1D^o - \frac{1}{2}[\frac{1}{2}]$	2 - 2	A5
Mg III	1922.788	1		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1D^o - \frac{1}{2}[\frac{1}{2}]$	2 - 3	A5
Mg III	1923.042	20		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1D^o - \frac{1}{2}[\frac{1}{2}]$	2 - 3	A5
Mg III	1923.896	200		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^2P$	1 - 2	A5
Mg III	1924.479	30		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	2 - 3	A5
Mg III	1928.198	2		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2D^o - \frac{1}{2}[\frac{1}{2}]$	3 - 3	A5
Mg III	1928.424	30		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2D^o - \frac{1}{2}[\frac{1}{2}]$	3 - 4	A5
Mg III	1928.811	4		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	2 - 2	A5
Mg III	1929.080	1		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2F^o - \frac{1}{2}[\frac{1}{2}]$	2 - 3	A5
Mg III	1930.374	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^1P - ^2P^o$	1 - 0	A5
Mg III	1930.672	250		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^1D$	2 - 2	A5
Mg III	1933.563	40		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1F^o - \frac{1}{2}[\frac{1}{2}]$	3 - 4	A5
Mg III	1937.539	1		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2D^o - \frac{1}{2}[\frac{1}{2}]$	2 - 2	A5
Mg III	1937.78			$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^2D^o - \frac{1}{2}[\frac{1}{2}]$	2 - 3	A5
Mg III	1937.843	150		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^2P$	0 - 1	A5
Mg III	1938.249	7		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1F^o - \frac{1}{2}[\frac{1}{2}]$	3 - 3	A5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg III	1938.936	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2P^o$	2 - 1	A5
Mg III	1941.500	12		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2P^o$	1 - 2	A5
Mg III	1942.036	4		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1F^o - \frac{3}{2}[\frac{3}{2}]$	3 - 4	A5
Mg III	1954.831	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2P^o$	0 - 1	A5
Mg III	1962.145	7		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2P^o$	1 - 1	A5
Mg III	1971.514	4		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$^2P - ^2P^o$	1 - 0	A5
Mg III	1974.737	12		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^1P^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	A5
Mg III	1977.554	60		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^1D$	1 - 2	A5
Mg III	1979.327	80		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$^2P^o - ^1P$	0 - 1	A5
Mg III	1979.43			$2p^5(^2P^o)3p - 2p^5(^2P^o)4s$	$^1S - \frac{3}{2}[\frac{3}{2}]^*$	0 - 1	A5
Mg III	1985.175	12		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^3D^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	A5
Mg III	1993.759	7		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^3D^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	A5
Mg III	1994.087	4		$2p^5(^2P^o)3d - 2p^5(^2P^o)4f$	$^3D^o - \frac{3}{2}[\frac{3}{2}]$	1 - 1	A5

MAGNESIUM IV (Mg^{3+}), $Z = 12$ Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}^o$; (9 electrons)Ionization Potential $881\ 100\ cm^{-1}$; 109.24 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg IV?	112.914	10					S21
Mg IV?	118.158	10d					S21
Mg IV	118.421	10		$2p^5 - 2p^4(^1S)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV?	118.603	100					S21
Mg IV	118.740	5		$2p^5 - 2p^4(^1S)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV?	120.086	10d					S21
Mg IV?	120.283	100d					S21
Mg IV	121.549	20		$2p^5 - 2p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	121.891	10		$2p^5 - 2p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	123.171	5		$2p^5 - 2p^4(^2P)5d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	123.266	50		$2p^5 - 2p^4(^2P)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	123.372	5		$2p^5 - 2p^4(^2P)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV?	123.418	10					S21
Mg IV	123.508	5		$2p^5 - 2p^4(^2P)5d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	123.569	2		$2p^5 - 2p^4(^2P)5d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	123.721	4		$2p^5 - 2p^4(^2P)5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV?	123.770	0					S21
Mg IV	123.913	1		$2p^5 - 2p^4(^2P)5d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	124.415	100		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	124.52	1		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	124.539	100		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	124.64	<0		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	124.650	240		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	124.761	80		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	124.870	100		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	124.989	70		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	124.994	90		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	125.459	100		$2p^5 - 2p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	125.810	30		$2p^5 - 2p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	126.600	4		$2p^5 - 2p^4(^2P)5s$	$g^2F^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	126.800	20		$2p^5 - 2p^4(^2P)5s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	126.960	10		$2p^5 - 2p^4(^2P)5s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	127.165	5		$2p^5 - 2p^4(^2P)5s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	129.710	100		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	129.858	300		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7

Mg IV

Mg IV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	Reference
Mg IV	129.968	200		$2p^2 - 2p^4(^3P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	129.98	30		$2p^2 - 2p^4(^3P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	130.187	100		$2p^2 - 2p^4(^3P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	130.116	50		$2p^2 - 2p^4(^3P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	130.245	70		$2p^2 - 2p^4(^3P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	130.340	150		$2p^2 - 2p^4(^3P)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	130.36	20		$2p^2 - 2p^4(^3P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV?	130.541	0					S21
Mg IV	130.625	60		$2p^2 - 2p^4(^3P)4d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	132.126	20		$2p^2 - 2p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	132.51			$2p^2 - 2p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	132.800			$2p^2 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	132.8134	300		$2p^2 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	133.1966	200		$2p^2 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	137.970	80		$2p^2 - 2p^4(^3P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	138.265	150		$2p^2 - 2p^4(^3P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	138.395	100		$2p^2 - 2p^4(^3P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	138.6884	100		$2p^2 - 2p^4(^3P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	138.939	1		$2p^2 - 2p^4(^3P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	139.993	70		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	140.121	110		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	140.176	210		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	140.427	110		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	140.475	120		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	140.525	120		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	140.560	120		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	140.868	200		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	140.915	80		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	140.965	100		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	146.526	250		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	146.837	200		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	146.954	400		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	147.005	200		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	147.050	200		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	147.252	150		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	147.319	160		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	147.4062	300		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	147.500	4		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	147.535	300		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	147.630	60		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	147.748	150		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	147.881	80		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	148.114	120		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	148.958	7		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	149.024	1		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	149.400	5		$2p^2 - 2p^4(^3P)3d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	160.2358	200		$2p^2 - 2p^4(^1S)3s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	160.8088	150		$2p^2 - 2p^4(^1S)3s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	171.657	250		$2p^2 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	172.311	150		$2p^2 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	180.071	350		$2p^2 - 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	180.618	400		$2p^2 - 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	180.797	400		$2p^2 - 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	181.345	350		$2p^2 - 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	183.442	150		$2p^2 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	183.921	50		$2p^2 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	184.199	30		$2p^2 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	187.697	15		$2s 2p^6 - 2s 2p^2(^3P^o)3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	188.146	15		$7s 2p^6 - 2s 2p^5(^3P^o)3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	320.994	1000		$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	323.307	900		$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	799.166	10		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	803.07	2		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	809.99	5		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	811.26	20		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	A7

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg IV	814.88	11		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	840.37	4		$2p^4(^1D)3p - 2p^4(^1D)4s$	$^3F^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	842.09	6		$2p^4(^1D)3p - 2p^4(^1D)4s$	$^3F^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	854.409	20		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	857.292	150		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	859.26	2		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	863.70	1		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4D^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	865.724	8		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^3D^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	866.741	30		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	877.495	5		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^3D^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	891.01	1		$2p^4(^1D)3p - 2p^4(^1D)4s$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	892.22	1		$2p^4(^1D)3p - 2p^4(^1D)4s$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	902.80	1		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	909.37	10		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	919.03	50		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	929.784	30		$2p^4(^3P)3p - 2p^4(^3P)4s$	$^4S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	936.30	2		$2p^4(^1D)3p - 2p^4(^1D)4s$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1026.411	30		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P^o - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1037.409	250		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P^o - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1044.374	80		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P^o - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1055.757	60		$2p^4(^3P)3s - 2p^4(^1D)3p$	$^3P^o - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1210.993	300		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1219.019	150		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1220.929	200		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1229.093	10		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1235.908	200		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1236.977	200		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1243.874	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1307.934	100		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1311.693	200		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^3F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1311.97	1		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1316.482	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1328.09	1		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1331.630	30		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1336.884	60		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1342.193	300		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1345.677	10		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1346.573	800		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1346.680	300		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1351.652	100		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1352.049	600		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1355.67	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1356.132	200		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1356.277	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1361.526	50		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^3F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1362.526	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1363.18	10		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1366.03	5		$2p^4(^1D)3p - 2p^4(^3P)4s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1370.898	10		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1371.077	150		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1373.226	200		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1375.531	100		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1377.419	50		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1382.578	300		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1384.463	500		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1385.772	500		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1386.19	1		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1387.527	800		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1398.850	30		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1404.68	300		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^3G$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1409.361	1000		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3F^o - ^3G$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1413.895	10		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1418.393	30		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1427.760	60		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1429.189	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	A7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	Reference
Mg IV	1432.791	50		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3J^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1434.852	150		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^1D^o - ^3F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1437.53	500		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^1D^o - ^3F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1437.636	1000		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1437.844	10		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1438.267	100		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3S^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1447.424	300		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1448.243	30		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1448.476	30		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1450.66	1		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1451.48	3		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1454.212	5		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1457.229	100		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1459.38	1		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1459.540	300		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1459.617	400		$2p^4(^1P)3s - 2p^4(^3P)3p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1466.655	100		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1468.882	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3S^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1470.799	100		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1472.984	30		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1478.267	200		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1480.798	25		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1481.660	8		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3D - ^4F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1481.509	400		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1481.859	15		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1485.446	50		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1487.28	6		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3D^o - ^3S$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1490.451	350		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1491.998	100		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1492.82	3		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1494.647	15		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1495.505	300		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1495.993	60		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1497.422	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1500.142	70		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1501.534	30		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1502.970	15		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1506.48	3		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^3P^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1506.83			$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1508.534	20		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4D^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1508.841	250		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1510.691	200		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1520.97	10		$2p^4(^3P)3p - 2p^4(^3P)3d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1571.83	1		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1578.57	20		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1597.78	6		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1607.109	300		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1607.517	30		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1610.80	10		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1611.219	250		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1617.65	12		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1624.155	15		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1638.54	8		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1640.91	10		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4F - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1645.06	5		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1651.87	1		$2p^4(^1D)3p - 2p^4(^1D)3d$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1658.866	100		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1669.588	50		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1679.987	300		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1683.016	500		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1687.03			$2p^4(^3P)3s - 2p^4(^3P)3p$	$^3P - ^3S^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1692.704	200		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1698.806	400		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1699.686	100		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{5}{2}$	A7
Mg IV	1703.387	150		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	A7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg IV	1736.098	70		$2p^2(^3P)3s - 2p^4(^3P)3p$	$^3P - ^3S^o$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	1744.692	60		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	1749.503	20		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1797.296	30		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^3P - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1800.180	200		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1807.80	2		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1808.308	100		$2p^4(^1D)3s - 2p^4(^1D)3p$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1844.169	300		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^3P - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1853.107	60		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^3P - ^3D^o$	$\frac{1}{2} - \frac{3}{2}$	A7
Mg IV	1874.598	70		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1893.898	200		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1906.729	50		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	A7
Mg IV	1925.754	20		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1936.931	5		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	A7
Mg IV	1946.135	60		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A7
Mg IV	1956.570	40		$2p^4(^3P)3s - 2p^4(^3P)3p$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	A7

MAGNESIUM V (Mg^{4+}), $Z = 12$
 Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
 Ionization Potential $1\ 139\ 400\ cm^{-1}$; $141.26\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg V	92.409	10d		$2p^4 - 2p^3(^3D^o)5d$	$g^3P - ^3P^o$	2 - 1	S21
Mg V	92.428	10d		$2p^4 - 2p^3(^3D^o)5d$	$g^3P - ^3P^o$	2 - 2	S21
Mg V	92.534	10		$2p^4 - 2p^3(^3D^o)5d$	$g^3P - ^3P^o$? 1 - 1	S21, K8
Mg V	92.588	10		$2p^4 - 2p^3(^3D^o)5d$	$g^3P - ^3P^o$	1 - 2	S21
Mg V	92.641	10		$2p^4 - 2p^3(^3D^o)5d$	$g^3P - ^3D^o$	2 - 3	S21
Mg V	93.109	100b		$2p^4 - 2p^3(^3P^o)5d$	$^1D - ^1D^o$	2 - 2	S21
Mg V	94.793	10		$2p^4 - 2p^3(^3D^o)5s$	$g^3P - ^3D^o$	2 - 3	S21
Mg V	95.556	100b		$2p^4 - 2p^3(^3D^o)5d$	$^1D - ^1F^o$	2 - 3	S21
Mg V	95.592	10		$2p^4 - 2p^3(^3D^o)5d$	$^1D - ^1D^o$	2 - 2	S21
Mg V	95.803	200		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3D^o$	2 - 3	S21
Mg V	95.909	100d		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3P^o$	2 - 2	S21
Mg V	95.965	100		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3D^o$	1 - 2	S21
Mg V	96.019	200b		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3D^o$	0 - 1	S21
Mg V	96.085	100b		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3P^o$	1 - 1	S21
Mg V	96.159	10b		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3P^o$	0 - 1	S21
Mg V	97.391	100		$2p^4 - 2p^3(^4S^o)5d$	$g^3P - ^3D^o$	2 - 3	S21
Mg V	97.439	200		$2s^2 2p^4 - 2s 2p^4(^4P)3p$	$g^3P - ^3D^o$	2 - 3	S21
Mg V	97.563	100		$2p^4 - 2p^3(^4S^o)5d$	$g^3P - ^3D^o$	1 - 2	S21
Mg V	97.606	200b		$2s^2 2p^4 - 2s 2p^4(^4P)3p$	$g^3P - ^3D^o$	1 - 2	S21
Mg V	97.686	100b		$2s^2 2p^4 - 2s 2p^4(^4P)3p$	$g^3P - ^3D^o$	0 - 1	S21
Mg V	98.235	100		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	2 - 1	S21
Mg V	98.271	200		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	2 - 2	S21
Mg V	98.406	100		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	1 - 1	S21
Mg V	98.444	100		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	1 - 2	S21
Mg V	98.636	200		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3D^o$	2 - 3	S21
Mg V	98.805	200		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3D^o$	1 - 2	S21
Mg V	98.872	100		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3D^o$	0 - 1	S21
Mg V	98.983	400b		$2p^4 - 2p^3(^3P^o)4d$	$^1D - ^1F^o$	2 - 3	S21
Mg V	99.025	200b		$2p^4 - 2p^3(^3P^o)4d$	$^1D - ^1P^o$	2 - 1	S21
Mg V	99.067	200		$2p^4 - 2p^3(^3P^o)4d$	$^1D - ^1D^o$	2 - 2	S21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg V?	99.149	10					S21
Mg V	99.205	1		$2p^4 - 2p^3(^2P^o)4d$	$^1D - ^3D^o$? 2-2	S21, K8
Mg V	99.535	100		$2p^4 - 2p^3(^2D^o)5d$	$^1S - ^3P^o$? 0-1	S21, K8
Mg V	99.610	200		$2p^4 - 2p^3(^4S^o)5s$	$g^3P - ^3S^o$	2-1	S21
Mg V	99.788	100		$2p^4 - 2p^3(^4S^o)5s$	$g^3P - ^3S^o$	1-1	S21
Mg V	100.949	10		$2p^4 - 2p^3(^2P^o)4s$	$g^3P - ^3P^o$	2-2	S21
Mg V	101.671	300		$2p^4 - 2p^3(^2D^o)4d$	$^1D - ^1F^o$	2-3	S21
Mg V	101.782	300		$2p^4 - 2p^3(^2D^o)4d$	$^1D - ^1D^o$	2-2	S21
Mg V	101.845	100		$2p^4 - 2p^3(^2D^o)4d$	$^1D - ^3P^o$? 2-2	S21, K8
Mg V	102.079	200		$2p^4 - 2p^3(^2D^o)4d$	$^1D - ^1P^o$	2-1	S21
Mg V	103.533	10	-A	$2s2p^5 - 2s2p^4(^4P)5s$	$^3P^o - ^3P$	2-2	S21
Mg V	103.904	400		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	2-3	S21
Mg V	103.947	300		$2p^4 - 2p^3(^2D^o)4s$	$g^3P - ^3D^o$	2-3	S21
Mg V	104.100	200		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	1-2	S21
Mg V	104.140	200		$2p^4 - 2p^3(^2D^o)4s$	$g^3P - ^3D^o$	1-2	S21
Mg V	104.182	100		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	0-1	S21
Mg V	104.214	100		$2p^4 - 2p^3(^2D^o)4s$	$g^3P - ^3D^o$	0-1	S21
Mg V	104.432	200		$2p^4 - 2p^3(^2P^o)4s$	$^1D - ^1P^o$	2-1	S21
Mg V	107.661	200		$2p^4 - 2p^3(^2D^o)4s$	$^1D - ^1D^o$	2-2	S21
Mg V	109.174	10		$2p^4 - 2p^3(^2P^o)4s$	$^1S - ^1P^o$	0-1	S21
Mg V	109.812	200		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	2-1	S21
Mg V	110.029	100		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	1-1	S21
Mg V	110.121	10b		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	0-1	S21
Mg V	110.809	200		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3D^o$	2-2	S21
Mg V	110.859	400		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3D^o$	2-3	S21
Mg V	110.539	200		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^1D^o$	2-2	S21
Mg V	111.031	300		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3D^o$	1-2	S21
Mg V	111.091	300		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3D^o$	0-1	S21
Mg V	111.199	400b		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	2-2	S21
Mg V	111.247	200		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	2-1	S21
Mg V	111.419	200		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	1-2	S21
Mg V	111.467	200		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	1-1	S21
Mg V	111.496	200		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3P^o$	1-0	S21
Mg V	113.217	200		$2s2p^5 - 2s2p^4(^2D)3d$	$^3P^o - ^3D$	2-3	S21
Mg V	113.279	10		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^1F^o$? 2-3	S21, K8
Mg V	113.414	200		$2s2p^5 - 2s2p^4(^2D)3d$	$^3P^o - ^3D$	1-2	S21
Mg V	113.518	100		$2s2p^5 - 2s2p^4(^2D)3d$	$^3P^o - ^3D$	0-1	S21
Mg V	113.703	400		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3S^o$	2-1	S21
Mg V	113.923	100		$2s2p^5 - 2s2p^4(^4P)4s$	$^3P^o - ^3P$	2-2	S21
Mg V	113.934	300		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3S^o$	1-1	S21
Mg V	113.990	300		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	2-1	S21
Mg V	114.029	200		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3S^o$	0-1	S21
Mg V	114.059	400		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	2-2	S21
Mg V	114.199	300		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	1-0	S21
Mg V	114.226	300		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	1-1	S21
Mg V	114.285	300		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	1-2	S21
Mg V	114.324	300		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3P^o$	0-1	S21
Mg V	114.498	10		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^1P^o$? 2-1	S21, K8
Mg V	114.785	600d		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3D^o$	2-3	S21
Mg V	115.013	600d		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3D^o$	1-2	S21
Mg V	115.093	400b		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3D^o$	0-1	S21
Mg V	115.399	400		$2p^4 - 2p^3(^2P^o)3d$	$^1D - ^1P^o$	2-1	S21
Mg V	115.537	400		$2p^4 - 2p^3(^2P^o)3d$	$^1D - ^1D^o$	2-2	S21
Mg V	118.085	500		$2p^4 - 2p^3(^2D^o)3d$	$^1D - ^1F^o$	2-3	S21
Mg V	118.810	500		$2p^4 - 2p^3(^2D^o)3d$	$^1D - ^1D^o$	2-2	S21
Mg V	118.914	10		$2p^4 - 2p^3(^2D^o)3d$	$^1D - ^3P^o$? 2-2	S21, K8
Mg V	119.401	400		$2p^4 - 2p^3(^2D^o)3d$	$^1D - ^1P^o$	2-1	S21
Mg V?	119.447	400					S21
Mg V	119.978	10		$2p^4 - 2p^3(^4S^o)4s$	$^1S - ^3S^o$? 0-1	S21, K8
Mg V	121.644	600		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2-3	S21
Mg V	121.922	500		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	1-2	S21
Mg V	122.034	400		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	0-1	S21
Mg V	125.600	400b		$2p^4 - 2p^3(^2D^o)3d$	$^1S - ^1P^o$	0-1	S21
Mg V	126.280	400		$2s2p^5 - 2s2p^4(^4P)3d$	$^3P^o - ^3D$	2-3	S21
Mg V	126.544	200		$2s2p^5 - 2s2p^4(^4P)3d$	$^3P^o - ^3D$	1-2	S21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg V	126.677	10b		2s 2p ⁵ - 2s 2p ⁴ (⁴ P) 3d	³ P° - ³ D	0 - 1	S21
Mg V	132.171	600		2p ⁴ - 2p ³ (³ P°) 3s	³ P° - ³ P°	2 - 2	S21
Mg V	132.465	500		2p ⁴ - 2p ³ (³ P°) 3s	³ P° - ³ P°	1 - 2	S21
Mg V	132.623	300		2p ⁴ - 2p ³ (³ P°) 3s	³ P° - ³ P°	0 - 1	S21
Mg V	133.638	200		2s 2p ⁵ - 2s 2p ⁴ (³ D) 3s	³ P° - ³ D	2 - 3	S21
Mg V	135.953	100		2s 2p ⁵ - 2s 2p ⁴ (³ D) 3s	³ P° - ³ D	1 - 2	S21
Mg V	136.128	10		2s 2p ⁵ - 2s 2p ⁴ (³ D) 3s	³ P° - ³ D	0 - 1	S21
Mg V	137.234	600		2p ⁴ - 2p ³ (³ P°) 3s	³ D - ¹ P°	2 - 1	S21
Mg V	137.414	200		2p ⁴ - 2p ³ (³ D°) 3s	³ P° - ³ D°	2 - 3	S21
Mg V	137.748	700		2p ⁴ - 2p ³ (³ D°) 3s	³ P° - ³ D°	1 - 2	S21
Mg V	137.880	600		2p ⁴ - 2p ³ (³ D°) 3s	³ P° - ³ D°	0 - 1	S21
Mg V	142.933	600		2p ⁴ - 2p ³ (³ D°) 3s	¹ D - ¹ D°	2 - 2	S21
Mg V	145.485	500		2p ⁴ - 2p ³ (³ P°) 3s	¹ S - ¹ P°	0 - 1	S21
Mg V	146.083	600		2p ⁴ - 2p ³ (⁴ S°) 3s	³ P° - ³ S°	2 - 1	S21
Mg V	146.464	500		2p ⁴ - 2p ³ (⁴ S°) 3s	³ P° - ³ S°	1 - 1	S21
Mg V	146.621	400		2p ⁴ - 2p ³ (⁴ S°) 3s	³ P° - ³ S°	0 - 1	S21
Mg V	147.252	300		2p ⁴ - 2p ³ (³ P°) 3s	¹ S - ³ P°	? 0 - 1	S22, K8
Mg V	152.019	10		2s 2p ⁵ - 2s 2p ⁴ (⁴ P) 3s	³ P° - ³ P	2 - 1	S21
Mg V	152.149	300		2s 2p ⁵ - 2s 2p ⁴ (⁴ P) 3s	³ P° - ³ P	1 - 2	S21
Mg V	152.384	100		2s 2p ⁵ - 2s 2p ⁴ (⁴ P) 3s	³ P° - ³ P	1 - 1	S21
Mg V	152.527	100		2s 2p ⁵ - 2s 2p ⁴ (⁴ P) 3s	³ P° - ³ P	1 - 2	S21
Mg V	152.591	10d		2s 2p ⁵ - 2s 2p ⁴ (⁴ P) 3s	³ P° - ³ P	0 - 1	S21
Mg V	251.600	100		2s ² 2p ⁴ - 2s 2p ⁵	³ P° - ¹ P°	? 2 - 1	S22, K8
Mg V	276.581	1000		2s ² 2p ⁴ - 2s 2p ⁵	¹ D - ¹ P°	2 - 1	S21
Mg V	312.311	1000		2s ² 2p ⁴ - 2s 2p ⁵	¹ S - ¹ P°	0 - 1	S21
Mg V	351.089	850		2s ² 2p ⁴ - 2s 2p ⁵	³ P° - ³ P°	2 - 1	S21
Mg V	352.202	700		2s ² 2p ⁴ - 2s 2p ⁵	³ P° - ³ P°	1 - 0	S21
Mg V	353.094	1000		2s ² 2p ⁴ - 2s 2p ⁵	³ P° - ³ P°	2 - 2	S21
Mg V	353.300	650		2s ² 2p ⁴ - 2s 2p ⁵	³ P° - ³ P°	1 - 1	S21
Mg V	354.223	700		2s ² 2p ⁴ - 2s 2p ⁵	³ P° - ³ P°	0 - 1	S21
Mg V	355.326	850		2s ² 2p ⁴ - 2s 2p ⁵	³ P° - ³ P°	1 - 2	S21

MAGNESIUM VI (Mg⁵⁺), Z = 12
 Ground State 1s²2s²2p³ ⁴S_{3/2} (7 electrons)
 Ionization Potential 1 504 300 cm⁻¹; 186.50 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VI	72.430	100		2p ³ - 2p ² (³ P) 6s	⁴ S° - ⁴ P	3/2 - 5/2	S21
Mg VI	74.319	300b		2p ³ - 2p ² (³ P) 5d	⁴ S° - ⁴ F	3/2 - 5/2	S21
Mg VI	74.461	10b		2p ³ - 2p ² (³ P) 5d	⁴ S° - ⁴ F	3/2 - 5/2	S21
Mg VI	74.574	200		2s ² 2p ³ - 2s 2p ² (⁴ S°) 4p	⁴ S° - ⁴ P	3/2 - 5/2	S21
Mg VI	75.248	100		2p ³ - 2p ² (¹ D) 5d	³ D° - ³ D	3/2 - 5/2	S21
Mg VI	75.334	100d		2p ³ - 2p ² (¹ D) 5d	³ D° - ³ F	3/2 - 5/2	S21
Mg VI	75.834	200		2p ³ - 2p ² (³ P) 5s	⁴ S° - ⁴ P	3/2 - 5/2	S21
Mg VI	75.890	10		2p ³ - 2p ² (³ P) 5s	⁴ S° - ⁴ P	3/2 - 5/2	S21
Mg VI	76.908	1		2p ³ - 2p ² (¹ D) 5d	³ P° - ³ D	3/2 - 5/2	S21
Mg VI	77.301	10		2p ³ - 2p ² (¹ D) 4d	⁴ S° - ³ P	? 3/2 - 5/2	S21, K8
Mg VI	77.405	200b		2p ³ - 2p ² (³ P) 5d	¹ D° - ³ F	3/2 - 5/2	S21
Mg VI	77.511	100b		2p ³ - 2p ² (³ P) 5d	¹ D° - ³ F	3/2 - 5/2	S21
Mg VI	77.639	10		2p ³ - 2p ² (³ P) 5d	³ D° - ³ D	3/2 - 5/2	S21, K8
Mg VI	78.239	10		2p ³ - 2p ² (¹ S) 4d	³ D° - ³ D	3/2 - 5/2	S21
Mg VI	79.059	10d		2p ³ - 2p ² (³ P) 5s	³ D° - ⁴ P	3/2 - 5/2	S21, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VI	79.817	200		$2p^2 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	79.830	400		$2p^2 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	79.857	400		$2p^2 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	80.032	200		$2p^2 - 2p^2(^3P)4d$	$g^4S^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	80.075	200		$2p^2 - 2p^2(^3P)4d$	$g^4S^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	80.563	100		$2p^2 - 2p^2(^1D)4d$	$^3D^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	S21, K8
Mg VI	80.724	10		$2p^2 - 2p^2(^1D)4d$	$^3D^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	80.930	200		$2p^2 - 2p^2(^1D)4d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	81.106	300		$2p^2 - 2p^2(^1D)4d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	82.238	200b		$2s 2p^4 - 2s 2p^2(^3S^o) 5d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	82.475	100		$2p^2 - 2p^2(^1D)4d$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	82.853	100		$2p^2 - 2p^2(^1D)4d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	83.403	400b		$2p^2 - 2p^2(^3P)4d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	83.519	300b		$2p^2 - 2p^2(^3P)4d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	83.560	200b		$2p^2 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	84.745	200d		$2p^2 - 2p^2(^1D)4s$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	85.153	10b		$2p^2 - 2p^2(^3P)4d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	85.577	200		$2s^2 2p^2 - 2s 2p^2(^3D^o) 3p$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	85.622	300		$2s^2 2p^2 - 2s 2p^2(^3D^o) 3p$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	85.622	300		$2p^2 - 2p^2(^1D)4s$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	86.807	200		$2p^2 - 2p^2(^1D)4s$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	87.406	10		$2p^2 - 2p^2(^3P)4s$	$^3D^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	88.827	200		$2s 2p^4 - 2s 2p^2(^3S^o) 4d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	88.952	200		$2s 2p^4 - 2s 2p^2(^3S^o) 4d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	89.021	10		$2s 2p^4 - 2s 2p^2(^3S^o) 4d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	89.649	10		$2p^2 - 2p^2(^3P)4s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	90.897	600b		$2s^2 2p^2 - 2s 2p^2(^3S^o) 3p$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	92.964	100b		$2s 2p^4 - 2s 2p^2(^3S^o) 4s$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	93.109	100b		$2s 2p^4 - 2s 2p^2(^3S^o) 4s$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	93.493	300		$2p^2 - 2p^2(^1S) 3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	95.385	400b		$2p^2 - 2p^2(^3P) 3d$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	95.421	400b		$2p^2 - 2p^2(^3P) 3d$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	95.483	500b		$2p^2 - 2p^2(^3P) 3d$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	95.637	300b		$2p^2 - 2p^2(^3P) 3d$	$g^4S^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	95.675	300		$2p^2 - 2p^2(^3P) 3d$	$g^4S^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	95.803	200		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	96.085	100b		$2p^2 - 2p^2(^1S) 3d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.159	100		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.240	100		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.256	200		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.303	200		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	96.388	100		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.467	10		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.670	200		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.704	200		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.797	100		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	96.857	100		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.903	10		$2s 2p^4 - 2s 2p^2(^3D^o) 3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.939	400		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	96.973	400		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	97.251	500		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	97.278	500		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	98.508	300		$2p^2 - 2p^2(^1D) 3d$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	98.983	400b		$2p^2 - 2p^2(^1D) 3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	99.025	200b		$2p^2 - 2p^2(^1D) 3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	99.279	400		$2p^2 - 2p^2(^3P) 3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	99.333	400		$2p^2 - 2p^2(^3P) 3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	99.713	300		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	99.738	300		$2p^2 - 2p^2(^1D) 3d$	$^3D^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	100.702	500		$2p^2 - 2p^2(^3P) 3d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	100.904	400		$2p^2 - 2p^2(^3P) 3d$	$^3D^o - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	101.508	200d		$2p^2 - 2p^2(^3P) 3d$	$^3D^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	101.556	300		$2p^2 - 2p^2(^3P) 3d$	$^3D^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	102.189	500		$2p^2 - 2p^2(^3P) 3d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	102.239	500		$2p^2 - 2p^2(^3P) 3d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	104.519	300		$2p^2 - 2p^2(^3P) 3d$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	S21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VI	104.597	500		$2p^3 - 2p^2(^3P)3d$	$^3P - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	105.410	20 ^c		$2s2p^4 - 2s2p^3(^3D^o)3d$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	105.502	300		$2s2p^4 - 2s2p^3(^3D^o)3d$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	105.778	100		$2s2p^4 - 2s2p^3(^3D^o)3d$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	S21, K8
Mg VI	105.830	100		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	S21, K8
Mg VI	107.820	400					
Mg VI	108.015	300		$2s2p^4 - 2s2p^3(^4S^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	108.114	200		$2s2p^4 - 2s2p^3(^4S^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	108.148	100		$2s2p^4 - 2s2p^3(^4S^o)3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	108.338	100		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	108.441	10		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	111.160	300		$2p^3 - 2p^2(^1S)3s$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	111.199	400b		$2p^3 - 2p^2(^1S)3s$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	111.552	500		$2p^3 - 2p^2(^3P)3s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	111.746	400		$2p^3 - 2p^2(^3P)3s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	111.864	400					
Mg VI	113.189	500		$2p^3 - 2p^2(^3P)3s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	S21
Mg VI	114.412	10		$2p^3 - 2p^2(^1D)3s$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	114.624	10		$2s2p^4 - 2s2p^3(^3D^o)3s$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	114.725	10		$2s2p^4 - 2s2p^3(^3D^o)3s$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	114.725	10		$2s2p^4 - 2s2p^3(^3D^o)3s$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	116.968	500					
Mg VI	117.226	300		$2p^3 - 2p^2(^3P)3s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	117.527	100		$2p^3 - 2p^2(^3P)3s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	S21
Mg VI	120.415	10d		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	121.025	500		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	S21, K8
Mg VI	121.025	500		$2p^3 - 2p^2(^3P)3s$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	121.290	300					
Mg VI	123.590	100d		$2p^3 - 2p^2(^3P)3s$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	125.206	300		$2s2p^4 - 2s2p^3(^3D^o)3s$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	125.459	300b		$2s2p^4 - 2s2p^3(^4S^o)3s$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	125.600	400b		$2s2p^4 - 2s2p^3(^4S^o)3s$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	125.600	400b		$2s2p^4 - 2s2p^3(^4S^o)3s$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	126.450	100					
Mg VI	126.488	100		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	130.294	200b		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	130.630	100b		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	130.701	10		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	130.701	10		$2s2p^4 - 2s2p^3(^3P^o)3s$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	137.814	10					
Mg VI	268.986	650		$2s2p^4 - 2s2p^3(^3D^o)3s$	$^3P - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	270.394	750		$2s^22p^2 - 2s2p^4$	$^3L^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	S21
Mg VI	288.652	10		$2s^22p^2 - 2s2p^4$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	291.348	300		$2s^22p^2 - 2s2p^4$	$^3D^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	S21
Mg VI	291.348	300		$2s^22p^2 - 2s2p^4$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	291.458	200					
Mg VI	293.026	200		$2s^22p^2 - 2s2p^4$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	S21
Mg VI	293.124	400d		$2s^22p^2 - 2s2p^4$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	314.554	300		$2s^22p^2 - 2s2p^4$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	314.676	400		$2s^22p^2 - 2s2p^4$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	S21
Mg VI	314.676	400		$2s^22p^2 - 2s2p^4$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	S21
Mg VI	349.155	700d					
Mg VI	387.787	200d		$2s^22p^2 - 2s2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	388.020	300d		$2s^22p^2 - 2s2p^4$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S21
Mg VI	399.289	600		$2s^22p^2 - 2s2p^4$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	400.676	700		$2s^22p^2 - 2s2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	S21
Mg VI	400.676	700		$2s^22p^2 - 2s2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	403.315	800					
Mg VI	436.13			$2s^22p^2 - 2s2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S21
Mg VI	439.82			$2s2p^4 - 2p^5$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	F3
Mg VI	441.22			$2s2p^4 - 2p^5$	$^3P - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Mg VI	444.90			$2s2p^4 - 2p^5$	$^3P - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	F3
Mg VI	1900.04	100		$2s2p^3(^3D^o)3d - 2s^22p^3(^3P)5d$	$^3F^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S22, K8

MAGNESIUM VII (Mg^{6+}), $Z = 12$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential $1\ 814\ 300\ cm^{-1}$; $224.94\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VII	58.316	10		$2s^2 2p^2 - 2s 2p^2(^4P) 5p$	$^3P - ^3D^o$	2-3	S21
Mg VII	59.640	1		$2s 2p^2 - 2s 2p^2(^4P) 6d$	$^3S^o - ^3P$	2-3	S21
Mg VII	60.138	10		$2p^2 - 2p 6d$	$g^3P - ^3P^o$	2-2	S21
Mg VII	62.166	10d		$2s 2p^2 - 2s 2p^2(^4P) 5d$	$^3S^o - ^3P$	2-3	S21
Mg VII	62.615	10		$2p^2 - 2p 5d$	$^3P - ^3P^o$? 1-2	S21, K8
Mg VII	62.696	100		$2p^2 - 2p 5d$	$g^3P - ^3P^o$	2-2	S21
Mg VII	63.396	100d		$2s^2 2p^2 - 2s 2p^2(^4P) 4p$	$^3P - ^3D^o$	2-3	S21
Mg VII	64.122	200		$2p^2 - 2p 5d$	$^1D - ^1F^o$	2-3	S21
Mg VII	64.377	1000b		$2p^2 - 2p 5d$	$^1D - ^1D^o$	2-2	S21
Mg VII	66.788	10		$2s 2p^2 - 2s 2p^2(^4P) 5d$	$^1D^o - ^3F$	3-4	S21
Mg VII	67.453	10		$2s 2p^2 - 2s 2p^2(^4P) 4d$	$^3S^o - ^3P$	2-1	S21
Mg VII	67.470	100d		$2s 2p^2 - 2s 2p^2(^4P) 4d$	$^3S^o - ^3P$	2-2	S21
Mg VII	67.497	200		$2s 2p^2 - 2s 2p^2(^4P) 4d$	$^3S^o - ^3P$	2-3	S21
Mg VII	67.993	100d		$2p^2 - 2p 4d$	$g^3P - ^3P^o$	1-2	S21
Mg VII	68.064	200		$2p^2 - 2p 4d$	$g^3P - ^3P^o$	2-2	S21
Mg VII	68.100	200		$2p^2 - 2p 4d$	$g^3P - ^3D^o$	1-2	S21
Mg VII	68.144	300d		$2p^2 - 2p 4d$	$g^3P - ^3D^o$	2-3	S21
Mg VII	68.352	200		$2s 2p^2 - 2s 2p^2(^3D) 4d$	$^3D^o - ^3F$	3-4	S21
Mg VII	69.615	300b		$2p^2 - 2p 4d$	$^1D - ^1F^o$	2-3	S21
Mg VII	69.900	10		$2s 2p^2 - 2s 2p^2(^4P) 4s$	$^3S^o - ^3P$	2-3	S21
Mg VII	70.193	100		$2p^2 - 2p 4d$	$^1D - ^1D^o$	2-2	S21
Mg VII	71.786	100		$2p^2 - 2p 4d$	$^1S - ^1P^o$	0-1	S21
Mg VII	72.546	10b		$2s 2p^2 - 2s 2p^2(^4P) 4d$	$^3D^o - ^3D$	3-3	S21
Mg VII	72.787	100		$2s 2p^2 - 2s 2p^2(^4P) 4d$	$^3D^o - ^3F$	3-4	S21
Mg VII	72.852	10		$2s 2p^2 - 2s 2p^2(^4P) 4d$	$^3D^o - ^3F$	2-3	S21
Mg VII	72.896	1d		$2s 2p^2 - 2s 2p^2(^4P) 4d$	$^3D^o - ^3F$	1-2	S21
Mg VII	73.112	10		$2s 2p^2 - 2s 2p^2(^4P) 4d$	$^3D^o - ^3P$? 3-3	S21, K8
Mg VII	75.975	400		$2s^2 2p^2 - 2s 2p^2(^3D) 3p$	$^1D - ^1D^o$	2-2	S21
Mg VII	76.392	300		$2s^2 2p^2 - 2s 2p^2(^3D) 3p$	$^1D - ^1F^o$	2-3	S21
Mg VII	77.033	100		$2s^2 2p^2 - 2s 2p^2(^3D) 3p$	$g^3P - ^3D^o$	1-2	S21
Mg VII	77.144	200		$2s^2 2p^2 - 2s 2p^2(^3D) 3p$	$g^3P - ^3D^o$	2-3	S21
Mg VII	78.376	10		$2s^2 2p^2 - 2s 2p^2(^4P) 3p$	$g^3P - ^3P^o$? 0-1	S21, K8
Mg VII	78.405	10		$2s^2 2p^2 - 2s 2p^2(^4P) 3p$	$g^3P - ^3P^o$	1-2	S21
Mg VII	78.521	200		$2s^2 2p^2 - 2s 2p^2(^4P) 3p$	$g^3P - ^3P^o$	2-2	S21
Mg VII	79.131	500		$2s^2 2p^2 - 2s 2p^2(^4P) 3p$	$g^3P - ^3D^o$	1-2	S21
Mg VII	79.168	500		$2s^2 2p^2 - 2s 2p^2(^4P) 3p$	$g^3P - ^3D^o$	2-3	S21
Mg VII	79.248	100		$2s^2 2p^2 - 2s 2p^2(^4P) 3p$	$g^3P - ^3D^o$	2-2	S21
Mg VII	81.024	100		$2s^2 2p^2 - 2s 2p^2(^4P) 3p$	$g^3P - ^3S^o$	1-1	S21
Mg VII	81.133	300		$2s^2 2p^2 - 2s 2p^2(^4P) 3p$	$g^3P - ^3S^o$	2-1	S21
Mg VII	82.940	400		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3S^o - ^3P$	2-1	S21
Mg VII	82.969	400		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3S^o - ^3P$	2-2	S21
Mg VII	83.015	500d		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3S^o - ^3P$	2-3	S21
Mg VII	83.403	400b		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3S^o - ^3D$	2-3	S21
Mg VII	83.519	300b		$2p^2 - 2p 3d$	$g^3P - ^3P^o$	0-1	S21
Mg VII	83.560	200b		$2p^2 - 2p 3d$	$g^3P - ^3P^o$	1-0	S21
Mg VII	83.587	200		$2p^2 - 2p 3d$	$g^3P - ^3P^o$	1-1	S21
Mg VII	83.635	10		$2p^2 - 2p 3d$	$g^3P - ^3P^o$	1-2	S21
Mg VII	83.716	300		$2p^2 - 2p 3d$	$g^3P - ^3P^o$	2-1	S21
Mg VII	83.766	500		$2p^2 - 2p 3d$	$g^3P - ^3P^o$	2-2	S21
Mg VII	83.910	300		$2p^2 - 2p 3d$	$g^3P - ^3D^o$	0-1	S21
Mg VII	83.959	400d		$2p^2 - 2p 3d$	$g^3P - ^3D^o$	1-2	S21
Mg VII	84.025	500		$2p^2 - 2p 3d$	$g^3P - ^3D^o$	2-3	S21
Mg VII	84.087	300b		$2p^2 - 2p 3d$	$g^3P - ^3D^o$	2-2	S21
Mg VII	84.189	10		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^3D^o - ^3F$	3-2	S21
Mg VII	84.642	500		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^3D^o - ^3F$	3-4	S21
Mg VII	85.336	10		$2p^2 - 2p 3d$	$^1D - ^1P^o$	2-1	S21
Mg VII	85.407	700		$2p^2 - 2p 3d$	$^1D - ^1F^o$	2-3	S21
Mg VII	86.032	200d					S21
Mg VII	86.147	10		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^3P^o - ^3S$? 2-1	S21, K8
Mg VII	86.762	100		$2p^2 - 2p 3d$	$^1D - ^3D^o$? 2-3	S21, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VII	87.131	500d		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^3P^o - ^3D$	2 - 3	S21
Mg VII	87.175	400d		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^3P^o - ^3D$	1 - 2	S21
Mg VII	87.722	600		$2p^2 - 2p 3d$	$^1D^o - ^1D^o$	2 - 2	S21
Mg VII	87.767	400		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^3P^o - ^3F$	2 - 3	S21
Mg VII	87.889	500		$2p^2 - 2p 3d$	$^1D^o - ^3F^o$	2 - 2	S21
Mg VII	88.680	600		$2p^2 - 2p 3d$	$^1S - ^1P^o$	0 - 1	S21
Mg VII	89.407	200		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3D^o - ^3D$	3 - 3	S21
Mg VII	89.448	200		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3D^o - ^3D$	2 - 2	S21
Mg VII	89.476	10		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3D^o - ^3D$	1 - 1	S21
Mg VII	90.338	100		$2p^2 - 2p 3d$	$^1S - ^3D^o$? 0 - 1	S21, K8
Mg VII	90.706	400		$2s 2p^2 - 2s 2p^2(^4F) 3d$	$^3D^o - ^3F$	3 - 4	S21
Mg VII	90.815	300		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3D^o - ^3F$	2 - 3	S21
Mg VII	90.897	600b		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3D^o - ^3F$	1 - 2	S21
Mg VII	91.302	10d		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3S^o - ^3P$? 2 - 2	S21, K8
Mg VII	91.460	10d		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3D^o - ^3P$	2 - 1	S21
Mg VII	91.573	100		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3D^o - ^3P$	3 - 2	S21
Mg VII	92.256	300		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^1D^o - ^1F$	2 - 3	S21
Mg VII	92.503	10		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^1D^o - ^3S$? 2 - 1	S21, K8
Mg VII	92.898	200		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3P^o - ^3D$	2 - 3	S21
Mg VII	92.934	200		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3P^o - ^3D$	1 - 2	S21
Mg VII	92.964	100b		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3P^o - ^3D$	0 - 1	S21
Mg VII	94.043	400b		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3S^o - ^3P$	2 - 3	S21
Mg VII	94.174	300		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3S^o - ^3P$	2 - 2	S21
Mg VII	94.276	200b		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3S^o - ^3P$	2 - 1	S21
Mg VII	95.027	400		$2s 2p^2 - 2s 2p^2(^3D) 3s$	$^3D^o - ^3D$	3 - 3	S21
Mg VII	95.089	10		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3P^o - ^3P$	1 - 0	S21
Mg VII	95.139	100		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3P^o - ^3P$	0 - 1	S21
Mg VII	95.233	100		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3P^o - ^3P$	2 - 2	S21
Mg VII	95.259	200		$2p^2 - 2p 3s$	$g^3P - ^3P^o$	1 - 2	S21
Mg VII	95.385	400b		$2p^2 - 2p 3s$	$g^3P - ^3P^o$	0 - 1	S21
Mg VII	95.421	400b		$2p^2 - 2p 3s$	$g^3P - ^3P^o$	2 - 2	S21
Mg VII	95.483	500b		$2p^2 - 2p 3s$	$g^3P - ^3P^o$	1 - 1	S21
Mg VII	95.556	100b		$2p^2 - 2p 3s$	$g^3P - ^3P^o$	1 - 0	S21
Mg VII	95.637	300b		$2p^2 - 2p 3s$	$g^3P - ^3P^o$	2 - 1	S21
Mg VII	96.019	200b		$2s 2p^2 - 2s 2p^2(^3D) 3d$	$^1P^o - ^1D$	1 - 2	S21
Mg VII	98.032	300		$2p^2 - 2p 3s$	$^1D - ^1P^o$	2 - 1	S21
Mg VII	98.983	400b		$2s 2p^2 - 2s 2p^2(^3D) 3s$	$^3P^o - ^3D$	2 - 3	S21
Mg VII	100.374	100		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^1D^o - ^3D$? 2 - 2	S21, K8
Mg VII	100.421	100		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^1D^o - ^3D$? 2 - 1	S21, K8
Mg VII	101.956	200		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3D^o - ^3P$	3 - 2	S21
Mg VII	102.053	10		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^1D^o - ^3F$? 2 - 3	S21, K8
Mg VII	102.138	100		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3D^o - ^3P$	2 - 1	S21
Mg VII	102.471	300		$2p^2 - 2p 3s$	$^1S - ^1P^o$	0 - 1	S21
Mg VII	102.906	300		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^1D^o - ^3P$? 2 - 1	S21, K8
Mg VII	103.743	10		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3S^o - ^3P$	1 - 1	S21
Mg VII	103.859	10		$2s 2p^2 - 2s 2p^2(^4P) 3d$	$^3S^o - ^3P$	1 - 2	S21
Mg VII	105.159	100		$2s 2p^2 - 2s 2p^2(^3D) 3s$	$^1D^o - ^1D$	2 - 2	S21
Mg VII	106.524	200d		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3P^o - ^3P$	2 - 2	S21
Mg VII	106.707	100		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3P^o - ^3P$	2 - 1	S21
Mg VII	106.809	10		$2s 2p^2 - 2s 2p^2(^4P) 3s$	$^3P^o - ^3P$	1 - 0	S21
Mg VII	110.121	10b		$2s 2p^2 - 2s 2p^2(^3D) 3s$	$^1P^o - ^1D$	1 - 2	S21
Mg VII	111.984	10d		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	3 - 2	S21
Mg VII	112.135	10		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	2 - 1	S21
Mg VII	112.269	1		$2s 2p^2 - 2s^2 2p 3p$	$^3D^o - ^3P$	1 - 0	S21
Mg VII	276.145	200		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3S^o$	0 - 1	S21
Mg VII	277.007	300		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3S^o$	1 - 1	S21
Mg VII	278.406	400		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3S^o$	2 - 1	S21
Mg VII	280.744	300		$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1P^o$	2 - 1	S21
Mg VII	319.016	400d		$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1D^o$	2 - 2	S21
Mg VII	320.50			$2s^2 2p^2 - 2s 2p^3$	$^1S - ^1P^o$	0 - 1	F6
Mg VII	321.00			$2s 2p^2 - 2p^4$	$^3D^o - ^3P$	2 - 1	F6
Mg VII	323.29			$2s 2p^2 - 2p^4$	$^3D^o - ^3P$	3 - 2	F6
Mg VII	363.770	10		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^o$	0 - 1	S21
Mg VII	65.230	200d		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^o$	1 - 2	S21
Mg VII	67.679	400d		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^o$	2 - 2	S21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VII	371.06			$2s 2p^2 - 2p^4$	$^3P^{\circ} - ^3P$	2 - 1	F6
Mg VII	373.99			$2s 2p^2 - 2p^4$	$^3P^{\circ} - ^3P$	2 - 2	F6
Mg VII	382.72			$2s 2p^2 - 2p^4$	$^1P^{\circ} - ^1S$	1 - 0	F6
Mg VII	429.134	100d		$2s^2 2p^2 - 2s 2p^3$	$g^3P^{\circ} - ^3D^{\circ}$	0 - 1	S21
Mg VII	431.318	200d		$2s^2 2p^2 - 2s 2p^3$	$g^3P^{\circ} - ^3D^{\circ}$	1 - 2	S21
Mg VII	434.710	10d		$2s^2 2p^2 - 2s 2p^3$	$g^3P^{\circ} - ^3D^{\circ}$	2 - 2	S21
Mg VII	434.923	200d		$2s^2 2p^2 - 2s 2p^3$	$g^3P^{\circ} - ^3D^{\circ}$	2 - 3	S21
Mg VII	450.69			$2s 2p^2 - 2p^4$	$^1D^{\circ} - ^1D$	2 - 2	F0
Mg VII	545.98			$2s 2p^2 - 2p^4$	$^3S^{\circ} - ^3P$	1 - 0	F3
Mg VII	548.54			$2s 2p^2 - 2p^4$	$^3S^{\circ} - ^3P$	1 - 1	F3
Mg VII	554.89			$2s 2p^2 - 2p^4$	$^3S^{\circ} - ^3P$	1 - 2	F3
Mg VII	558.22			$2s 2p^2 - 2p^4$	$^1P^{\circ} - ^1D$	1 - 2	F3

MAGNESIUM VIII (Mg^{7+}), $Z = 12$
 Ground State $1s^2 2s^2 2p^2 P_{1/2}^{\circ}$ (5 electrons)
 Ionization Potential $2\ 144\ 700\ cm^{-1}$; $265.90\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VIII	50.219	20		$2s^2 2p - 2s 2p(^3P^{\circ}) 5p$	$g^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	50.386	20		$2s^2 2p - 2s 2p(^3P^{\circ}) 5p$	$g^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	51.040	10		$2s 2p^2 - 2s 2p(^3P^{\circ}) 6d$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	51.098	40		$2s 2p^2 - 2s 2p(^3P^{\circ}) 6d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	51.389	20		$2p - 6d$	$g^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H7
Mg VIII	51.470	40		$2p - 6d$	$g^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	52.395	10		$2s 2p^2 - 2p^3(^3P) 4p$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	52.628	40		$2s 2p^2 - 2s 2p(^1P^{\circ}) 5d$	$^3D - ^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	52.692	80		$2s 2p^2 - 2s 2p(^1P^{\circ}) 5d$	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	53.438	20		$2s 2p^2 - 2s 2p(^3P^{\circ}) 5d$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	53.484	10d		$2s 2p^2 - 2s 2p(^3P^{\circ}) 5d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	53.512	100d		$2s 2p^2 - 2s 2p(^3P^{\circ}) 5d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	53.744	10		$2s 2p^2 - 2s 2p(^3P^{\circ}) 6d$	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	53.812	10		$2p - 5d$	$g^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S20
Mg VIII	53.905	100		$2p - 5d$	$g^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	54.853	60		$2s^2 2p - 2s 2p(^3P^{\circ}) 4p$	$g^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	H7
Mg VIII	54.886	100		$2s^2 2p - 2s 2p(^3P^{\circ}) 4p$	$g^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	55.222	10d		$2s^2 2p - 2s 2p(^3P^{\circ}) 4p$	$g^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	56.358	10d		$2s 2p^2 - 2s 2p(^3P^{\circ}) 5d$	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	56.403	10d		$2s 2p^2 - 2s 2p(^3P^{\circ}) 5d$	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	57.590	10		$2s 2p^2 - 2s 2p(^1P^{\circ}) 4d$	$^3D - ^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	57.736	100		$2s 2p^2 - 2s 2p(^1P^{\circ}) 4d$	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	58.537	10d		$2s 2p^2 - 2s 2p(^3P^{\circ}) 4d$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S20
Mg VIII	58.614	200d		$2s 2p^2 - 2s 2p(^3P^{\circ}) 4d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	58.667	300d		$2s 2p^2 - 2s 2p(^3P^{\circ}) 4d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	59.038	200		$2p - 4d$	$g^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S20
Mg VIII	59.153	300		$2p - 4d$	$g^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	60.316	40		$2s 2p^2 - 2s 2p(^3P^{\circ}) 4s$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H7
Mg VIII	60.384	10		$2s 2p^2 - 2s 2p(^3P^{\circ}) 4s$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	60.806	10		$2p - 4s$	$g^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	S20
Mg VIII	61.891	200		$2s 2p^2 - 2s 2p(^1P^{\circ}) 4d$	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	61.964	100b		$2s 2p^2 - 2s 2p(^1P^{\circ}) 4d$	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	62.291	10		$2s 2p^2 - 2s 2p(^3P^{\circ}) 4d$	$^3D - ^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S20
Mg VIII	64.246	10		$2s^2 2p - 2s 2p(^1P^{\circ}) 3p$	$g^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	S20
Mg VIII	64.377	100b		$2s^2 2p - 2s 2p(^1P^{\circ}) 3p$	$g^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	S20

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VIII	64.488	100d		2s ² 2p - 2s 2p (¹ P°) 3p	g ² P° - ² P	½ - ¾	S20
Mg VIII	64.518	100d		2s ² 2p - 2s 2p (¹ P°) 3p	g ² P° - ² P	½ - ½	S20
Mg VIII	64.635	200		2s ² 2p - 2s 2p (¹ P°) 3p	g ² P° - ² P	¾ - ¾	S20
Mg VIII	64.702	200		2s ² 2p - 2s 2p (¹ P°) 3p	g ² P° - ² D	¾ - ¾	S20
Mg VIII	64.811	10		2s 2p ² - 2p ² (² P) 3p	⁴ P - ⁴ S°	¾ - ¾	S20
Mg VIII	64.878	100		2s 2p ² - 2p ² (² P) 3p	⁴ P - ⁴ S°	¾ - ¾	S20
Mg VIII	65.735	100		2s 2p ² - 2p ² (² P) 3p	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	65.806	200		2s 2p ² - 2p ² (² P) 3p	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	66.069	300		2s 2p ² - 2p ² (² F) 3p	⁴ P - ⁴ D°	¾ - ¾	S20
Mg VIII	67.731	400b		2s 2p ² - 2p ² (¹ D) 3p	² D - ² D°	¾ - ¾	S20
Mg VIII	68.450	100		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² S	½ - ½	S20
Mg VIII	68.550	100		2s 2p ² - 2p ² (¹ D) 3p	² D - ² F°	¾ - ¾	S20
Mg VIII	68.580	10		2s 2p ² - 2p ² (¹ D) 3p	² D - ² F°	¾ - ¾	S20
Mg VIII	68.606	200		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² S	¾ - ½	S20
Mg VIII	69.327	10		2s 2p ² - 2p ² (² P) 3p	² D - ⁴ S°	?	S21, K8
Mg VIII	69.413	400b		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² D	½ - ¾	S20
Mg VIII	69.467	500b		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² D	¾ - ¾	S20
Mg VIII	69.577	100		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² D	¾ - ¾	S20
Mg VIII	70.953	100		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² P	½ - ¾	S20
Mg VIII	71.007	200d		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² P	½ - ½	S20
Mg VIII	71.118	300		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² P	¾ - ¾	S20
Mg VIII	71.168	100		2s ² 2p - 2s 2p (³ P°) 3p	g ² P° - ² P	¾ - ½	S20
Mg VIII	71.454	100		2p ² - 2s 2p (³ P°) 4p	⁴ S° - ² P	?	S21, K8
Mg VIII	72.027	300b		2s 2p ² - 2p ² (¹ D) 3p	² P - ² D°	¾ - ¾	S20
Mg VIII	72.546	10b		2s 2p ² - 2s 2p (¹ P°) 3d	² D - ² P°	¾ - ¾	S20
Mg VIII	72.684	100d		2s 2p ² - 2s 2p (¹ P°) 3d	² D - ² D°	¾ - ¾	S20
Mg VIII	73.250	400		2s 2p ² - 2s 2p (¹ P°) 3d	² D - ² F°	¾ - ¾	S20
Mg VIII	73.710	10		2s 2p ² - 2s 2p (³ P°) 3s	⁴ P - ² P°	?	S21, K8
Mg VIII	73.773	10		2s 2p ² - 2s 2p (¹ P°) 3s	⁴ P - ² P°	?	S21, K8
Mg VIII	73.825	100		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ P°	½ - ¾	S20
Mg VIII	73.862	200		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ P°	¾ - ½	S20
Mg VIII	73.890	100		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	73.927	100		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	73.981	200		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	74.021	300		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	74.274	200b		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ D°	½ - ¾	S20
Mg VIII	74.319	300b		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ D°	¾ - ¾	S20
Mg VIII	74.366	400b		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ D°	¾ - ¾	S20
Mg VIII	74.411	100b		2s 2p ² - 2s 2p (³ P°) 3d	⁴ P - ⁴ F°	¾ - ¾	S20
Mg VIII	74.676	100		2p ² - 2p ² (¹ D) 3d	⁴ S° - ² P	?	S21, K8
Mg VIII	74.858	600		2p - 3d	g ² P° - ² D	½ - ¾	S20
Mg VIII	75.034	700		2p - 3d	g ² P° - ² D	¾ - ¾	S20
Mg VIII	76.199	100		2s 2p ² - 2s 2p (¹ P°) 3d	² S - ² P°	½ - ¾	S20
Mg VIII	76.714	100		2p ² - 2p ² (² P) 3d	⁴ S° - ⁴ P	¾ - ½	S20
Mg VIII	76.740	200		2p ² - 2p ² (² P) 3d	⁴ S° - ⁴ P	¾ - ¾	S20
Mg VIII	76.788	300		2p ² - 2p ² (² P) 3d	⁴ S° - ⁴ P	¾ - ¾	S20
Mg VIII	77.405	200b		2s 2p ² - 2s 2p (¹ P°) 3d	² P - ² P°	½ - ½	S20
Mg VIII	77.511	100b		2s 2p ² - 2s 2p (¹ P°) 3d	² P - ² P°	¾ - ¾	S20
Mg VIII	77.572	500		2s 2p ² - 2s 2p (¹ P°) 3d	² P - ² D°	½ - ¾	S20
Mg VIII	77.671	500		2s 2p ² - 2s 2p (¹ P°) 3d	² P - ² D°	¾ - ¾	S20
Mg VIII	77.737	600b		2p ² - 2p ² (¹ D) 3d	² D° - ² F	¾ - ¾	S20
Mg VIII	78.446	600d		2s 2p ² - 2s 2p (³ P°) 3d	² D - ² F°	¾ - ¾	S20
Mg VIII	78.574	600d		2s 2p ² - 2s 2p (³ P°) 3d	² D - ² F°	¾ - ¾	S20
Mg VIII	79.695	200		2s 2p ² - 2s 2p (¹ P°) 3s	² D - ² P°	¾ - ¾	S20
Mg VIII	79.880	200		2p ² - 2p ² (² P) 3d	² D° - ⁴ P	?	S21, K8
Mg VIII	80.229	400d		2s 2p ² - 2s 2p (³ P°) 3d	² D - ² D°	¾ - ¾	S20
Mg VIII	80.255	400d		2s 2p ² - 2s 2p (³ P°) 3d	² D - ² D°	¾ - ¾	S20
Mg VIII	80.806	10d		2p ² - 2p ² (² P) 3d	² D° - ² D	¾ - ¾	S20
Mg VIII	80.889	100		2p ² - 2p ² (² P) 3d	² D° - ² F	¾ - ¾	S20
Mg VIII	81.304	100		2p ² - 2p ² (¹ D) 3d	² P° - ² P	?	S20
Mg VIII	81.368	10		2p ² - 2p ² (¹ D) 3d	² P° - ² P	?	S20
Mg VIII	81.732	300		2s 2p ² - 2s 2p (³ P°) 3s	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	81.790	200		2s 2p ² - 2s 2p (³ P°) 3s	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	81.844	400		2s 2p ² - 2s 2p (³ P°) 3s	⁴ P - ⁴ P°	¾ - ¾	S20
Mg VIII	81.943	200		2s 2p ² - 2s 2p (³ P°) 3s	⁴ P - ⁴ P°	¾ - ¾	S20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg VIII	81.979	200		2s 2p ² - 2s 2p (² P ^o) 3s	⁴ P - ⁴ P ^o	½ - ½	S20
Mg VIII	82.238	200b		2s 2p ² - 2s 2p (² P ^o) 3d	² S - ² P ^o	½ - ½	S20
Mg VIII	82.317	300		2s 2p ² - 2s 2p (² P ^o) 3d	² S - ² P ^o	½ - ½	S20
Mg VIII	82.598	20c		2p - 3s	² P ^o - ² S	½ - ½	S20
Mg VIII	82.709	200		2p ² - 2p ² (¹ D) 3d	² P ^o - ² D	½ - ½	S20
Mg VIII	87.822	300		2p - 3s	² P ^o - ² S	½ - ½	S20
Mg VIII	84.087	300b		2s 2p ² - 2s 2p (¹ P ^o) 3s	² S - ² P ^o	½ - ½	S20
Mg VIII	84.827	10d		2p ² - 2p ² (² P) 3d	² P ^o - ² P	½ - ½	S20
Mg VIII	84.919	100		2p ² - 2p ² (² P) 3s	⁴ S ^o - ⁴ P	½ - ½	S20
Mg VIII	85.064	10		2p ² - 2p ² (² P) 3s	⁴ S ^o - ⁴ P	½ - ½	S20
Mg VIII	85.153	10b		2p ² - 2p ² (² P) 3s	⁴ S ^o - ⁴ P	½ - ½	S20
Mg VIII	85.248	200		2p ² - 2p ² (¹ D) 3s	² D ^o - ² D	½ - ½	S20
Mg VIII	85.599	300		2s 2p ² - 2s 2p (¹ P ^o) 3s	² P - ² P ^o	½ - ½	S20
Mg VIII	85.749	400		2s 2p ² - 2s 2p (¹ P ^o) 3s	² P - ² P ^o	½ - ½	S20
Mg VIII	86.234	100		2s 2p ² - 2s 2p (² P ^o) 3d	² P - ² D ^o	½ - ½	S20
Mg VIII	86.359	100		2s 2p ² - 2s 2p (² P ^o) 3d	² P - ² D ^o	½ - ½	S20
Mg VIII	86.417	200d		2s 2p ² - 2s 2p (² P ^o) 3d	² P - ² D ^o	?	S21, K8
Mg VIII	86.440	200d		2s 2p ² - 2s 2p (² P ^o) 3d	² P - ² D ^o	?	S21, K8
Mg VIII	86.847	200		2s 2p ² - 2s 2p (² P ^o) 3s	² D - ² P ^o	½ - ½	S20
Mg VIII	87.017	100		2s 2p ² - 2s 2p (² P ^o) 3s	² D - ² P ^o	½ - ½	S20
Mg VIII	88.016	200		2p ² - 2s 2p (¹ P ^o) 3p	⁴ S ^o - ⁴ P	?	S21, K8
Mg VIII	97.123	100d		2s 2p ² - 2s 2p (² P ^o) 3s	² S - ² P ^o	½ - ½	S20
Mg VIII	92.324	10		2s 2p ² - 2s 2p (² P ^o) 3s	² S - ² P ^o	½ - ½	S70
Mg VIII	93.650	200d		2p ² - 2p ² (² P) 3s	² P ^o - ⁴ P	?	S21, K8
Mg VIII	93.911	10		2s 2p ² - 2s 2p (² P ^o) 3s	² P - ² P ^o	½ - ½	S20
Mg VIII	93.972	10		2p ² - 2p ² (² P) 3s	² P ^o - ⁴ P	?	S21, K8
Mg VIII	94.043	400b		2s 2p ² - 2s 2p (² P ^o) 3s	² P - ² P ^o	½ - ½	S20
Mg VIII	94.276	200b		2s 2p ² - 2s 2p (² P ^o) 3s	² P - ² P ^o	½ - ½	S20
Mg VIII	97.465	200		2p ² - 2s 2p (¹ P ^o) 3p	² P ^o - ² P	½ - ½	S20
Mg VIII	97.525	10		2p ² - 2s 2p (¹ P ^o) 3p	² P ^o - ² P	½ - ½	S20
Mg VIII	97.606	200b		2p ² - 2s 2p (¹ P ^o) 3p	² P ^o - ² D	½ - ½	S20
Mg VIII	97.686	100b		2p ² - 2s 2p (¹ P ^o) 3p	² P ^o - ² D	½ - ½	S20
Mg VIII	100.519	10		2p ² - 2s 2p (² P ^o) 3p	⁴ S ^o - ² P	?	S21, K8
Mg VIII	100.597	200		2p ² - 2s 2p (² P ^o) 3p	⁴ S ^o - ² P	?	S21, K8
Mg VIII	269.295	10		2s 2p (¹ P ^o) 3s - 2s ² 5d	² P ^o - ² D	?	S22, K8
Mg VIII	295.393	10		2s 2p (² P ^o) 3s - 2s ² 4d	⁴ P ^o - ² D	?	S22, K8
Mg VIII	311.806	10d		2s ² 2p - 2s 2p ²	² P ^o - ² P	½ - ½	S20
Mg VIII	313.743	100d		2s ² 2p - 2s 2p ²	² P ^o - ² P	½ - ½	S20
Mg VIII	315.022	20c		2s ² 2p - 2s 2p ²	² P ^o - ² P	½ - ½	S20
Mg VIII	317.029	100d		2s ² 2p - 2s 2p ²	² P ^o - ² P	½ - ½	S20
Mg VIII	335.230	10d		2s ² 2p - 2s 2p ²	² P ^o - ² S	½ - ½	S20
Mg VIII	339.007	100d		2s ² 2p - 2s 2p ²	² P ^o - ² S	½ - ½	S20
Mg VIII	341.75			2s 2p ² - 2p ³	² D - ² P ^o	½ - ½	F3
Mg VIII	342.07			2s 2p ² - 2p ³	² D - ² P ^o	½ - ½	F3
Mg VIII	352.46			2s 2p ² - 2p ³	⁴ P - ⁴ S ^o	½ - ½	F3
Mg VIII	353.86			2s 2p ² - 2p ³	⁴ P - ⁴ S ^o	½ - ½	F3
Mg VIII	356.000	10		2s 2p ² - 2p ³	⁴ P - ⁴ S ^o	½ - ½	S20
Mg VIII	428.27			2s 2p ² - 2p ³	² D - ² D ^o	½ - ½	F3
Mg VIII	430.467	10d		2s ² 2p - 2s 2p ²	² P ^o - ² D	½ - ½	S20
Mg VIII	436.726	100d		2s ² 2p - 2s 2p ²	² P ^o - ² D	½ - ½	S20
Mg VIII	441.22			2s 2p ² - 2p ³	² S - ² P ^o	½ - ½	F3
Mg VIII	441.76			2s 2p ² - 2p ³	² S - ² P ^o	½ - ½	F3
Mg VIII	465.972	10		2s 2p (¹ P ^o) 3d - 2s 2p (² P ^o) 4p	² P ^o - ² D	?	S22, K8
Mg VIII	485.13			2s 2p ² - 2p ³	² P - ² P ^o	½ - ½	F3
Mg VIII	485.59			2s 2p ² - 2p ³	² P - ² P ^o	½ - ½	F3
Mg VIII	489.86			2s 2p ² - 2p ³	² P - ² P ^o	½ - ½	F3
Mg VIII	490.29			2s 2p ² - 2p ³	² P - ² P ^o	½ - ½	F3
Mg VIII	491.045	10		2s 2p (² P ^o) 3d - 2p ² (² P) 3d	² F ^o - ⁴ P	?	S22, K8
Mg VIII	679.77			2s 2p ² - 2p ³	² P - ² D ^o	½ - ½	F3
Mg VIII	689.55			2s 2p ² - 2p ³	² P - ² L ^o	½ - ½	F3

MAGNESIUM IX (Mg^{8+}), $Z = 12$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential 2.64×10^5 200 cm^{-1} ; 327.95 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg IX	40.638	10					
Mg IX	41.803	40		$2s^2 - 2s 7p$	$g^1S - ^1P^o$	0-1	H6
Mg IX	43.087	10		$2s^2 - 2s 6p$	$g^1S - ^1P^o$	0-1	H6
Mg IX	43.138	20		$2s 2p - 2s 7d$	$^3P^o - ^3D$	1-2	H6
Mg IX	43.48	50		$2s 2p - 2s 7d$	$^3P^o - ^3D$	2-3	H6
Mg IX				$2s 2p - 2p 5p$	$^3P^o - ^3P$	2-2	H6
Mg IX	43.843	60					
Mg IX	44.373	40		$2s^2 - 2s 5p$	$g^1S - ^1P^o$	0-1	H6
Mg IX	44.420	60		$2s 2p - 2s 6d$	$^3P^o - ^3D$	1-2	H6
Mg IX	44.983	20		$2s 2p - 2s 6d$	$^3P^o - ^3D$	2-3	H6
Mg IX	45.635	40		$2p^2 - 2p 7d$	$^1D - ^1F^o$	2-3	H6
Mg IX				$2s 2p - 2s 7d$	$^1P^o - ^1D$	1-2	H6
Mg IX	45.980	20					
Mg IX	46.340	40		$2s 2p - 2p 5p$	$^1P^o - ^1D$	1-2	H6
Mg IX	46.657	160		$2p^2 - 2p 6d$	$^1D - ^1F^o$	2-3	H6
Mg IX	46.711	10		$2s 2p - 2s 5d$	$^3P^o - ^3D$	1-2	H6
Mg IX	47.041	60		$2s 2p - 2s 5d$	$^3P^o - ^3D$	2-3	S20
Mg IX				$2s 2p - 2s 6d$	$^1P^o - ^1D$	1-2	H6
Mg IX	47.818	10d					
Mg IX	47.947	100d		$2s 2p - 2p 4p$	$^3P^o - ^3P$	2-2	S20
Mg IX	48.024	10d		$2s 2p - 2p 4p$	$^3P^o - ^3D$	2-3	S20
Mg IX	48.340	100		$2p^2 - 2p 5d$	$^3P - ^3D^o$	2-3	S20
Mg IX	48.794	10		$2s^2 - 2s 4p$	$g^1S - ^1P^o$	0-1	S20
Mg IX				$2p^2 - 2p 5d$	$^1D - ^1F^o$	2-3	S20
Mg IX	49.586	1					
Mg IX	50.777	10		$2s 2p - 2s 5d$	$^1P^o - ^1D$	1-2	S20
Mg IX	51.560	10		$2s 2p - 2p 4p$	$^1P^o - ^1D$	1-2	S20
Mg IX	51.591	300		$2s 2p - 2s 4d$	$^3P^o - ^3D$	0-1	S20
Mg IX	51.654	400		$2s 2p - 2s 4d$	$^3P^o - ^3D$	1-1	S20
Mg IX				$2s 2p - 2s 4d$	$^3P^o - ^3D$	2-3	S20
Mg IX	53.112	10					
Mg IX	53.188	200d		$2p^2 - 2p 4d$	$^3P - ^3P^o$	1-2	S20
Mg IX	53.222	200d		$2p^2 - 2p 4d$	$^3P - ^3P^o$	2-2	S20
Mg IX	54.011	200		$2p^2 - 2p 4d$	$^3P - ^3D^o$	2-3	S20
Mg IX	54.463	10		$2p^2 - 2p 4d$	$^1D - ^1F^o$	2-3	S20
Mg IX				$2p^2 - 2p 4d$	$^1D - ^1D^o$	2-2	S20
Mg IX	55.060	200					
Mg IX	56.861	10		$2s 2p - 2s 4d$	$^1P^o - ^1D$	1-2	S20
Mg IX	61.038	200		$2p^2 - 2p 4d$	$^1S - ^1P^o$	0-1	S20
Mg IX	61.088	100		$2s 2p - 2p 3p$	$^3P^o - ^3P$	1-2	S20
Mg IX	61.127	300		$2s 2p - 2p 3p$	$^3P^o - ^3P$	1-1	S20
Mg IX				$2s 2p - 2p 3p$	$^3P^o - ^3P$	2-2	S20
Mg IX	61.175	200					
Mg IX	61.359	10		$2s 2p - 2p 3p$	$^3P^o - ^3P$	2-1	S20
Mg IX	61.393	100		$2s 2p - 2p 3p$	$^3P^o - ^3S$	0-1	S20
Mg IX	61.489	200		$2s 2p - 2p 3p$	$^3P^o - ^3S$	1-1	S20
Mg IX	61.924	400		$2s 2p - 2p 3p$	$^3P^o - ^3S$	2-1	S20
Mg IX				$2s 2p - 2p 3p$	$^3P^o - ^3D$	2-3	S20
Mg IX	61.964	100b					
Mg IX	62.020	10		$2s 2p - 2p 3p$	$^3P^o - ^3D$	1-1	S20
Mg IX	62.751	500		$2s 2p - 2p 3p$	$^3P^o - ^3D$	2-2	S20
Mg IX	65.609	400		$2s^2 - 2s 3p$	$g^1S - ^1P^o$	0-1	S20
Mg IX	67.096	500		$2s 2p - 2p 3p$	$^1P^o - ^1D$	1-2	S20
Mg IX				$2s 2p - 2s 3d$	$^3P^o - ^3D$	0-1	S20
Mg IX	67.135	600					
Mg IX	67.239	700		$2s 2p - 2s 3d$	$^3P^o - ^3D$	1-2	S20
Mg IX	67.731	400b		$2s 2p - 2s 3d$	$^3P^o - ^3D$	2-3	S20
Mg IX	68.949	10		$2s 2p - 2p 3p$	$^1P^o - ^1P$	1-1	S20
Mg IX	68.986	100		$2p^2 - 2p 3d$	$^3P - ^3P^o$	0-1	S20
Mg IX				$2p^2 - 2p 3d$	$^3P - ^3P^o$	1-0	S20
Mg IX	69.009	100					
Mg IX	69.058	10		$2p^2 - 2p 3d$	$^3P - ^3P^o$	1-1	S20
Mg IX	69.116	100		$2p^2 - 2p 3d$	$^3P - ^3P^o$	1-2	S20
Mg IX	69.161	300		$2p^2 - 2p 3d$	$^3P - ^3P^o$	2-1	S20
Mg IX	69.374	200		$2p^2 - 2p 3d$	$^3P - ^3P^o$	2-2	S20
Mg IX				$2p^2 - 2p 3d$	$^3P - ^3D^o$	0-1	S20
Mg IX	69.413	400b					
Mg IX	69.467	500b		$2p^2 - 2p 3d$	$^3P - ^3D^o$	1-2	S20
Mg IX	69.513	100		$2p^2 - 2p 3d$	$^3P - ^3D^o$	2-3	S20
Mg IX	69.615	300b		$2p^2 - 2p 3d$	$^3P - ^3D^o$	2-2	S20
Mg IX	69.950	600		$2p^2 - 2p 3d$	$^1D - ^1P^o$	2-1	S20
Mg IX				$2p^2 - 2p 3d$	$^1D - ^1F^o$	2-3	S20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg IX	70.878	10d		2p ² - 2p3d	¹ D - ³ P°	? 2 - 2	S21, K8
Mg IX	71.841	100		2s2p - 2s3s	³ P° - ³ S	0 - 1	S20
Mg IX	71.901	200		2s2p - 2s3s	³ P° - ³ S	1 - 1	S20
Mg IX	72.027	300b		2s2p - 2s3s	³ P° - ³ S	2 - 1	S20
Mg IX	72.226	300		2p ³ - 2p3d	¹ D - ¹ D°	2 - 2	S20
Mg IX	72.312	400		2s2p - 2s3d	¹ P° - ¹ D	1 - 2	S20
Mg IX	74.274	200b		2p ³ - 2p3s	³ P - ³ P°	1 - 2	S70
Mg IX	74.319	300b		2p ³ - 2p3s	³ P - ³ P°	0 - 1	S20
Mg IX	74.366	400b		2p ² - 2p3s	³ P - ³ P°	2 - 2	S20
Mg IX	74.411	100b		2p ² - 2p3s	³ P - ³ P°	1 - 1	S20
Mg IX	74.461	10b		2p ³ - 2p3s	³ P - ³ P°	1 - 0	S20
Mg IX	74.520	100		2p ³ - 2p3s	³ P - ³ P°	2 - 1	S20
Mg IX	74.735	10 ^a		2p ³ - 2p3s	¹ D - ¹ P°	2 - 1	S20
Mg IX	76.459	100		2p ² - 2p3d	¹ S - ³ D°	? 0 - 1	S21, K8
Mg IX	77.737	600b		2s2p - 2s3s	¹ P° - ¹ S	1 - 0	S20
Mg IX	80.428	100		2p ² - 2p ² s	¹ S - ¹ P°	0 - 1	S20
Mg IX	91.385	10d		2p ² - 2s3p	¹ S - ¹ P°	0 - 1	S20
Mg IX	368.071	100d		2s ² - 2s2p	³ S - ¹ P°	0 - 1	S20
Mg IX	438.69			2s2p - 2p ²	¹ P° - ¹ S	1 - 0	F3
Mg IX	439.180	10		2s2p - 2p ²	³ P° - ³ P	1 - 2	S20
Mg IX	441.20			2s2p - 2p ²	³ P° - ³ P	1 - 0	F3
Mg IX	443.40			2s2p - 2p ²	³ P° - ³ P	1 - 1	F3
Mg IX	443.981	10d		2s2p - 2p ²	³ P° - ³ P	2 - 2	S20
Mg IX	445.97			2s2p - 2p ²	³ P° - ³ P	1 - 0	F3
Mg IX	448.29			2s2p - 2p ²	³ P° - ³ P	2 - 1	F3
Mg IX	705.3	P		2s ³ - 2s2p	³ S - ³ P°	0 - 1	E22
Mg IX	749.55			2s2p - 2p ²	¹ P° - ¹ D	1 - 2	F3

MAGNESIUM X (Mg⁹⁺), Z = 12
 Ground State 1s²2s²S_{1/2} (3 electrons)
 Ionization Potential 2 964 400 cm⁻¹; 367.53 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg X	35.366	3		2s - 9p	³ S - ¹ P°	1/2 - 3/2	F28
Mg X	35.827	6		2s - 8p	³ S - ³ P°	1/2 - 3/2	F28
Mg X	36.518	35		2s - 7p	³ S - ³ P°	1/2 - 3/2	F28
Mg X	37.644	60		2s - 6p	³ S - ³ P°	1/2 - 3/2	F28
Mg X	38.769	60		2p - 7d	³ P° - ³ D	1/2 - 3/2	F28
Mg X	38.823	170		2p - 7d	³ P° - ³ D	3/2 - 5/2	F28
Mg X	39.669	250		2s - 5p	³ S - ³ P°	1/2 - 3/2	F28
Mg X	40.022	120		2p - 6d	³ P° - ³ D	1/2 - 3/2	F28
Mg X	40.080	200		2p - 6d	³ P° - ³ D	3/2 - 5/2	F28
Mg X	42.294	250		2p - 5d	³ P° - ³ D	1/2 - 3/2	F28
Mg X	42.363	400		2p - 5d	³ P° - ³ D	3/2 - 5/2	F28
Mg X	42.523	6		2p - 5s	³ P° - ³ S	1/2 - 1/2	F28
Mg X	42.596	10		2p - 5s	³ P° - ³ S	3/2 - 1/2	F28
Mg X	44.050	400		2s - 4p	³ S - ³ P°	1/2 - 3/2	F28
Mg X	47.231	250		2p - 4d	³ P° - ³ D	1/2 - 3/2	F28
Mg X	47.310	400		2p - 4d	³ P° - ³ D	3/2 - 5/2	F23
Mg X	57.876	700		2s - 3p	³ S - ³ P°	1/2 - 3/2	F28
Mg X	57.920	700		2s - 3p	³ S - ³ P°	1/2 - 3/2	F28
Mg X	63.152	400		2p - 3d	³ P° - ³ D	1/2 - 3/2	F28
Mg X	63.295	700		2p - 3d	³ P° - ³ D	3/2 - 5/2	F28

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg X	65.672	35		2p - 3s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F28
Mg X	65.847	60		2p - 3s	$^3P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F28
Mg X	170.21	P		3s - 4p	$^3S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	K3
Mg X	181.50			3p - 4d	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F6
Mg X	181.86			3p - 4d	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F6
Mg X	187.17			3d - 4f	$^3D - ^3F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F6
Mg X	609.76			2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F3
Mg X	624.93			2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	F3

MAGNESIUM XI (Mg^{10+}), $Z = 12$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $14\ 210\ 261\ cm^{-1}$; $1761.802\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg XI	7.510			$1s^2 - 1s5p$	$g^1S - ^1P^{\circ}$	0 - 1	F36
Mg XI	7.473			$1s^2 - 1s4p$	$g^1S - ^1P^{\circ}$	0 - 1	F36
Mg XI	7.850			$1s^2 - 1s3p$	$g^1S - ^1P^{\circ}$	0 - 1	F36
Mg XI	7.864			$1s^2 - 1s3p$	$g^1S - ^2P^{\circ}$	0 - 1	D6
Mg XI	8.458			$1s2p - 2p^2$	$^1P^{\circ} - ^1S$	1 - 0	D6
Mg XI	8.490			$1s2s - 2s2p$	$^1S - ^1P^{\circ}$	0 - 1	D6
Mg XI	8.518			$1s2s - 2s2p$	$^3S - ^2P^{\circ}$	1 - 2	D6
Mg XI	8.550			$1s2p - 2p^2$	$^1P^{\circ} - ^1D$	1 - 2	D6
Mg XI	9.168			$1s^2 - 1s2p$	$g^1S - ^1P^{\circ}$	0 - 1	F36
Mg XI	9.23			$1s^2 - 1s2p$	$g^1S - ^2P^{\circ}$	0 - 1	S3
Mg XI	9.32	?	f	$1s^2 - 1s2s$	$g^1S - ^2S$	0 - 1	K8, F40
Mg XI	50.48	P		$1s2s - 1s3p$	$^2S - ^2P^{\circ}$	1 - 2	K8
Mg XI	52.47	P		$1s2p - 1s3d$	$^2P^{\circ} - ^2D$	2 - 3	K8
Mg XI	950.6	P		$1s2s - 1s2p$	$^2S - ^2P^{\circ}$	1 - 2	K8

MAGNESIUM XII (Mg^{11+}), $Z = 12$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential $15\ 829\ 946\ cm^{-1}$; $1962.61\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg XII	6.497	P		1s - 6p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2
Mg XII	6.580	P		1s - 5p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2
Mg XII	6.738	P	10	1s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Mg XII	7.106	P	30	1s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Mg XII	8.421	P	100	1s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Mg XII	27.52	P		2 - 7			G2
Mg XII	28.43	P		2 - 6			G2
Mg XII	30.09	P		2 - 5			G2
Mg XII	33.70	P		2 - 4			G2
Mg XII	45.47	P		2 - 3			G2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mg XII	69.71	P		3 - 7			G2
Mg XII	75.87	P		3 - 6			G2
Mg XII	88.91	P		3 - 5			G2
Mg XII	130.0	P		3 - 4			G2
Mg XII	150.26	P		4 - 7			G2
Mg XII	182.1	P		4 - 6			G2
Mg XII	281.1	P		4 - 5			G2
Mg XII	322.9	P		5 - 7			G2
Mg XII	517.5	P		5 - 6			G2
Mg XII	858.4	P		6 - 7			G2

ALUMINUM, Z = 13

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al	53.412	10					
Al	53.598	10					F35
Al	55.143	10					F35
Al	55.622	1					F35
Al	56.274	30					F35
Al	56.545	10					F35
Al	57.244	50					F35
Al	57.271	50					F35
Al	57.663	10					F35
Al	59.298	10					F35
Al	59.481	10d					F35
Al	60.052	50					F35
Al	60.788	50					F35
Al	60.809	50					F35
Al	61.262	10					F35
Al	61.373	50					F35
Al	61.472	100					F35
Al	61.900	10					F35
Al	61.933	50					F35
Al	62.070	50					F35
Al	64.269	10					F35
Al	64.418	10					F35
Al	65.632	50					F35
Al	65.821	50					F35
Al	66.996	10d					F35
Al	67.873	10					F35
Al	68.000	10					F35
Al	68.439	50					F35
Al	68.458	50					F35
Al	68.783	10					F35
Al	68.904	10					F35
Al	69.165	200					F35
Al	69.379	50					F35
Al	69.631	200					F35
Al	70.040	50					F35
Al	70.090	100					F35
Al	70.802	50					F35
Al	71.077	10					F35
Al	71.139	50					F35
Al	71.590	70					F35
Al	71.625	70					F35
Al	71.774	10d					F35
Al	71.867	10d					F35
Al	71.987	10					F35
Al	72.674	300					F35
Al	73.278	100					F35
Al	74.016	120					F35
Al	74.259	10					F35
Al	74.321	50					F35
Al	75.164	100					F35
Al	75.226	100d					F35
Al	76.794	200					F35
Al	76.853	200					F35
Al	76.984	100					F35
Al	77.052	50					F35
Al	77.315	10					F35
Al	78.149	100					F35
Al	78.256	70					F35
Al	78.421	10					F35
Al	78.508	150					F35

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al	78.573	70					F35
Al	78.836	100					F35
Al	78.938	300					F35
Al	79.557	10					F35
Al	79.783	50					F35
Al	80.014	10					F35
Al	80.403	10					F35
Al	81.560	100					F35
Al	81.667	100					F35
Al	82.105	70					F35
Al	82.128	70					F35
Al	82.423	50					F35
Al	82.582	50					F35
Al	82.908	50d					F35
Al	83.102	10					F35
Al	83.335	10					F35
Al	84.479	10					F35
Al	85.046	1					F35
Al	85.189	10					S22
Al	86.282	50					F35
Al	86.360	100					F35
Al	86.393	100					F35
Al	86.427	100					F35
Al	86.540	10					F35
Al	86.975	10					F35
Al	87.932	100					F35
Al	88.108	100					F35
Al	88.241	10					F35
Al	91.023	50					F35
Al	94.970	50					F35
Al	95.405	10					F35
Al	95.624	100					F35
Al	95.720	200					F35
Al	95.859	10					F35
Al	96.939	10					F35
Al	104.227	10					F35
Al	104.960	10					F35
Al	106.471	10					F35
Al	113.140	50					F35
Al	135.231	10					S22
Al	135.620	50					S22
Al	190.560	50					S22
Al	221.543	10					S22
Al	1150.27	10					S22
Al	1165.38	10d					S22
Al	1183.62	10					S22
Al	1220.57	10					S22
Al	1291.81	10					S22
Al	1320.71	10					S22
Al	1337.86	50					S22
Al	1369.20	10d					S22
Al	1422.17	10					S22
Al	1429.57	10					S22
Al	1457.92	50d					S22

ALUMINUM I (Al⁰⁺), Z = 13
 Ground State 1s²2s²2p⁶3s²3p²P_{1/2}^o (13 electrons)
 Ionization Potential 48 278.37 cm⁻¹; 5.986 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al I	1762.892	100 -A		3s ² 3p - 3s3p ²	g ² P ^o - ² P	½ - ½	E6,E34
Al I	1765.632	200 -A		3s ² 3p - 3s3p ²	g ² P ^o - ² P	½ - ½	E6,E34
Al I	1766.381	200 -A		3s ² 3p - 3s3p ²	g ² P ^o - ² P	½ - ½	E6,E34
Al I	1769.133	200 -A		3s ² 3p - 3s3p ²	g ² P ^o - ² P	½ - ½	E6,E34

ALUMINUM II (Al¹⁺), Z = 13
 Ground State 1s²2s²2p⁶3s² ¹S₀ (12 electrons)
 Ionization Potential 151 860.4 cm⁻¹; 18.828 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al II	933.43	0		3s3p - 3s9s	² P ^o - ² S	0 - 1	S5
Al II	933.95	0		3s3p - 3s9s	² P ^o - ² S	1 - 1	S5
Al II	935.29	1		3s ² - 3s4p	g ¹ S - ¹ P ^o	0 - 1	S5
Al II	952.65	0		3s3p - 3s7d	² P ^o - ² D	0 - 1	S5
Al II	953.18	0		3s3p - 3s7d	² P ^o - ² D	1 - 2	S5
Al II	954.35	1		3s3p - 3s7d	² P ^o - ² D	2 - 3	S5
Al II	954.87	0		3s3p - 3s8s	² P ^o - ² S	1 - 1	S5
Al II	955.99	1		3s3p - 3s8s	² P ^o - ² S	2 - 1	S5
Al II	986.55	0		3s3p - 3s6d	² P ^o - ² D	1 - 2	S5
Al II	987.80	0		3s3p - 3s6d	² P ^o - ² D	2 - 3	S5
Al II	989.70	0		3s3p - 3s7s	² P ^o - ² S	1 - 1	S5
Al II	990.88	1		3s3p - 3s7s	² P ^o - ² S	2 - 1	S5
Al II	1047.92	0		3s3p - 3s5d	² P ^o - ² D	0 - 1	S5
Al II	1048.59	1		3s3p - 3s5d	² P ^o - ² D	1 - 2	S5
Al II	1049.9220	6		3s3p - 3s5d	² P ^o - ² D	? 2 - 3	K2
Al II	1055.28	1		3s3p - 3s6s	² P ^o - ² S	1 - 1	S5
Al II	1056.68	0		3s3p - 3s6s	² P ^o - ² S	2 - 1	S5
Al II	1142.97	5		3s3p - 3s10d	¹ P ^o - ¹ D	1 - 2	S5
Al II	1157.10	20		3s3p - 3s9d	¹ P ^o - ¹ D	1 - 2	J6,S5
Al II	1158.24	1		3s3p - 3s10s	¹ P ^o - ¹ S	1 - 0	S5
Al II	1177.43	40		3s3p - 3s8d	¹ P ^o - ¹ D	1 - 2	J6,S5
Al II	1179.34	1		3s3p - 3s9s	¹ P ^o - ¹ S	1 - 0	J6,S5
Al II	1189.18	5		3s3p - 3s4d	² P ^o - ² D	0 - 1	J6,S5
Al II	1190.0493	15		3s3p - 3s4d	² P ^o - ² D	1 - 2	K2
Al II	1191.8123	50		3s3p - 3s4d	² P ^o - ² D	2 - 3	K2
Al II	1208.35	20		3s3p - 3s7d	¹ P ^o - ¹ D	1 - 2	J6,S5
Al II	1209.19	1		3s3p - 3s5s	² F ^o - ² S	0 - 1	J6,S5
Al II	1210.09	5		3s3p - 3s5s	² P ^o - ² S	1 - 1	J6,S5
Al II	1211.90	3		3s3p - 3s5s	² P ^o - ² S	2 - 1	J6,S5
Al II	1258.86	40		3s3p - 3s6d	¹ P ^o - ¹ D	1 - 2	J6,S5
Al II	1266.66	0		3s3p - 3s7s	¹ P ^o - ¹ S	1 - 0	J6,S5
Al II	1350.18	150		3s3p - 3s5d	¹ P ^o - ¹ D	1 - 2	J6,S5
Al II	1371.24	5		3s3p - 3s6s	¹ P ^o - ¹ S	1 - 0	J6,S5
Al II	1539.8303	800	10	3s3p - 3s4d	¹ P ^o - ¹ D	1 - 2	K2
Al II	1555.9433	1		3p ² - 3s16p	¹ D - ¹ P ^o	2 - 1	K2
Al II	1560.35	1		3p ² - 3s14f	¹ D - ¹ F ^o	2 - 3	S5
Al II	1563.5797	1		3p ² - 3s15p	¹ D - ¹ P ^o	2 - 1	K2
Al II	1569.3853	100		3p ² - 3s13f	¹ D - ¹ F ^o	2 - 3	K2
Al II	1573.0028	3		3p ² - 3s14p	¹ D - ¹ P ^o	2 - 1	K2
Al II	1580.9193	1		3p ² - 3s12f	¹ D - ¹ F ^o	2 - 3	K2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al II	1584.7080	4		$3p^2 - 3s13p$	$^1D - ^1P^o$	2-1	K2
Al II	1596.0586	125		$3p^2 - 3s11f$	$^1D - ^1P^o$	2-3	K2
Al II	1599.4108	20		$3p^2 - 3s12p$	$^1D - ^1P^o$	2-1	K2
Al II?	1611.2871	15			$^1D - ^1P^o$		K2
Al II	1616.4148	10		$3p^2 - 3s10f$	$^1D - ^1F^o$	2-3	K2
Al II	1618.3990	50					K2
Al II	1625.6271	150	9	$3p^2 - 3s11p$	$^1D - ^1P^o$	2-1	K2
Al II	1644.2348	100		$3s3p - 3s5s$	$^1P^o - ^1S$	1-0	K2
Al II	1644.8089	100		$3p^2 - 3s10p$	$^1D - ^1P^o$	2-1	K2
Al II	1670.7867	1000	2	$3p^2 - 3s9f$	$^1D - ^1F^o$	2-3	K2
				$3s^2 - 3s3p$	$g^1S - ^1P^o$	0-1	K2
Al II	1681.8089	80					
Al II	1686.2505	100		$3p^2 - 3s9p$	$^1D - ^1P^o$	2-1	K2
Al II	1719.4400	800	6	$3p^2 - 3s8f$	$^1D - ^1F^o$	2-3	K2
Al II	1721.2435	500	6	$3s3p - 3s3d$	$^3P^o - ^3D$	0-1	K2
Al II	1721.2714	900	6	$3s3p - 3s3d$	$^3P^o - ^3D$	1-1	K2
				$3s3p - 3s3d$	$^3P^o - ^3D$	1-2	K2
Al II	1724.9519	500	6	$3s3p - 3s3d$	$^3P^o - ^3D$	2-2	K2
Al II	1724.9838	900	6	$3s3p - 3s3d$	$^3P^o - ^3D$	2-3	K2
Al II	1739.7382	50		$3p^2 - 3s8p$	$^1D - ^1P^o$	2-1	K2
Al II	1750.6124	60		$3p^2 - 3s7f$	$^1D - ^1F^o$	2-3	K2
Al II	1760.1044	350	5	$3s3p - 3p^2$	$^3P^o - ^3P$	1-2	K2
Al II	1761.9751	300	5				
Al II	1763.8692	500	5	$3s3p - 3p^2$	$^3P^o - ^3P$	0-1	K2
Al II	1763.9521	700	5	$3s3p - 3p^2$	$^3P^o - ^3P$	1-1	K2
Al II	1765.8150	300	5	$3s3p - 3p^2$	$^3P^o - ^3P$	2-2	K2
Al II	1767.7308	400	5	$3s3p - 3p^2$	$^3P^o - ^3P$	1-0	K2
					$^3P^o - ^3P$	2-1	K2
Al II	1776.27	0					
Al II	1807.4168	70		$3s4s - 3s11p$	$^3S - ^3P^o$	1-2	S5
Al II	1807.5851	20		$3s4s - 3p3d$	$^3S - ^3P^o$	1-2	K2
Al II	1807.6510	1		$3s4s - 3p3d$	$^3S - ^3P^o$	1-1	K2
Al II	1828.5876	600		$3s4s - 3p3d$	$^3S - ^3P^o$	1-0	K2
				$3s4s - 3p4s$	$^3S - ^3P^o$	1-2	K2
Al II	1832.8374	400					
Al II	1834.8077	250		$3s4s - 3p4s$	$^3S - ^3P^o$	1-1	K2
Al II	1836.9635	60		$3s4s - 3p4s$	$^3S - ^3P^o$	1-0	K2
Al II	1848.8876	1		$3p^2 - 3s7p$	$^1D - ^1P^o$	2-1	K2
Al II	1855.8054	90		$3s4s - 3s15p$	$^1S - ^1P^o$	0-1	K2
				$3s4s - 3p3d$	$^3S - ^3P^o$	1-2	K2
Al II	1855.9286	300	4				
Al II	1856.0957	90		$3s3p - 3s4s$	$^3P^o - ^3S$	0-1	K2
Al II	1856.2741	30		$3s4s - 3p3d$	$^3S - ^3P^o$	1-1	K2
Al II	1858.0262	700	4	$3s4s - 3p3d$	$^3S - ^3P^o$	1-0	K2
Al II	1859.9796	120		$3s3p - 3s4s$	$^3P^o - ^3S$	1-1	K2
				$3p^2 - 3s6f$	$^1D - ^1F^o$	2-3	K2
Al II	1862.0813	5					
Al II	1862.3111	1000	4	$3s4s - 3s14p$	$^1S - ^1P^o$	0-1	K2
Al II	1877.13	1		$3s3p - 3s4s$	$^3P^o - ^3S$	2-1	K2
Al II	1878.5643	8		$3s3d - 3s12f$	$^3D - ^3F^o$	3-4	S5
Al II	1897.4014	9		$3s4s - 3s13p$	$^1S - ^1P^o$	0-1	K2
				$3s3d - 3s11f$	$^3D - ^3F^o$	3-4	K2
Al II	1897.4605	3					
Al II	1897.4998	1		$3s3d - 3s11f$	$^3D - ^3F^o$	2-3	K2
Al II	1899.1943	25		$3s3d - 3s11f$	$^3D - ^3F^o$	1-2	K2
Al II	1904.3264	8		$3s4s - 3s12p$	$^1S - ^1P^o$	0-1	K2
Al I.	1906.4082	25		$3p^2 - 3p3d$	$^3P - ^3P^o$	0-1	K2
				$3p^2 - 3p3d$	$^3P - ^3P^o$	1-2	K2
Al I.	1906.5957	4					
Al II	1906.6743	8		$3p^2 - 3p3d$	$^3P - ^3P^o$	1-1	K2
Al II	1910.8252	80		$3p^2 - 3p3d$	$^3P - ^3P^o$	1-0	K2
Al II	1911.0132	12		$3p^2 - 3p3d$	$^3P - ^3P^o$	2-2	K2
Al II	1924.7537	50		$3p^2 - 3p3d$	$^3P - ^3P^o$	2-1	K2
				$3s3d - 3s10f$	$^3D - ^3F^o$	3-4	K2
Al II	1924.8254	30					
Al II	1924.8788	10		$3s3d - 3s10f$	$^3D - ^3F^o$	2-3	K2
Al II	1926.0291	60		$3s3d - 3s10f$	$^3D - ^3F^o$	1-2	K2
Al II	1926.9478	20		$3s4s - 3s11p$	$^1S - ^1P^o$	0-1	K2
Al II	1927.0696	10		$3s4s - 3s8p$	$^3S - ^3P^o$	1-2	K2
				$3s4s - 3s8p$	$^3S - ^3P^o$	1-1	K2
Al II	1929.9775	200					
Al II	1931.0481	150		$3p^2 - 3p4s$	$^3P - ^3P^o$	1-2	K2
Al II	1932.3768	200		$3s3p - 3p^2$	$^1P^o - ^1S$	1-0	K2
Al II	1934.5032	400		$3p^2 - 3p4s$	$^3P - ^3P^o$	0-1	K2
Al II	1934.7129	150		$3p^2 - 3p4s$	$^3P - ^3P^o$	2-2	K2
				$3p^2 - 3p4s$	$^3P - ^3P^o$	1-1	K2

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al II	1936.9066	150		$3p^2 - 3p4s$	$^3P - ^3P^o$	1-0	K2
Al II	1939.2606	220		$3p^2 - 3p4s$	$^3P - ^3P^o$	2-1	K2
Al II	1958.2470	8		$3p^2 - 3p3d$	$^3P - ^3P^o$	0-1	K2
Al II	1958.77	1		$3s3d - 3p3d$	$^3D - ^3P^o$	3-2	J6, K8
Al II	1959.00	0		$3s3d - 3p3d$	$^3D - ^3P^o$	2-1	J6, K8
Al II	1960.3221	3		$3p^2 - 3p3d$	$^3P - ^3P^o$	1-2	K2
Al II	1960.6458	3		$3p^2 - 3p3d$	$^3P - ^3P^o$	1-1	K2
Al II	1960.8466	10		$3p^2 - 3p3d$	$^3P - ^3P^o$	1-0	K2
Al II	1962.5904	70		$3s3d - 3s9f$	$^3D - ^3F^o$	3-4	K2
Al II	1962.6452	8		$3s3d - 3s9f$	$^3D - ^3F^o$	3-3	K2
Al II	1962.6910	60		$3s3d - 3s9f$	$^3D - ^3F^o$	2-3	K2
Al II	1962.7349	70		$3s4p - 3s10p$	$^1S - ^1P^o$	0-1	K2
Al II	1962.7634	50		$3s3d - 3s9f$	$^3D - ^3F^o$	1-2	K2
Al II	1964.9903	40		$3p^2 - 3p3d$	$^3P - ^3P^o$	2-2	K2
Al II	1965.3157	10		$3p^2 - 3p3d$	$^3P - ^3P^o$	2-1	K2
Al II	1983.6496	10		$3s3d - 3p4s$	$^3D - ^3P^o$	3-2	K2
Al II	1988.6985	3		$3s3d - 3p4s$	$^3D - ^3P^o$	2-1	K2
Al II	1990.5310	700	8	$3s3p - 3s3d$	$^1P^o - ^1D$	1-2	K2
Al II	1991.05	1		$3s3d - 3p4s$	$^3D - ^3P^o$	1-0	J6, K8

ALUMINUM III (Al^{2+}), $Z = 13$ Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)Ionization Potential: 229 445.71 cm^{-1} ; 28.447 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al III	486.8839	70		$3s - 7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	486.9124	30		$3s - 7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	17
Al III	511.1384	250		$3s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	511.1907	150		$3s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	17
Al III	560.3173	500	3	$3s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	560.4331	200	3	$3s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	17
Al III	644.3339			$3p - 7d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	645.3063			$3p - 7d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	17
Al III	670.0676	100		$3p - 7s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	17
Al III	671.1184	200		$3p - 7s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	17
Al III	677.0819			$3p - 6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	678.1548			$3p - 6d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	17
Al III	678.1564			$3p - 6d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	695.8289	500	2	$3s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	696.2170	400	2	$3s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	17
Al III	725.6826	200		$3p - 6s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	17
Al III	726.9152	300		$3p - 6s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	17
Al III	739.6707			$3p - 5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	740.9514			$3p - 5d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	17
Al III	740.9550			$3p - 5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	855.0340	400		$3p - 5s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	17
Al III	856.7457	500		$3p - 5s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	17
Al III	892.0242	400		$3p - 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	893.8874	50		$3p - 4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	17
Al III	893.8969	450		$3p - 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	17
Al III	1071.739			$3d - 7f$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{7}{2}$	17
Al III	1071.757			$3d - 7f$	$^3D - ^3F^o$	$\frac{5}{2} - \frac{5}{2}$	17
Al III	1118.173			$3d - 7p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	17
Al III	1118.202			$3d - 7p$	$^3D - ^3P^o$	$\frac{5}{2} - \frac{3}{2}$	17
Al III	1118.353			$3d - 7p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	17

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al III	1162.588	10		3d - 6f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1162.621	5		3d - 6f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1254.933			3d - 6p	$^3D - ^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1254.969			3d - 6p	$^3D - ^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1255.284			3d - 6p	$^3D - ^3P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	I7
Al III	1262.248			4s - 7p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	I7
Al III	1262.440			4s - 7p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I7
Al III	1352.810	100		3d - 5f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1352.816	5		3d - 5f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1352.858	70		3d - 5f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1379.670	600		3p - 4s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	I7
Al III	1384.132	800		3p - 4s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	I7
Al III	1439.311			4s - 6p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	I7
Al III	1439.726			4s - 6p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I7
Al III	1532.600			4p - 7d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	I7
Al III	1534.489			4p - 7d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1599.639			3d - 5p	$^3D - ^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1599.697			3d - 5p	$^3D - ^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1600.642			3d - 5p	$^3D - ^3P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	I7
Al III	1605.766	700		3p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	I7
Al III	1611.814	100		3p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1611.874	800		3p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1686.676			4p - 7s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	I7
Al III	1688.958			4p - 7s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	I7
Al III	1731.836			4p - 6d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	I7
Al III	1734.243			4p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1734.253			4p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1854.716	1000	1	3s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	I7
Al III	1862.790	600	1	3s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I7
Al III	1911.817			4s - 5p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	I7
Al III	1913.166			4s - 5p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I7
Al III	1955.840	300		3d - 4f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	I7
Al III	1935.863	15		3d - 4f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7
Al III	1935.949	200		3d - 4f	$^3D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	I7

ALUMINUM IV (Al³⁺), Z = 13Ground State 1s²2s²2p⁶ ¹S₀ (10 electrons)Ionization Potential 967 800 cm⁻¹; 119.99 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al IV	108.535	50		2p ⁶ - 2p ⁵ (² P ^o)6d	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	S22
Al IV	108.907	50d		2p ⁶ - 2p ⁵ (² P ^o)6d	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	S22
Al IV	111.196	100		2p ⁶ - 2p ⁵ (² P ^o)5d	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F35, S22
Al IV	111.589	150		2p ⁶ - 2p ⁵ (² P ^o)5d	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F35, S22
Al IV	111.781	50		2p ⁶ - 2p ⁵ (² P ^o)5d	$g^1S - \frac{3}{2}[\frac{1}{2}]^{\circ}$	0 - 1	F35, S22
Al IV	114.313	10		2p ⁶ - 2p ⁵ (² P ^o)5s	$g^1S - \frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1	F35, S22
Al IV	114.737	50		2p ⁶ - 2p ⁵ (² P ^o)5s	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F35, S22
Al IV	116.464	250		2p ⁶ - 2p ⁵ (² P ^o)4d	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F35, S22
Al IV	116.921	150		2p ⁶ - 2p ⁵ (² P ^o)4d	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F35, S22
Al IV	117.410	10		2p ⁶ - 2p ⁵ (² P ^o)4d	$g^1S - \frac{3}{2}[\frac{1}{2}]^{\circ}$	0 - 1	F35, S22
Al IV	124.034	400		2p ⁶ - 2p ⁵ (² P ^o)4s	$g^1S - \frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1	S22
Al IV	124.543	300		2p ⁶ - 2p ⁵ (² P ^o)4s	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	S22
Al IV	129.729	700		2p ⁶ - 2p ⁵ (² P ^o)3d	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	S22
Al IV	131.652	150		2p ⁶ - 2p ⁵ (² P ^o)3d	$g^1S - \frac{3}{2}[\frac{1}{2}]^{\circ}$	0 - 1	S22
Al IV	160.073	800		2p ⁶ - 2p ⁵ (² P ^o)3s	$g^1S - \frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1	E6, S22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al IV	161.686	700		$2p^5 - 2p^5(^2P^o)3s$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E5, S22
Al IV	1718.89	200d		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1 - 2	S22
Al IV	1136.80	150		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1 - 1	S22
Al IV	1142.03	50d		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1 - 0	S22
Al IV	1150.85	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	3 - 2	S22
Al IV	1156.21	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	3 - 3	S22
Al IV	1161.85	10d		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2 - 2	S22
Al IV	1167.35	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2 - 3	S22
Al IV	1198.47	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	3 - 3	S22
Al IV	1211.80	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	S22
Al IV	1216.78	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1 - 1	S22
Al IV	1219.19	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2 - 2	S22
Al IV	1228.30	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	3 - 3	S22
Al IV	1229.94	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2 - 1	S22
Al IV	1237.14	200		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	3 - 4	S22
Al IV	1240.18	100		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1 - 2	S22
Al IV	1240.83	150		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2 - 3	S22
Al IV	1248.76	100d		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1 - 2	S22
Al IV	1251.25	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2 - 2	S22
Al IV	1257.58	150		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{3}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	2 - 3	S22
Al IV	1262.51	50		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2 - 1	S22
Al IV	1264.14	150d		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{1}{2}] - \frac{1}{2}[\frac{3}{2}]^o$	1 - 2	S22
Al IV	1272.70	150d		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	2 - 3	S22
Al IV	1283.48	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2 - 1	S22
Al IV	1302.13	100		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	S22
Al IV	1353.73	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{3}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	2 - 1	S22
Al IV	1359.49	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{3}{2}] - \frac{3}{2}[\frac{3}{2}]^o$	1 - 2	S22
Al IV	1388.77	100		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	2 - 1	S22
Al IV	1404.72	100d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	2 - 2	S22
Al IV	1409.52	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1 - 1	S22
Al IV	1412.24	10		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	2 - 1	S22
Al IV	1417.58	10		$2p^5(^2P^o)3p - 2p^5(^2P^o)3d$	$\frac{1}{2}[\frac{1}{2}] - \frac{3}{2}[\frac{1}{2}]^o$	1 - 0	S22
Al IV	1425.00	10		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	1 - 1	S22
Al IV	1431.93	100		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	1 - 0	S22
Al IV	1441.81	50d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	1 - 2	S22
Al IV	1447.47	100d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	2 - 2	S22
Al IV	1449.70	10		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	1 - 1	S22
Al IV	1481.26	10		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	0 - 1	S22
Al IV	1486.87	50d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	S22
Al IV	1526.15	50d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	1 - 0	S22
Al IV	1537.52	100		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	2 - 2	S22
Al IV	1553.00	50d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	1 - 1	S22
Al IV	1557.24	250d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	2 - 3	S22
Al IV	1564.14	50d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{1}{2}]$	1 - 1	S22
Al IV	1582.04	150d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	S22
Al IV	1584.45	100d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{1}{2}[\frac{3}{2}]$	1 - 2	S22
Al IV	1589.27	50d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	0 - 1	S22
Al IV	1639.00	100		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{1}{2}[\frac{1}{2}]^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	S22
Al IV	1818.55	50d		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	2 - 1	S22
Al IV	1881.19	50		$2p^5(^2P^o)3s - 2p^5(^2P^o)3p$	$\frac{3}{2}[\frac{3}{2}]^o - \frac{3}{2}[\frac{1}{2}]$	1 - 1	S22

ALUMINUM V (Al⁴⁺), Z = 13
 Ground State 1s²2s²2p⁵ ²P_{3/2} (9 electrons)
 Ionization Potential 1 239 800 cm⁻¹; 153.71 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al V	85.662	50		2p ⁵ - 2p ⁴ (¹ D)5d	g ² P ^o - ² S	3/2 - 1/2	F35
Al V	85.804	350		2p ⁵ - 2p ⁴ (² P)6d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	85.922	10b		2p ⁵ - 2p ⁴ (² P)6d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	87.020	100		2p ⁵ - 2p ⁴ (¹ S)4d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	87.279	50d		2p ⁵ - 2p ⁴ (¹ S)4d	g ² P ^o - ² D	1/2 - 3/2	F35
Al V	88.425	100		2p ⁵ - 2p ⁴ (² P)5d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	88.539	400b		2p ⁵ - 2p ⁴ (² P)5d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	88.636	100b		2p ⁵ - 2p ⁴ (² P)5d	g ² P ^o - ² P	1/2 - 3/2	F35
Al V	88.688	200b		2p ⁵ - 2p ⁴ (² P)5d	g ² P ^o - ⁴ D	3/2 - 3/2	F35
Al V	88.817	50		2p ⁵ - 2p ⁴ (² P)5d	g ² P ^o - ² D	1/2 - 3/2	F35
Al V	88.945	1		2p ⁵ - 2p ⁴ (² P)5d	g ² P ^o - ⁴ D	1/2 - 3/2	F35
Al V	90.630	250b		2p ⁵ - 2p ⁴ (¹ D)4d	g ² P ^o - ² P	3/2 - 3/2	F35
Al V	90.646	100		2p ⁵ - 2p ⁴ (¹ D)4d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	90.701	200		2p ⁵ - 2p ⁴ (¹ D)4d	g ² P ^o - ² S	3/2 - 1/2	F35
Al V	90.914	200		2p ⁵ - 2p ⁴ (¹ D)4d	g ² P ^o - ² P	1/2 - 3/2	F35
Al V	90.982	50d		2p ⁵ - 2p ⁴ (¹ D)4d	g ² P ^o - ² S	1/2 - 1/2	F35
Al V	91.078	10		2p ⁵ - 2p ⁴ (¹ D)4d	g ² P ^o - ² F	1/2 - 1/2	F35
Al V	91.750	50		2p ⁵ - 2p ⁴ (¹ S)4s	g ² P ^o - ² S	3/2 - 1/2	F35
Al V	92.039	10		2p ⁵ - 2p ⁴ (¹ S)4s	g ² P ^o - ² S	1/2 - 1/2	F35
Al V	93.654	20		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ² P	3/2 - 3/2	F35
Al V	93.755	350		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	93.855	200		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	93.880	70		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ² P	3/2 - 3/2	F35
Al V	93.955	300		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ² P	1/2 - 3/2	F35
Al V	93.981	100		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ⁴ P	3/2 - 3/2	F35
Al V	94.089	70		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ⁴ D	3/2 - 3/2	F35
Al V	94.117	120		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ⁴ D	3/2 - 3/2	F35
Al V	94.160	100		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ² D	1/2 - 3/2	F35
Al V	94.187	100		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ² P	1/2 - 1/2	F35
Al V	94.321	10		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ⁴ P	1/2 - 3/2	F35
Al V	94.394	10		2p ⁵ - 2p ⁴ (² P)4d	g ² P ^o - ⁴ D	1/2 - 3/2	F35
Al V	95.835	100		2p ⁵ - 2p ⁴ (¹ D)4s	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	96.150	50		2p ⁵ - 2p ⁴ (¹ D)4s	g ² P ^o - ² D	1/2 - 3/2	F35
Al V	99.200	50		2p ⁵ - 2p ⁴ (² P)4s	g ² P ^o - ² P	3/2 - 1/2	F35
Al V	99.290	500		2p ⁵ - 2p ⁴ (¹ S)3d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	99.427	200		2p ⁵ - 2p ⁴ (² P)4s	g ² P ^o - ² P	3/2 - 3/2	F35
Al V	99.544	100		2p ⁵ - 2p ⁴ (² P)4s	g ² P ^o - ² P	1/2 - 3/2	F35
Al V	99.616	350		2p ⁵ - 2p ⁴ (¹ S)3d	g ² P ^o - ² D	1/2 - 3/2	F35
Al V	99.769	20		2p ⁵ - 2p ⁴ (² P)4s	g ² P ^o - ² P	1/2 - 3/2	F35
Al V	103.805	500		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	103.881	700		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	103.990	200		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² P	3/2 - 3/2	F35
Al V	104.073	500		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² S	3/2 - 1/2	F35
Al V	104.121	600		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² P	3/2 - 1/2	F35
Al V	104.180	700		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² D	1/2 - 3/2	F35
Al V	104.363	500		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² P	1/2 - 3/2	F35
Al V	104.447	500		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² S	1/2 - 1/2	F35
Al V	104.495	400		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² P	1/2 - 1/2	F35
Al V	107.711	300		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ² P	3/2 - 3/2	F35
Al V	107.945	1000		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	108.004	250		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ² P	3/2 - 1/2	F35
Al V	108.057	600		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ² D	3/2 - 3/2	F35
Al V	108.112	600		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ² P	1/2 - 3/2	F35
Al V	108.315	200		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ² F	3/2 - 3/2	F35
Al V	108.385	500		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ⁴ P	3/2 - 3/2	F35
Al V	108.404	250		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ² P	1/2 - 1/2	F35
Al V	108.446	150		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ⁴ P	3/2 - 3/2	F35
Al V	108.462	500		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ² D	1/2 - 3/2	F35
Al V	108.526	20		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ⁴ P	3/2 - 1/2	F35
Al V	108.616	50		2p ⁵ - 2p ⁴ (² P)3d	g ² P ^o - ⁴ D	3/2 - 3/2	F35

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al V	108.707	300		$2p^5 - 2p^4(^3P)3d$	$g^3P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al V	108.851	50		$2p^5 - 2p^4(^3P)3d$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	F35
Al V	109.021	150		$2p^5 - 2p^4(^3P)3d$	$g^3P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	F35
Al V	118.500	500		$2p^5 - 2p^4(^1S)3s$	$g^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F35
Al V	118.984	300		$2p^5 - 2p^4(^1S)3s$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F35
Al V	125.525	750		$2p^5 - 2p^4(^1D)3s$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al V	126.065	750		$2p^5 - 2p^4(^1D)3s$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F35
Al V	130.413	1000		$2p^5 - 2p^4(^3P)3s$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	F35
Al V	130.848	1000		$2p^5 - 2p^4(^3P)3s$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al V	131.003	1000		$2p^5 - 2p^4(^3P)3s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	F35
Al V	131.441	1000		$2p^5 - 2p^4(^3P)3s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F35
Al V	132.630	500		$2p^5 - 2p^4(^3P)3s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al V	133.013	200		$2p^5 - 2p^4(^3P)3s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al V	133.242	100		$2p^5 - 2p^4(^3P)3s$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	F35
Al V	136.249	50		$2s^2 2p^6 - 2s 2p^5(^3P^o)3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	F35
Al V	136.668	100		$2s 2p^6 - 2s 2p^5(^3P^o)3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F35
Al V	278.699	800		$2s^2 2p^6 - 2s 2p^6$	$g^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	E6,S22
Al V	281.397	700		$2s^2 2p^6 - 2s 2p^6$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	E6,S22

ALUMINUM VI (Al⁵⁺), Z = 13Ground State $1s^2 2s^2 2p^4 ^3P_2$ (8 electrons)Ionization Potential $1\ 536\ 300\ \text{cm}^{-1}$; 190.47 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al VI	68.167	50d		$2p^4 - 2p^3(^3P^o)5d$	$g^3P - ^3D^o$	2 - 3	F35
Al VI	68.223	10		$2p^4 - 2p^3(^3P^o)5d$	$g^3P - ^3P^o$	2 - 2	F35
Al VI	68.289	1		$2p^4 - 2p^3(^3P^o)5d$	$g^3P - ^3D^o$	1 - 2	F35
Al VI	72.714	1		$2p^4 - 2p^3(^4S^o)5d$	$g^3P - ^3D^o$	2 - 3	F35
Al VI	72.810	250		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3D^o$	2 - 3	F35
Al VI	72.865	50		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3D^o$	1 - 2	F35
Al VI	72.926	100		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3P^o$	2 - 2	F35
Al VI	73.076	100		$2p^4 - 2p^3(^3P^o)4d$	$g^3P - ^3P^o$	1 - 2	F35
Al VI	73.334	1		$2p^4 - 2p^3(^4D^o)5s$	$^1D - ^1D^o$	2 - 2	F35
Al VI	74.346	50		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3S^o$	2 - 1	F35
Al VI	74.444	300		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	2 - 2	F35
Al VI	74.504	50d		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3S^o$	1 - 1	F35
Al VI	74.592	150		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3P^o$	1 - 2	F35
Al VI	74.656	250		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3D^o$	2 - 3	F35
Al VI	74.813	50		$2p^4 - 2p^3(^3D^o)4d$	$g^3P - ^3D^o$	1 - 2	F35
Al VI	74.892	100		$2p^4 - 2p^3(^3F^o)4d$	$^1D - ^1F^o$	2 - 3	F35
Al VI	76.618	200		$2p^4 - 2p^3(^3D^o)4d$	$^1D - ^1F^o$	2 - 3	F35
Al VI	76.697	200		$2p^4 - 2p^3(^3D^o)4d$	$^1D - ^1D^o$	2 - 2	F35
Al VI	76.953	50		$2p^4 - 2p^3(^3D^o)4d$	$^1D - ^1P^o$	2 - 1	F35
Al VI	77.945	500b		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3	F35
Al VI	78.112	100		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2	F35
Al VI	78.178	50		$2p^4 - 2p^3(^4S^o)4d$	$g^3P - ^3D^o$	0 - 1	F35
Al VI	78.459	70		$2p^4 - 2p^3(^3D^o)4s$	$g^3P - ^3D^o$	2 - 3	F35
Al VI	78.628	10		$2p^4 - 2p^3(^3D^o)4s$	$g^3P - ^3D^o$	1 - 2	F35
Al VI	78.712	10		$2p^4 - 2p^3(^3P^o)4s$	$^1D - ^1P^o$	2 - 1	F35
Al VI	80.770	70		$2p^4 - 2p^3(^3D^o)4s$	$^1D - ^1D^o$	2 - 2	F35
Al VI	81.176	50		$2p^4 - 2p^3(^3D^o)4s$	$^1D - ^3D^o$? 2 - 3	F35
Al VI?	81.339	10					F35
Al VI	81.738	50b		$2p^4 - 2p^3(^3P^o)4s$	$^1S - ^1P^o$	0 - 1	F35
Al VI	82.082	70		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	2 - 1	F35

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al VI	82.267	50		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	1-1	F35
Al VI	82.338	10		$2p^4 - 2p^3(^4S^o)4s$	$g^3P - ^3S^o$	0-1	F35
Al VI?	84.650	100					F35
Al VI?	84.801	20					F35
Al VI?	84.828	70					F35
Al VI?	84.928	10					F35
Al VI	85.423	100		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-2	F35
Al VI	85.515	1000		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-3	F35
Al VI	85.569	200		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3F^o$	2-2	F35
Al VI	85.622	300		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3D^o$	1-2	F35
Al VI	85.724	300		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3F^o$	2-3	F35
Al VI	85.764	400		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3F^o$	1-2	F35
Al VI	85.817	350		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-2	F35
Al VI	85.865	100b		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-1	F35
Al VI?	85.970	10					F35
Al VI	86.020	150		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-2	F35
Al VI	86.070	150		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-1	F35
Al VI	86.097	150		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-0	F35
Al VI	86.147	200		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	0-1	F35
Al VI	87.334	400		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3S^o$	2-1	F35
Al VI	87.544	350		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3S^o$	1-1	F35
Al VI	87.592	500		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-1	F35
Al VI	87.620	100		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3S^o$	0-1	F35
Al VI	87.655	650		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-2	F35
Al VI	87.783	250		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-0	F35
Al VI	87.802	250		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-1	F35
Al VI	87.866	350		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-2	F35
Al VI	87.887	25c		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	0-1	F35
Al VI	88.170	1000		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$	2-3	F35
Al VI	88.273	750		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^1F^o$	2-3	F35
Al VI	88.325	100		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3F^o$	2-3	F35
Al VI	88.376	750		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$	1-2	F35
Al VI	88.469	250		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$	0-1	F35
Al VI	88.688	100b		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^1D^o$	2-2	F35
Al VI	90.200	100c		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1F^o$	2-3	F35
Al VI	90.858	600		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1D^o$	2-2	F35
Al VI	91.332	500		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1P^o$	2-1	F35
Al VI	92.626	750		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2-3	F35
Al VI	92.636	200		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2-2	F35
Al VI	92.875	500		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	1-2	F35
Al VI	92.970	250		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	0-1	F35
Al VI	95.436	100		$2p^4 - 2p^3(^3D^o)3d$	$^1S - ^1P^o$	0-1	F35
Al VI?	96.071	10					F35
Al VI	96.442	10		$2s2p^5 - 2s2p^4(^3S)3s$	$^3P^o - ^3S$	2-1	F35
Al VI	96.673	50d		$2s2p^5 - 2s2p^4(^3S)3s$	$^3P^o - ^3S$	1-1	F35
Al VI?	98.684	10					F35
Al VI	100.616	600		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2-2	F35
Al VI	100.639	100		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2-1	F35
Al VI	100.894	200		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	1-2	F35
Al VI	100.919	200		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	1-1	F35
Al VI	101.027	150		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	0-1	F35
Al VI	103.062	10		$2s2p^5 - 2s2p^4(^3D)3s$	$^3P^o - ^3D$	2-3	F35
Al VI	103.940	300		$2p^4 - 2p^3(^3P^o)3s$	$^1D - ^1P^o$	2-1	F35
Al VI	104.047	1000		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2-3	F35
Al VI	104.344	800		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	1-2	F35
Al VI	104.466	400		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	0-1	F35
Al VI	107.620	700		$2p^4 - 2p^3(^3D^o)3s$	$^1D - ^1D^o$	2-2	F35
Al VI	109.284	350		$2p^4 - 2p^3(^3P^o)3s$	$^1S - ^1P^o$	0-1	F35
Al VI	109.514	1000		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2-1	F35
Al VI	109.843	600		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1-1	F35
Al VI	109.974	200		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	0-1	F35
Al VI	113.314	50		$2s2p^5 - 2s2p^4(^4P)3s$	$^3P^o - ^3P$	2-1	F35
Al VI	113.437	150		$2s2p^5 - 2s2p^4(^4P)3s$	$^3P^o - ^3P$	2-2	F35
Al VI	113.623	50d		$2s2p^5 - 2s2p^4(^4P)3s$	$^3P^o - ^3P$	1-1	F35
Al VI	113.756	50		$2s2p^5 - 2s2p^4(^4P)3s$	$^3P^o - ^3P$	1-2	F35

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al VI	243.760	600d		$2s^2 2p^4 - 2s 2p^5$	$^1D - ^1P^o$	2 - 1	E6,S22
Al VI	275.350	300d		$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^o$	0 - 1	S22
Al VI	307.242	350d		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2 - 1	E6,S22
Al VI	308.560	300d		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 0	E6,S22
Al VI	309.596	400d		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2 - 2	E6,S22
Al VI	309.852	300d		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 1	E6,S22
Al VI	310.908	300d		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	0 - 1	E6,S22
Al VI	312.241	300d		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 2	E6,S22

ALUMINUM VII (Al^{6+}), $Z = 13$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential 1 947 300 cm^{-1} ; 241.43 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al VII	58.384	10		$2p^3 - 2p^2(^1D)5d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	58.752	1		$2p^3 - 2p^2(^3P)5s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	59.821	10		$2p^3 - 2p^2(^3P)5d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	59.911	10		$2p^3 - 2p^2(^3P)5d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	62.296	200b		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	62.432	10		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	62.474	100b		$2p^3 - 2p^2(^3P)4d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	63.025	500b		$2p^3 - 2p^2(^1D)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	64.066	10		$2p^3 - 2p^2(^1D)4d$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	64.325	50		$2p^3 - 2p^2(^1D)4d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	64.358	50		$2p^3 - 2p^2(^1D)4d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	64.481	10		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	64.513	10		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	64.704	150		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	64.815	120		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	64.904	100b		$2p^3 - 2p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	65.014	10d		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	65.865	50		$2p^3 - 2p^2(^3P)4d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	65.882	50		$2p^3 - 2p^2(^3P)4d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	68.531	100b		$2s 2p^4 - 2s 2p^3(^3S^o)4d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	68.637	50b		$2s 2p^4 - 2s 2p^3(^3S^o)4d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	68.681	10b		$2s 2p^4 - 2s 2p^3(^3S^o)4d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	72.270	500d		$2s^2 2p^3 - 2s 2p^2(^3S^o)3p$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	74.095	100d		$2p^3 - 2p^2(^1S)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	75.270	250		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	75.302	350		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	75.360	600		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	75.532	200		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	75.809	100		$2s 2p^4 - 2s 2p^3(^3D^o)3d$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	75.850	100b		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	75.894	100b		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	76.010	50		$2s 2p^4 - 2s 2p^3(^3D^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	76.086	10		$2s 2p^4 - 2s 2p^3(^3D^o)3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	76.221	50		$2s 2p^4 - 2s 2p^3(^3D^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	76.257	100		$2s 2p^4 - 2s 2p^3(^3D^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	76.342	10		$2s 2p^4 - 2s 2p^3(^3D^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	76.383	500		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	76.422	500		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	76.543	1000		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	76.572	1000		$2p^3 - 2p^2(^1D)3d$	$^3D^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	F35

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al VII	77.448	150b		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	77.770	300		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	77.806	70		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F35
Al VII	77.896	500		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	77.945	500b		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{1}{2} - \frac{1}{2}$	F35
Al VII	78.327	1000		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	78.351	1000b		$2p^2 - 2p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	79.012	500		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	79.197	500		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	79.635	10		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	79.690	150		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	79.919	300		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	79.952	250		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	81.234	50		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{1}{2}$	F35
Al VII	81.738	50b		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F35
Al VII	81.806	200d		$2p^2 - 2p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	83.831	350		$2s2p^4 - 2s2p^2(^4S^{\circ})3d$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	84.007	200		$2s2p^4 - 2s2p^2(^4S^{\circ})3d$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	84.098	100		$2s2p^4 - 2s2p^2(^4S^{\circ})3d$	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	86.671	10		$2p^2 - 2p^2(^1S)3s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F35
Al VII	86.689	50		$2p^2 - 2p^2(^1S)3s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	86.887	750		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	87.060	600		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	87.176	300		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$	F35
Al VII	88.033	900		$2p^2 - 2p^2(^1D)3s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	90.550	300		$2p^2 - 2p^2(^2P)3s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	90.630	250b		$2p^2 - 2p^2(^1D)3s$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	90.772	200		$2p^2 - 2p^2(^2P)3s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	93.269	10		$2p^2 - 2p^2(^2P)3s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	93.295	120		$2p^2 - 2p^2(^2P)3s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	93.516	100		$2p^2 - 2p^2(^2P)3s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F35
Al VII	93.542	1		$2p^2 - 2p^2(^2P)3s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F35
Al VII	95.965	200d		$2s2p^4 - 2s2p^2(^4S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	96.198	50		$2s2p^4 - 2s2p^2(^4S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F35
Al VII	96.319	10		$2s2p^4 - 2s2p^2(^4S^{\circ})3s$	$^4P - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F35
Al VII	208.1	?		$2s^22p^2 - 2s2p^4$	$g^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	K8
Al VII	209.4	?		$2s^22p^2 - 2s2p^4$	$g^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	K8
Al VII	239.030	100d		$2s^22p^2 - 2s2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S22
Al VII	240.770	200d		$2s^22p^2 - 2s2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S22
Al VII	259.035	10		$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S22
Al VII	259.219	10		$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S22
Al VII	261.053	10		$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S22
Al VII	261.219	10		$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S22
Al VII	278.95			$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K17
Al VII	279.16			$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K17
Al VII?	279.256	10					S22
Al VII	282.65			$2s2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	K17
Al VII	285.81			$2s2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K17
Al VII	309.012	100d		$2s^22p^2 - 2s2p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Al VII	309.122	100d		$2s^22p^2 - 2s2p^4$	$^2D^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S22
Al VII	343.290	10		$2s^22p^2 - 2s2p^4$	$^2F^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S22
Al VII	343.650	10d		$2s^22p^2 - 2s2p^4$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S22
Al VII	352.160	100d		$2s^22p^2 - 2s2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F6,S22
Al VII	353.776	200d		$2s^22p^2 - 2s2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F6,S22
Al VII	356.885	250d		$2s^22p^2 - 2s2p^4$	$g^4S^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	E6,S22
Al VII	381.689			$2s2p^4 - 2p^5$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S22,F3
Al VII	386.09			$2s2p^4 - 2p^5$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	F3
Al VII	387.52			$2s2p^4 - 2p^5$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F3
Al VII	392.07			$2s2p^4 - 2p^5$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F3

ALUMINUM VIII (Al⁷⁺), Z = 13
Ground State 1s²2s³2p² ³P₀ (6 electrons)
Ionization Potential 2 295 400 cm⁻¹; 284.59 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al VIII	53.785	10		2s 2p ³ - 2s 2p ² (⁴ P)4d	³ S° - ³ P	2 - 1	F35
Al VIII	53.800	10		2s 2p ³ - 2s 2p ² (⁴ P)4d	³ S° - ³ P	2 - 2	F35
Al VIII	53.823	10		2s 2p ³ - 2s 2p ² (⁴ P)4d	³ S° - ³ P	2 - 3	F35
Al VIII	54.217	200b		2p ³ - 2p 4d	^g 3P - ³ D°	1 - 2	F35
Al VIII	54.258	200		2p ³ - 2p 4d	^g 3P - ³ D°	2 - 3	F35
Al VIII	57.553	10		2s 2p ³ - 2s 2p ² (⁴ P)4d	³ D° - ³ F	3 - 4	F35
Al VIII	57.624	10		2s 2p ³ - 2s 2p ² (⁴ P)4d	³ D° - ³ F	2 - 3	F35
Al VIII	61.694	150		2s ³ 2p ² - 2s 2p ² (³ D)3p	¹ D - ¹ D°	2 - 2	F35
Al VIII	62.016	100		2s ³ 2p ² - 2s 2p ² (³ D)3p	¹ D - ¹ F°	2 - 3	F35
Al VIII	63.203	10		2s 2p ³ - 2s 2p ² (³ P)3d	³ D° - ³ P	3 - 2	F35
Al VIII	63.560	10		2s ² 2p ³ - 2s 2p ² (⁴ P)3p	^g 2P - ² P°	? 2 - 2	F35, K8
Al VIII	63.714	100		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ D° - ³ F	3 - 4	F35
Al VIII	63.933	10		2s ³ 2p ² - 2s 2p ² (⁴ P)3p	^g 3P - ³ D°	0 - 1	F35
Al VIII	63.965	150d		2s ³ 2p ² - 2s 2p ² (⁴ P)3p	^g 3P - ³ D°	1 - 2	F35
Al VIII	64.004	200		2s ³ 2p ² - 2s 2p ² (⁴ P)3p	^g 3P - ³ D°	2 - 3	F35
Al VIII	64.086	10		2s ² 2p ³ - 2s 2p ² (⁴ P)3p	^g 2P - ³ D°	2 - 2	F35
Al VIII	65.128	10d		2s 2p ³ - 2s 2p ² (³ P)3d	³ P° - ³ P	2 - 2	F35
Al VIII	65.298	10		2s 2p ³ - 2s 2p ² (³ P)3d	³ P° - ³ D	2 - 3	F35
Al VIII	65.381	50		2s ³ 2p ² - 2s 2p ² (⁴ P)3p	^g 2P - ³ S°	1 - 1	F35
Al VIII	65.494	50		2s ³ 2p ² - 2s 2p ² (⁴ P)3p	^g 2P - ³ S°	2 - 1	F35
Al VIII	66.321	60b		2s 2p ³ - 2s 2p ² (³ S)3d	³ P° - ³ D	2 - 3	F35
Al VIII	66.363	10		2s 2p ³ - 2s 2p ² (³ S)3d	³ P° - ³ D	1 - 2	F35
Al VIII	66.704	150		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ S° - ³ P	2 - 1	F35
Al VIII	66.731	200		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ S° - ³ P	2 - 2	F35
Al VIII	66.771	350		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ S° - ³ P	2 - 3	F35
Al VIII	67.044	10		2p ³ - 2p 3d	^g 3P - ² P°	0 - 1	F35
Al VIII	67.096	100		2p ³ - 2p 3d	^g 3P - ³ P°	1 - 0	F35
Al VIII	67.121	100		2p ³ - 2p 3d	^g 3P - ³ P°	1 - 1	F35
Al VIII	67.166	10		2p ³ - 2p 3d	^g 2P - ³ P°	1 - 2	F35
Al VIII	67.244	150		2p ³ - 2p 3d	^g 2P - ³ P°	2 - 1	F35
Al VIII	67.288	500		2p ³ - 2p 3d	^g 2P - ³ P°	2 - 2	F35
Al VIII	67.360	250		2p ³ - 2p 3d	^g 2P - ³ D°	0 - 1	F35
Al VIII	67.408	500		2p ³ - 2p 3d	^g 2P - ³ D°	1 - 2	F35
Al VIII	67.437	50		2p ³ - 2p 3d	^g 3P - ³ D°	1 - 1	F35
Al VIII	67.464	600		2p ³ - 2p 3d	^g 3P - ³ D°	2 - 3	F35
Al VIII	67.529	10		2p ³ - 2p 3d	^g 3P - ³ D°	2 - 2	F35
Al VIII	67.565	150b		2s 2p ³ - 2s 2p ² (³ D)3d	³ D° - ³ D	3 - 3	F35
Al VIII	67.946	500		2s 2p ³ - 2s 2p ² (³ D)3d	³ D° - ³ F	3 - 4	F35
Al VIII	68.375	750		2p ³ - 2p 3d	¹ D - ¹ F°	2 - 3	F35
Al VIII	68.825	50b		2s 2p ³ - 2s 2p ² (³ D)3d	³ P° - ³ S	2 - 1	F35
Al VIII	69.420	50		2s 2p ³ - 2s 2p ² (³ D)3d	³ P° - ³ P	1 - 0	F35
Al VIII	69.502	100		2s 2p ³ - 2s 2p ² (³ D)3d	³ P° - ³ P	2 - 1	F35
Al VIII	69.611	200		2s 2p ³ - 2s 2p ² (³ D)3d	³ P° - ³ P	2 - 2	F35
Al VIII	69.773	150		2s 2p ³ - 2s 2p ² (³ D)3d	³ P° - ³ D	2 - 3	F35
Al VIII	70.161	300		2p ³ - 2p 3d	¹ D - ¹ D°	2 - 2	F35
Al VIII	70.323	200		2p ³ - 2p 3d	¹ D - ³ F°	2 - 2	F35
Al VIII	70.402	1		2s 2p ³ - 2s 2p ² (² P)3s	³ D° - ³ P	? 3 - 2	F35
Al VIII	70.727	250		2p ³ - 2p 3d	¹ S - ¹ P°	0 - 1	F35
Al VIII	71.277	50		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ D° - ³ D	? 2 - 2	F35, K8
Al VIII	72.223	200		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ D° - ³ F	3 - 4	F35
Al VIII	72.324	700		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ D° - ³ F	2 - 3	F35
Al VIII	72.401	150		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ D° - ³ F	1 - 2	F35
Al VIII	73.703	150		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ P° - ³ D	2 - 3	F35
Al VIII	73.733	100		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ P° - ³ D	1 - 2	F35
Al VIII	73.760	10		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ P° - ³ D	0 - 1	F35
Al VIII	73.879	200		2s 2p ³ - 2s 2p ² (³ S)3s	³ P° - ³ S	2 - 1	F35
Al VIII	74.841	200		2s 2p ³ - 2s 2p ² (⁴ P)3s	³ S° - ³ P	2 - 3	F35
Al VIII	74.965	150		2s 2p ³ - 2s 2p ² (⁴ P)3s	³ S° - ³ P	2 - 2	F35
Al VIII	75.058	50		2s 2p ³ - 2s 2p ² (⁴ P)3s	³ S° - ³ P	2 - 1	F35
Al VIII	75.397	70		2s 2p ³ - 2s 2p ² (⁴ P)3d	³ P° - ³ P	0 - 1	F35

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al VIII	75.488	200b		$2s2p^3 - 2s2p^2(^4P)3d$	$^3P^o - ^3P$	2-2	F35
Al VIII	75.577	150		$2s2p^3 - 2s2p^2(^2D)3s$	$^3D^o - ^3D$	3-3	F35
Al VIII	75.623	100		$2p^3 - 2p3s$	$g^3P - ^3P^o$	1-2	F35
Al VIII	75.734	50		$2p^3 - 2p3s$	$g^3P - ^3P^o$	0-1	F35
Al VIII	75.778	250		$2p^3 - 2p3s$	$g^3P - ^3P^o$	2-2	F35
Al VIII	75.894	100b		$2p^3 - 2p3s$	$g^3P - ^3P^o$	1-0	F35
Al VIII	75.985	50		$2p^3 - 2p3s$	$g^3P - ^3P^o$	2-1	F35
Al VIII	77.605	300		$2p^3 - 2p3s$	$^1D - ^1P^o$	2-1	F35
Al VIII	78.225	1		$2s2p^3 - 2s2p^2(^4P)3s$	$^3S^o - ^3P$? 1-2	F35
Al VIII	78.351	1000b		$2s2p^3 - 2s2p^2(^2D)3s$	$^3P^o - ^3D$	2-3	F35
Al VIII	79.455	120		$2s2p^3 - 2s2p^2(^2S)3s$	$^3S^o - ^3S$	1-1	F35
Al VIII	80.320	10		$2s2p^3 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	3-2	F35
Al VIII	80.483	10d		$2s2p^3 - 2s2p^2(^4P)3s$	$^3D^o - ^3P$	2-1	F35
Al VIII	80.704	100		$2p^3 - 2p3s$	$^1S - ^1P^o$	0-1	F35
Al VIII	82.543	150		$2s2p^3 - 2s2p^2(^2D)3s$	$^1D^o - ^1D$	2-2	F35
Al VIII	83.465	50		$2s2p^3 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	2-2	F35
Al VIII	83.635	10		$2s2p^3 - 2s2p^2(^4P)3s$	$^3P^o - ^3P$	2-1	F35
Al VIII	91.487	50		$2s2p^3 - 2s2p^23p$	$^3P^o - ^3S$	2-1	F35
Al VIII	247.40	45		$2s^22p^3 - 2s2p^3$	$^3P - ^3S^o$	0-1	K18
Al VIII	248.45	83		$2s^22p^3 - 2s2p^3$	$g^3P - ^3S^o$	1-1	K18
Al VIII	250.139	100		$2s^22p^3 - 2s2p^3$	$g^3P - ^3S^o$	2-1	S22, K18
Al VIII	251.347	10		$2s^22p^3 - 2s2p^3$	$^1D - ^1P^o$	2-1	S22
Al VIII	285.467	50d		$2s^22p^3 - 2s2p^3$	$^1D - ^1D^o$	2-2	S22
Al VIII	286.65			$2s2p^3 - 2p^4$	$^3D^o - ^3P^o$	2-1	F3
Al VIII	287.13			$2s^22p^3 - 2s2p^3$	$^1S - ^1P^o$	0-1	F3
Al VIII	289.12			$2s2p^3 - 2p^4$	$^3D^o - ^3P$	3-2	F3
Al VIII	323.54			$2s^22p^3 - 2s2p^3$	$g^3P - ^3P^o$	0-1	F3
Al VIII	325.29			$2s^22p^3 - 2s2p^3$	$g^3P - ^3P^o$	1-2	F3
Al VIII	328.200	10d		$2s^22p^3 - 2s2p^3$	$g^3P - ^3P^o$	2-2	S22
Al VIII	329.63			$2s2p^3 - 2p^4$	$^3P^o - ^3P$	1-0	F3
Al VIII	331.03			$2s2p^3 - 2p^4$	$^3P^o - ^3P$	2-1	F3
Al VIII	334.51			$2s2p^3 - 2p^4$	$^3P^o - ^3P$	2-2	F3
Al VIII	340.23			$2s2p^3 - 2p^4$	$^1P^o - ^1S$	1-0	F6
Al VIII	381.15			$2s^22p^3 - 2s2p^3$	$g^3P - ^3D^o$	0-1	F3
Al VIII	381.689	10		$2s^22p3d - 2s2p^2(^2D)3d$	$^1D^o - ^3F$? 2-3	S22, K8
Al VIII	383.70			$2s^22p^3 - 2s2p^3$	$g^3P - ^3D^o$	1-1	K17
Al VIII	383.785	50		$2s^22p^3 - 2s2p^3$	$g^3P - ^3D^o$	1-2	S22
Al VIII	387.83			$2s^22p^3 - 2s2p^3$	$g^3P - ^3D^o$	2-2	K17
Al VIII	387.970	100		$2s^22p^3 - 2s2p^3$	$g^3P - ^3D^o$	2-3	S22
Al VIII	399.57			$2s2p^3 - 2p^4$	$^1D^o - ^1D$	2-2	F6
Al VIII	480.11			$2s2p^3 - 2p^4$	$^3S^o - ^3P$	1-0	F3
Al VIII	483.03			$2s2p^3 - 2p^4$	$^3S^o - ^3P$	1-1	F3
Al VIII	490.44			$2s2p^3 - 2p^4$	$^3S^o - ^3P$	1-2	F3
Al VIII	493.18			$2s2p^3 - 2p^4$	$^1P^o - ^1D$	1-2	F3
Al VIII	774.8	?		$2s^22p^3 - 2s2p^3$	$g^3P - ^3S^o$	2-2	K8

ALUMINUM IX (Al⁸⁺), Z = 13
 Ground State $1s^22s^22p^2P_{1/2}^o$ (5 electrons)
 Ionization Potential 2 663 400 cm⁻¹; 330.21 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al IX	40.904	10		$2s^22p - 2s2p(^3P^o)5p$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H7
Al IX	41.037	20		$2s^22p - 2s2p(^3P^o)5p$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	H7
Al IX	41.543	20		$2p - 6d$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	H7
Al IX	42.708	10		$2s2p^3 - 2s2p(^1P^o)5d$	$^3D - ^3D^o$	$\frac{3}{2} - \frac{3}{2}$	H7
Al IX	42.744	10		$2s2p^3 - 2s2p(^1P^o)5d$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	H7

I⁺ He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ai IX	42.928	20		2s 2p ² - 2p ² (² P) 4p	4P - 4D°	½ - ½	H7
Ai IX	43.195	40		2s 2p ² - 2s 2p(³ P°) 5d	4P - 4P°	½ - ½	H7
Ai IX	43.237	40		2s 2p ² - 2s 2p(³ P°) 5d	4P - 4P°	½ - ½	H7
Ai IX	43.261	80		2s 2p ² - 2s 2p(² P°) 5d	4P - 4D°	½ - ½	H7
Ai IX	43.549	i0		2p - 5d	g ² P° - 2D	½ - ½	F35
Ai IX	44.704	50		2s ² 2p - 2s 2p(³ P°) 4p	g ² P° - 2D	½ - ½	H7
Ai IX	44.743	80		2s ² 2p - 2s 2p(³ P°) 4p	g ² P° - 2D	½ - ½	H7
Ai IX	45.977	10		2s ² 2p - 2s 2p(³ P°) 4p	g ² P° - 2P	½ - ½	H7
Ai IX	45.344	40		2s 2p ² - 2s 2p(³ P°) 5d	2D - 2F°	½ - ½	H7
Ai IX	46.896	40		2s 2p ² - 2s 2p(¹ P°) 4d	2D - 2F°	½ - ½	H7
Ai IX	47.417	80		2s 2p ² - 2s 2p(³ P°) 4d	4P - 4P°	½ - ½	H7
Ai IX	47.455	170		2s 2p ² - 2s 2p(³ P°) 4d	4P - 4D°	½ - ½	W12
Ai IX	47.489	200		2s 2p ² - 2s 2p(³ P°) 4d	4P - 4P°	½ - ½	H7
Ai IX	47.534	100		2s 2p ² - 2s 2p(² P°) 4d	4P - 4D°	½ - ½	F35
Ai IX	47.755	10		2p - 4d	g ² P° - 2D	½ - ½	F35
Ai IX	47.856	50		2p - 4d	g ² P° - 2D	½ - ½	F35
Ai IX	48.765	20		2s 2p ² - 2s 2p(³ P°) 4s	4P - 4P°	½ - ½	H7
Ai IX	49.094	40		2p - 4s	g ² P° - 2S	½ - ½	H7
Ai IX	49.854	100		2s 2p ² - 2s 2p(² P°) 4d	2D - 2F°	½ - ½	F35
Ai IX	49.916	100		2s 2p ² - 2s 2p(² P°) 4d	2D - 2F°	½ - ½	H7
Ai IX	52.966	10		2s ² 2p - 2s 2p(¹ P°) 3p	g ² P° - 2S	½ - ½	H7
Ai IX	53.098	10		2s ² 2p - 2s 2p(¹ P°) 3p	g ² P° - 2S	½ - ½	H7
Ai IX	53.237	60		2s ² 2p - 2s 2p(¹ P°) 3p	g ² P° - 2P	½ - ½	H7
Ai IX	53.267	60		2s ² 2p - 2s 2p(¹ P°) 3p	g ² P° - 2P	½ - ½	H7
Ai IX	53.376	10		2s ² 2p - 2s 2p(¹ P°) 3p	g ² P° - 2P	½ - ½	F35
Ai IX	53.424	10		2s ² 2p - 2s 2p(¹ P°) 3p	g ² P° - 2D	½ - ½	F35
Ai IX	53.488	1		2s 2p ² - 2p ² (³ P) 3p	4P - 4S°	½ - ½	F35
Ai IX	53.554	10		2s 2p ² - 2p ² (³ P) 3p	4P - 4S°	½ - ½	F35
Ai IX	54.312	10d		2s 2p ² - 2p ² (³ P) 3p	4P - 4P°	½ - ½	F35
Ai IX	54.457	200		2s 2p ² - 2p ² (³ P) 3p	4P - 4D°	½ - ½	F35
Ai IX	55.667	10		2s 2p ² - 2p ² (¹ D) 3p	2D - 2D°	½ - ½	F35
Ai IX	56.150	50b		2s ² 2p - 2s 2p(³ P°) 3p	g ² P° - 2S	½ - ½	F35
Ai IX	56.304	70		2s ² 2p - 2s 2p(³ P°) 3p	g ² P° - 2S	½ - ½	F35
Ai IX	56.899	100b		2s ² 2p - 2s 2p(³ P°) 3p	g ² P° - 2D	½ - ½	F35
Ai IX	56.945	250		2s ² 2p - 2s 2p(³ P°) 3p	g ² P° - 2D	½ - ½	F35
Ai IX	58.060	10		2s ² 2p - 2s 2p(³ P°) 3p	g ² P° - 2P	½ - ½	F35
Ai IX	58.112	50		2s ² 2p - 2s 2p(³ P°) 3p	g ² P° - 2P	½ - ½	F35
Ai IX	58.222	100		2s ² 2p - 2s 2p(³ P°) 3p	g ² P° - 2P	½ - ½	F35
Ai IX	58.276	1		2s ² 2p - 2s 2p(³ P°) 3p	g ² P° - 2P	½ - ½	F35
Ai IX	59.381	10d		2s 2p ² - 2s 2p(¹ P°) 3d	2D - 2D°	½ - ½	F35
Ai IX	59.761	300		2s 2p ² - 2s 2p(¹ P°) 3d	2D - 2F°	½ - ½	F35
Ai IX	59.960	60		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4P°	½ - ½	H7
Ai IX	60.162	10d		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4P°	½ - ½	F35
Ai IX	60.197	50		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4P°	½ - ½	F35
Ai IX	60.222	10		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4P°	½ - ½	F35
Ai IX	60.262	10		2s 2p ² - 2s 2p(³ P°) 3s	4P - 4P°	½ - ½	F35
Ai IX	60.312	50		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4P°	½ - ½	F35
Ai IX	60.347	100		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4P°	½ - ½	F35
Ai IX	60.504	150		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4D°	½ - ½	F35
Ai IX	60.549	200		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4D°	½ - ½	F35
Ai IX	60.588	300		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4D°	½ - ½	F35
Ai IX	60.645	10		2s 2p ² - 2s 2p(³ P°) 3d	4P - 4D°	½ - ½	F35
Ai IX	60.896	300		2p - 3d	g ² P° - 2D	½ - ½	F35
Ai IX	61.069	630		2p - 3d	g ² P° - 2D	½ - ½	F35
Ai IX	61.647	10		2s 2p ² - 2s 2p(¹ P°) 3d	2S - 2P°	½ - ½	F35
Ai IX	62.327	250		2p ³ - 2p ² (³ P) 3d	4S° - 4P	½ - ½	F35
Ai IX	62.369	150		2p ³ - 2p ² (³ P) 3d	4S° - 4P	½ - ½	F35
Ai IX	62.474	100b		2s 2p ² - 2s 2p(¹ P°) 3d	2P - 2P°	½ - ½	F35
Ai IX	62.587	100		2s 2p ² - 2s 2p(¹ P°) 3d	2P - 2P°	½ - ½	F35
Ai IX	62.916	150		2s 2p ² - 2s 2p(¹ P°) 3d	2P - 2D°	½ - ½	F35
Ai IX	63.025	500b		2s 2p ² - 2s 2p(¹ P°) 3d	2P - 2D°	½ - ½	F35
Ai IX	63.509	500d		2s 2p ² - 2s 2p(³ P°) 3d	2D - 2F°	½ - ½	F35
Ai IX	63.632	300		2s 2p ² - 2s 2p(³ P°) 3d	2D - 2F°	½ - ½	F35
Ai IX	64.625	50		2s 2p ² - 2s 2p(¹ P°) 3s	2D - 2P°	½ - ½	F35
Ai IX	64.885	150		2s 2p ² - 2s 2p(³ P°) 3d	2D - 2D°	½ - ½	F35

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al IX	64.904	100b		2s 2p ² - 2s 2p(² P°) 3d	² D - ² D°	½ - ½	F35
Al IX	66.038	50		2s 2p ² - 2s 2p(² P°) 3s	⁴ P - ² P°	½ - ½	F35
Al IX	66.092	50		2s 2p ² - 2s 2p(² P°) 3s	⁴ P - ⁴ P°	½ - ½	F35
Al IX	66.142	120		2s 2p ² - 2s 2p(² P°) 3s	⁴ P - ⁴ P°	½ - ½	F35
Al IX	66.239	150		2s 2p ² - 2s 2p(² P°) 3d	² S - ² P°	½ - ½	H7
Al IX	66.275	50		2s 2p ² - 2s 2p(² P°) 3s	⁴ P - ⁴ P°	½ - ½	F35
Al IX	66.321	60b		2s 2p ² - 2s 2p(² P°) 3d	² S - ² P°	½ - ½	F35
Al IX	66.624	10		2p - 3s	<i>g</i> ² P° - ² S	½ - ½	F35
Al IX	66.836	100a		2p - 3s	<i>g</i> ² P° - ² S	½ - ½	F35
Al IX	67.828	10		2s 2p ² - 2s 2p(¹ P°) 3s	² S - ² P°	½ - ½	F35
Al IX	68.531	100b		2p ² - 2p ² (² P) 3s	⁴ S° - ⁴ P	½ - ½	F35
Al IX	68.637	50b		2p ² - 2p ² (² P) 3s	⁴ S° - ⁴ P	½ - ½	F35
Al IX	68.825	50b		2s 2p ² - 2s 2p(¹ P°) 3s	² P - ² P°	½ - ½	F35
Al IX	68.958	50		2s 2p ² - 2s 2p(¹ P°) 3s	² P - ² P°	½ - ½	F35
Al IX	69.258	50d		2s 2p ² - 2s 2p(² P°) 3d	² P - ² D°	½ - ½	F35
Al IX	69.716	100		2s 2p ² - 2s 2p(² P°) 3s	² D - ² P°	½ - ½	F35
Al IX	69.850	50d		2s 2p ² - 2s 2p(² P°) 3s	² D - ² P°	½ - ½	F35
Al IX	73.451	1		2s 2p ² - 2s 2p(² P°) 3s	² S - ² P°	½ - ½	F35
Al IX	73.625	1		2s 2p ² - 2s 2p(² P°) 3s	² S - ² P°	½ - ½	F35
Al IX	74.785	50		2s 2p ² - 2s 2p(² P°) 3s	² P - ² P°	½ - ½	F35
Al IX	77.381	150		2p ² - 2s 2p(¹ P°) 3p	² P° - ² D	½ - ½	F35
Al IX	77.448	150b		2p ² - 2s 2p(¹ P°) 3p	² P° - ² D	½ - ½	F35
Al IX	280.16			2s ² 2p - 2s 2p ²	<i>g</i> ² P° - ² P	½ - ½	F3
Al IX	282.45			2s ² 2p - 2s 2p ²	<i>g</i> ² P° - ² P	½ - ½	F3
Al IX	284.042	10G		2s ² 2p - 2s 2p ²	<i>g</i> ² P° - ² P	½ - ½	S22
Al IX	286.45			2s ² 2p - 2s 2p ²	<i>g</i> ² P° - ² P	½ - ½	F3
Al IX	300.60			2s ² 2p - 2s 2p ²	<i>g</i> ² P° - ² P	½ - ½	F3
Al IX	305.10			2s ² 2p - 2s 2p ²	<i>g</i> ² P° - ² P	½ - ½	F3
Al IX	306.95			2s 2p ² - 2p ³	² D - ² P°	½ - ½	F3
Al IX	307.33			2s 2p ² - 2p ³	² D - ² P°	½ - ½	F3
Al IX	316.78			2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ½	K18
Al IX	318.50			2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ½	K18
Al IX	321.05			2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ½	K18
Al IX	384.95			2s ² 2p - 2s 2p ²	<i>g</i> ² P° - ² D	½ - ½	K18
Al IX	392.40			2s ² 2p - 2s 2p ²	<i>g</i> ² P° - ² D	½ - ½	K18
Al IX	395.44			2s 2p ² - 2p ³	² S - ² P°	½ - ½	F3
Al IX	396.05			2s 2p ² - 2p ³	² S - ² P°	½ - ½	F3
Al IX	432.03			2s 2p ² - 2p ³	² P - ² P°	½ - ½	K18
Al IX	432.66			2s 2p ² - 2p ³	² P - ² P°	½ - ½	K18
Al IX	437.46			2s 2p ² - 2p ³	² P - ² P°	½ - ½	K18
Al IX	438.09			2s 2p ² - 2p ³	² P - ² P°	½ - ½	K18
Al IX	602.18			2s 2p ² - 2p ³	² P - ² D°	? ½ - ½	F3
Al IX	613.10			2s 2p ² - 2p ³	² P - ² D°	? ½ - ½	F3

ALUMINUM X (Al⁹⁺), Z = 13
 Ground State 1s²2s² ¹S₀ (4 electrons)
 Ionization Potential 3 214 800 cm⁻¹; 398.57 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al X	34.445	25		2s ² - 2s 6p	<i>g</i> ¹ S - ¹ P°	0 - 1	H6
Al X	35.301	10		2s 2p - 2s 7d	³ P° - ³ D	1 - 2	H6
Al X	35.340	10		2s 2p - 2s 7d	² P° - ² D	2 - 3	H6
Al X	35.888	50		2s 2p - 2p 5p	² P° - ³ P	2 - 2	H6
Al X	36.188	25		2s ² - 2s 5p	<i>g</i> ¹ S - ¹ P°	0 - 1	H6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al X	36.350	25		2s 2p - 2s 6d	$^3P^{\circ} - ^3D$	1 - 2	H6
Al X	36.403	50		2s 2p - 2s 6d	$^3P^{\circ} - ^3D$	2 - 3	H6
Al X	36.925	100		2s ² - 2s 4p	$g^1S - ^1P^{\circ}$	0 - 1	H6
Al X	38.255	100		2s 2p - 2s 5d	$^3P^{\circ} - ^3D$	1 - 2	H6
Al X	38.310	125		2s 2p - 2s 5d	$^3P^{\circ} - ^3D$	2 - 3	H6
Al X	39.291	75		2p ² - 2p 5d	$^3P - ^3P^{\circ}$	2 - 2	H6
Al X	39.535	100		2s 2p - 2p 4p	$^3P^{\circ} - ^3P$	2 - 2	H6
Al X	39.628	125		2s 2p - 2p 4p	$^3P^{\circ} - ^3D$	2 - 3	H6
Al X	39.853	50		2p ² - 2p 5d	$^1D - ^1F^{\circ}$	2 - 3	H6
Al X	40.421	25		2s 2p - 2s 5d	$^1P^{\circ} - ^1D$	1 - 2	H6
Al X	41.730	100		2s 2p - 2p 4p	$^1P^{\circ} - ^1D$	1 - 2	H6
Al X	42.310	75		2s 2p - 2s 4d	$^3P^{\circ} - ^3D$	0 - 1	H6
Al X	42.340	200		2s 2p - 2s 4d	$^3P^{\circ} - ^3D$	1 - 2	H6
Al X	42.403	350		2s 2p - 2s 4d	$^3P^{\circ} - ^3D$	2 - 3	H6
Al X	43.460	75		2p ² - 2p 4d	$^3P - ^3P^{\circ}$	1 - 2	H6
Al X	43.549	350		2p ² - 2p 4d	$^3P - ^3P^{\circ}$	2 - 2	H6
Al X	43.577	100		2p ² - 2p 4d	$^3P - ^3D^{\circ}$	2 - 3	H6
Al X	44.136	10		2p ² - 2p 4d	$^1D - ^1F^{\circ}$	2 - 3	F35
Al X	44.493	75		2p ² - 2p 4d	$^1D - ^1D^{\circ}$	2 - 2	H6
Al X	44.902	10		2s 2p - 2s 4d	$^1P^{\circ} - ^1D$	1 - 2	F35
Al X	46.223	75		2p ² - 2p 4d	$^1S - ^1P^{\circ}$	0 - 1	H6
Al X	50.670	50		2s 2p - 2p 3p	$^3P^{\circ} - ^3P$	1 - 2	F35
Al X	50.717	75		2s 2p - 2p 3p	$^3P^{\circ} - ^3P$	1 - 1	H6
Al X	50.762	350		2s 2p - 2p 3p	$^3P^{\circ} - ^3P$	2 - 2	H6
Al X	50.802	50		2s 2p - 2p 3p	$^3P^{\circ} - ^3P$	2 - 1	F35
Al X	50.903	50		2s 2p - 2p 3p	$^3P^{\circ} - ^3S$	0 - 1	H6
Al X	50.946	10		2s 2p - 2p 3p	$^3P^{\circ} - ^3S$	1 - 1	F35
Al X	51.039	10		2s 2p - 2p 3p	$^3P^{\circ} - ^3S$	2 - 1	F35
Al X	51.362	350		2s 2p - 2p 3p	$^3P^{\circ} - ^3D$	2 - 3	F35
Al X	51.400	1		2s 2p - 2p 3p	$^3P^{\circ} - ^3D$	1 - 1	F35
Al X	51.454	1		2s 2p - 2p 3p	$^3P^{\circ} - ^3D$	2 - 2	F35
Al X	51.979	300		2s ² - 2s 3p	$g^1S - ^1P^{\circ}$	0 - 1	F35
Al X	54.115	270		2s 2p - 2p 3p	$^1P^{\circ} - ^1D$	1 - 2	F35
Al X	55.227	150		2s 2p - 2s 3d	$^3P^{\circ} - ^3D$	0 - 1	F35
Al X	55.272	500		2s 2p - 2s 3d	$^3P^{\circ} - ^3D$	1 - 2	F35
Al X	55.376	750		2s 2p - 2s 3d	$^3P^{\circ} - ^3D$	2 - 3	F35
Al X	55.731	50		2s 2p - 2p 3p	$^1F^{\circ} - ^1F$	1 - 1	F35
Al X	56.590	75		2p ² - 2p 3d	$^3P - ^3P^{\circ}$	0 - 1	H6
Al X	56.650	10d		2p ² - 2p 3d	$^3P - ^3P^{\circ}$	1 - 1	F35
Al X	56.696	75		2p ² - 2p 3d	$^3P - ^3P^{\circ}$	1 - 2	H6
Al X	56.762	10		2p ² - 2p 3d	$^3P - ^3P^{\circ}$	2 - 1	F35
Al X	56.802	200		2p ² - 2p 3d	$^3P - ^3P^{\circ}$	2 - 2	F35
Al X	56.945	250		2p ² - 2p 3d	$^3P - ^3D^{\circ}$	0 - 1	H6
Al X	56.964	150		2p ² - 2p 3d	$^3P - ^3D^{\circ}$	1 - 2	F35
Al X	57.024	250		2p ² - 2p 3d	$^3P - ^3D^{\circ}$	2 - 3	F35
Al X	57.072	10		2p ² - 2p 3d	$^3P - ^3D^{\circ}$	2 - 2	F35
Al X	57.116	75		2p ² - 2p 3d	$^1D - ^1P^{\circ}$	2 - 1	H6
Al X	57.368	350		2p ² - 2p 3d	$^1D - ^1F^{\circ}$	2 - 3	F35
Al X	58.808	1		2s 2p - 2s 3s	$^3P^{\circ} - ^3S$	0 - 1	F35
Al X	58.858	100		2s 2p - 2s 3s	$^3P^{\circ} - ^3S$	1 - 1	F35
Al X	58.987	150		2s 2p - 2s 3s	$^3P^{\circ} - ^3S$	2 - 1	F35
Al X	59.107	400		2s 2p - 2s 3d	$^1P^{\circ} - ^1D$	1 - 2	F35
Al X	60.700	10		2p ² - 2p 3s	$^3P - ^3P^{\circ}$	2 - 2	F35
Al X	60.896	300		2p ² - 2p 3s	$^1D - ^1P^{\circ}$	2 - 1	H6
Al X	63.134	200		2s 2p - 2s 3s	$^1P^{\circ} - ^1S$	1 - 0	F35
Al X	177.80			2s 3d - 2s 4f	$^3D - ^3F^{\circ}$	3 - 4	F6
Al X	332.78			2s ² - 2s 2p	$g^1S - ^1P^{\circ}$	0 - 1	K18
Al X	394.83			2s 2p - 2p ²	$^1P^{\circ} - ^1S$	1 - 0	F3
Al X	395.36			2s 2p - 2p ²	$^3P^{\circ} - ^3P$	1 - 2	K18
Al X	397.76			2s 2p - 2p ²	$^3P^{\circ} - ^3P$	0 - 1	K 3
Al X	400.43			2s 2p - 2p ²	$^3P^{\circ} - ^3P$	1 - 1	K18
Al X	401.12			2s 2p - 2p ²	$^3P^{\circ} - ^3P$	2 - 2	K18
Al X	403.55			2s 2p - 2p ²	$^3P^{\circ} - ^3P$	1 - 0	K18
Al X	406.31			2s 2p - 2p ²	$^3P^{\circ} - ^3P$	2 - 1	K18
Al X	670.06			2s 2p - 2p ²	$^1P^{\circ} - ^1D$	1 - 2	F3

ALUMINUM XI (Al^{10+}), $Z = 13$
 Ground State $1s^2 2s^2 S_{1/2}$ (3 electrons)
 Ionization Potential $\approx 565\ 600\ cm^{-1}$; 442.07 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al XI	7.776			$1s^2 3p - 1s 2p 3p$	$^2P^\circ - ^2S$? $\frac{3}{2} - \frac{1}{2}$	D6
Al XI	29.416	6		$2s - 9p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	29.793	10		$2s - 8p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	30.376	20		$2s - 7p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	31.313	35		$2s - 6p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	31.426	3		$2p - 8d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	31.483	6		$2p - 8d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F28
Al XI	32.068	6		$2p - 7d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	32.128	10		$2p - 7d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F28
Al XI	33.007	200		$2s - 5p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	33.109	10		$2p - 6d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	33.172	35		$2p - 6d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F28
Al XI	34.994	200		$2p - 5d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	35.065	250		$2p - 5d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F28
Al XI	35.163	6		$2p - 5s$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F28
Al XI	35.239	6		$2p - 5s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F28
Al XI	36.675	400		$2s - 4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	39.091	250		$2p - 4d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	39.180	400		$2p - 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F28
Al XI	39.530	60		$2p - 4s$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F28
Al XI	39.623	90		$2p - 4s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F28
Al XI	48.297	700		$2s - 3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	48.338	700		$2s - 3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F28
Al XI	52.299	400		$2p - 3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F28
Al XI	52.446	700		$2p - 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F28
Al XI	54.388	60		$2p - 3s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F28
Al XI	150.31			$3p - 4d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F6
Al XI	150.61			$3p - 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F6
Al XI	154.66			$3d - 4f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{7}{2}$	F6
Al XI	550.01			$2s - 2p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F3
Al XI	568.12			$2s - 2p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F3

ALUMINUM XII (Al^{11+}), $Z = 13$
 Ground State $1s^2\ ^1S_0$ (2 electrons)
 Ionization Potential $16\ 825\ 022\ cm^{-1}$; 2085.983 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al XII	6.18	P		$1s^2 - 1s 5p$	$g^1S - ^1P^\circ$	0 - 1	K8
Al XII	6.314			$1s^2 - 1s 4p$	$g^1S - ^1P^\circ$	0 - 1	F36
Al XII	6.635			$1s^2 - 1s 3p$	$g^1S - ^1P^\circ$	0 - 1	F36
Al XII	7.757			$1s^2 - 1s 2p$	$g^1S - ^1P^\circ$	0 - 1	F36
Al XII	7.806	P		$1s^2 - 1s 2p$	$g^1S - ^3P^\circ$	0 - 1	K8
Al XII	7.873	f		$1s^2 - 1s 2s$	$g^1S - ^3S$	0 - 1	D6
Al XII	42.23	P		$1s 2s - 1s 3p$	$^3S - ^3P^\circ$	1 - 2	K8
Al XII	847.4	P		$1s 2s - 1s 2p$	$^3S - ^3P^\circ$	1 - 2	K8

ALUMINUM XIII (Al^{12+}), $Z = 13$
 Ground State $1s^2S_{1/2}$ (1 electron)
 Ionization Potential $18\,584\,139\text{ cm}^{-1}$; 2304.08 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Al XIII	5.534	P		$1s-6p$	$g^2S-^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Al XIII	5.605	P		$1s-5p$	$g^2S-^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Al XIII	5.739	P	10	$1s-4p$	$g^2S-^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Al XIII	6.053	P	30	$1s-3p$	$g^2S-^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Al XIII	7.173	P	100	$1s-2p$	$g^2S-^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Al XIII	23.44	P		2-7			G2
Al XIII	24.22	P		2-6			G2
Al XIII	25.63	P		2-5			G2
Al XIII	28.70	P		2-4			G2
Al XIII	38.73	P		2-3			G2
Al XIII	59.39	P		3-7			G2
Al XIII	64.64	P		3-6			G2
Al XIII	75.74	P		3-5			G2
Al XIII	110.8	P		3-4			G2
Al XIII	128.02	P		4-7			G2
Al XIII	155.2	P		4-6			G2
Al XIII	239.5	P		4-5			G2
Al XIII	275.1	P		5-7			G2
Al XIII	440.9	P		5-6			G2
Al XIII	731.4	P		6-7			G2

SILICON, Z = 14

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si	53.075	20					F34
Si	53.063	20					F34
Si	56.145	50					F34
Si	60.421	20					F34
Si	60.673	100					F34
Si	62.154	50					F34
Si	62.386	50d					F34
Si	63.183	50d					F34
Si	65.711	50					F34
Si	66.726	100					F34
Si	68.497	50d					F34
Si	68.522	50d					F34
Si	68.786	100					F34
Si	68.833	20					F34
Si	70.771	100d					F34
Si	82.622	50d					F34
Si	85.614	20					F34
Si	92.957	50d					F34

SILICON I (Si⁰⁺), Z = 14Ground State 1s²2s²2p⁶3s²3p² ³P₀ (14 electrons)Ionization Potential 65 747.5 cm⁻¹; 8.151 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si I	1255.276	10 -A	41.12	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	0 - 1	R1
Si I	1256.490	40 -A	41.12	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	1 - 1	R1
Si I	1258.795	50 -A	41.12	3s ² 3p ² - 3s3p ³	g ³ P - ³ S°	2 - 1	R1
Si I?	1543.713	1r					R1
Si I?	1545.095	1r					R1
Si I	1545.565	1r	41.11	3p ² - 3p10d	g ³ P - ³ D°	2 - 3	R1
Si I	1546.559	1r	41.10	3p ² - 3p10d	g ³ P - ³ P°	2 - 2	R1
Si I?	1547.373	1r					R1
Si I	1548.7149 st	2	41.09	3p ² - 3p9d	g ³ P - ³ D°	1 - 2	K5
Si I?	1551.2411	2					K5
Si I	1551.8595 st	2	41.09	3p ² - 3p9d	g ³ P - ³ D°	2 - 3	K5
Si I?	1551.9323	1					K5
Si I	1552.2089	1	41.09	3p ² - 3p9d	g ³ P - ³ D°	? 2 - 2	K5, K8
Si I	1552.9498 st	2	41.08	3p ² - 3p9d	g ³ P - ³ P°	2 - 2	K5
Si I?	1553.3712	1					K5
Si I?	1554.7021	2					K5
Si I	1555.5157 st	1	41.03	3p ² - 3p10s	g ³ P - (³ / ₂ , ¹ / ₂)°	1 - 2	K5
Si I?	1555.6630	1					K5
Si I?	1556.1626	1					K5
Si I	1556.5273 st	1	41.05	3p ² - 3p8d	g ³ P - ³ P°	1 - 0	K5
Si I	1558.2400 st	2	41.06	3p ² - 3p8d	g ³ P - ³ D°	1 - 2	K5
Si I	1559.06		41.03	3p ² - 3p10s	g ³ P - (³ / ₂ , ¹ / ₂)°	2 - 2	M19
Si I	1559.3645 st	2	41.07	3p ² - 3p10s	g ³ P - (³ / ₂ , ¹ / ₂)°	2 - 1	K5
Si I	1560.39		41.03	3p ² - 3p10s	g ³ P - ³ P°	0 - 1	M19
Si I	1560.7425 st	8	41.06	3p ² - 3p8d	g ³ P - ³ D°	2 - 3	R2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si I	1561.792	10r	41.06	$3p^3 - 3p8d$	$g^3P - ^3D^o$	2-2	R1
Si I	1562.0065 st	4	41.05	$3p^2 - 3p8d$	$g^3P - ^3P^o$	2-2	R2
Si I	1562.0531 st	1	41.02	$3p^2 - 3p8d$	$g^3P - ^1P^o$	0-1	K5
Si I	1562.28		41.03	$3p^3 - 3p10s$	$g^3P - ^3P^o$	1-1	Mt9
Si I	1563.3641 st	1	41.04	$3p^2 - 3p8d$	$g^3P - ^1F^o$	2-3	K5
Si I	1564.6138 st	8	41.01	$3p^3 - 3p8d$	$g^3P - ^3F^o$	1-2	R2
Si I	1565.32		41	$3p^3 - 3p9s$	$g^3P - (^{3/2}, 1/2)^o$	0-1	M19
Si I	1565.84		41.03	$3p^2 - 3p1f_s$	$g^3P - ^3P^o$	2-1	Mt9
Si I	1567.21		41	$3p^2 - 3p9s$	$g^3P - (^{3/2}, 1/2)^o$	1-1	Mt9
Si I	1567.7263 st	8	37.04	$3p^2 - 3p9s$	$g^3P - (^{3/2}, 1/2)^o$	1-2	R2
Si I?	1567.8095	1					K5
Si I	1568.1963 st	10	40.01	$3p^3 - 3p7d$	$g^3P - ^3P^o$	1-0	R2
Si I	1568.6182 st	3	40	$3p^2 - 3p7d$	$g^3P - ^3D^o$	0-1	R2
Si I	1569.3185 st	8	41.01	$3p^2 - 3p8d$	$g^3P - ^3F^o$	2-3	R2
Si I	1570.0275 st	2	40.01	$3p^3 - 3p7d$	$g^3P - ^3P^o$	1-1	K5
Si I	1570.5175 st	3	40	$3p^2 - 3p7d$	$g^3P - ^3D^o$	1-1	R2
Si I	1570.8104 st	1	41	$3p^2 - 3p9s$	$g^3P - (^{3/2}, 1/2)^o$	2-1	K5
Si I	1571.3726 st	1	37.04	$3p^2 - 3p9s$	$g^3P - (^{3/2}, 1/2)^o$	2-2	K5
Si I	1571.4058 st	10	40	$3p^2 - 3p7d$	$g^3P - ^3D^o$	1-2	R2
Si I?	1571.7956	6					K5
Si I	1572.7173 st	2	37.04	$3p^2 - 3p9s$	$g^3P - (^{1/2}, 1/2)^o$	0-1	K5
Si I?	1572.9245	1					K5
Si I?	1573.3483	1					K5
Si I	1573.6350 st	10	40.01	$3p^2 - 3p7d$	$g^3P - ^3P^o$	2-1	R2
Si I	1573.8840 st	25	40	$3p^2 - 3p7d$	$g^3P - ^3D^o$	2-3	R2
Si I	1574.1275 st	1	40	$3p^2 - 3p7d$	$g^3P - ^3D^o$	2-1	K5
Si I	1574.63		37.04	$3p^2 - 3p9s$	$g^3P - (^{1/2}, 1/2)^o$	1-1	M19
Si I	1574.7456 st	1	37.04	$3p^2 - 3p9s$	$g^3P - (^{1/2}, 1/2)^o$	1-0	K5
Si I	1574.8435 st	30	40.01	$3p^2 - 3p7d$	$g^3P - ^3P^o$	2-2	R2
Si I	1575.1268 st	10	37.03	$3p^2 - 3p7d$	$g^3P - ^1P^o$	0-1	R2
Si I	1576.829 st	12	39	$3p^2 - 3p7d$	$g^3P - ^1F^o$	2-3	K5
Si I	1577.0439 st	2	37.03	$3p^3 - 3p7d$	$g^3P - ^1P^o$	1-1	K5
Si I	1578.25		37.04	$3p^2 - 3p9s$	$g^3P - (^{1/2}, 1/2)^o$	2-1	M19
Si I	1580.3001 st	12	38	$3p^2 - 3p7d$	$g^3P - ^3F^o$	1-2	R?
Si I	1580.68		37.03	$3p^3 - 3p7d$	$g^3P - ^1P^o$	2-1	M19
Si I	1583.95		37.02	$3p^3 - 3p7d$	$g^3P - ^3F^o$	2-2	Mt9
Si I	1584.0297 st	8	37	$3p^2 - 3p8s$	$g^3P - (^{3/2}, 1/2)^o$	0-1	R2
Si I	1584.3455 st	12	38	$3p^2 - 3p7d$	$g^3P - ^3F^o$	2-3	R2
Si I	1584.8540 st	2	35.03	$3p^2 - 3p6d$	$g^3P - ^3P^o$	0-1	K5
Si I	1585.9580 st	3	37	$3p^2 - 3p8s$	$g^3P - (^{3/2}, 1/2)^o$	1-1	R2
Si I	1586.1372 st	15	35.03	$3p^2 - 3p6d$	$g^3P - ^3P^o$	1-0	R2
Si I	1586.7913 st	20	35.03	$3p^3 - 3p6d$	$g^3P - ^3P^o$	1-1	R2
Si I	1586.8920 st	3	35.01	$3p^2 - 3p8s$	$g^3P - (^{3/2}, 1/2)^o$	1-2	R2
Si I	1587.7620 st	15	37.01	$3p^3 - 3p7d$	$g^3P - ^1D^o$	2-2	R2
Si I	1589.1733 st	15	35.02	$3p^2 - 3p6d$	$g^3P - ^3D^o$	0-1	R2
Si I	1589.6399 st	7	37	$3p^3 - 3p8s$	$g^3P - (^{3/2}, 1/2)^o$	2-1	R2
Si I	1590.4768 st	20	35.03	$3p^2 - 3p6d$	$g^3P - ^3P^o$	2-1	R2
Si I	1590.5763 st	15	35.01	$3p^3 - 3p8s$	$g^3P - (^{3/2}, 1/2)^o$	2-2	R2
Si I	1591.1232 st	20	35.02	$3p^2 - 3p6d$	$g^3P - ^3D^o$	1-1	R2
Si I	1591.24		35.03	$3p^2 - 3p6d$	$g^3P - ^3P^o$	1-2	Mt9
Si I	1592.0200 st	20	35.01	$3p^2 - 3p8s$	$g^3P - (^{1/2}, 1/2)^o$	0-1	R2
Si I	1592.4234 st	60	35.02	$3p^2 - 3p6d$	$g^3P - ^3D^o$	1-2	R2
Si I	1594.1455 st	3	35.61	$3p^3 - 3p8s$	$g^3P - (^{1/2}, 1/2)^o$	1-0	K5
Si I	1594.5655 st	70	35.02	$3p^2 - 3p6d$	$g^3P - ^3D^o$	2-3	R2
Si I	1594.83		35.02	$3p^3 - 3p6d$	$g^3P - ^3D^o$	2-1	M19
Si I	1594.9493 st	70	35.03	$3p^3 - 3p6d$	$g^3P - ^3P^o$	2-2	R2
Si I	1595.7552 st	30	33.01	$3p^3 - 3p6d$	$g^3P - ^1P^o$	0-1	R2
Si I	1597.721 st	25	33.01	$3p^3 - 3p6d$	$g^3P - ^1P^o$	1-1	K5
Si I?	1597.7357	20					K5
Si I	1597.9620 st	60	35	$3p^2 - 3p6d$	$g^3P - ^1F^o$	2-3	R2
Si I	1601.46		33.01	$3p^2 - 3p6d$	$g^3P - ^1P^o$	2-1	M19
Si I	1605.8370 st	20	33	$3p^3 - 3p6d$	$g^3P - ^3F^o$	1-2	R2
Si I	1608.9157 st	25	33	$3p^2 - 3p6d$	$g^3P - ^3F^o$	2-3	R2
Si I	1610.82		32	$3p^2 - 3p6d$	$g^3P - ^1D^o$	1-2	M19
Si I	1614.5665 st	30	30	$3p^3 - 3p5d$	$g^3P - ^3P^o$	0-1	R2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si I	1614.6309 st	25	32	3p ² - 3p6d	g ³ P - ¹ D°	2 - 2	R2
Si I	1615.9488 st	50	30	3p ² - 3p5d	g ³ P - ³ P°	1 - 0	R2
Si I	1615.99		31	3p ² - 3p7s	g ³ P - (3/2, 1/2)°	0 - 1	M19
Si I	1616.5794 st	70	30	3p ² - 3p5d	g ³ P - ³ P°	1 - 1	R2
Si I	1618.0054 st	8	31	3p ² - 3p7s	g ³ P - (3/2, 1/2)°	1 - 1	R2
Si I	1619.0458 st	8	30	3p ² - 3p5d	g ³ P - ³ P°	1 - 2	K2
Si I	1619.5266 st	15	29	3p ² - 3p7s	g ³ P - (3/2, 1/2)°	1 - 2	R2
Si I	1620.4049 st	60	30	3p ² - 3p5d	g ³ P - ³ P°	2 - 1	R2
Si I	1621.8380 st	2	31	3p ² - 3p7s	g ³ P - (3/2, 1/2)°	2 - 1	K5
Si I	1622.8806 st	90	30	3p ² - 3p5d	g ³ P - ³ P°	2 - 2	R2
Si I	1623.3663 st	8	29	3p ² - 3p7s	g ³ P - (3/2, 1/2)°	2 - 2	R2
Si I	1623.4971 st	10	29	3p ² - 3p7s	g ³ P - (1/2, 1/2)°	0 - 1	R2
Si I	1625.5320 st	35	29	3p ² - 3p7s	g ³ P - (1/2, 1/2)°	1 - 1	R2
Si I	1625.7051 st	70	27	3p ² - 3p5d	g ³ P - ³ D°	0 - 1	R2
Si I	1627.0498 st	20	29	3p ² - 3p7s	g ³ P - (1/2, 1/2)°	1 - 0	R2
Si I	1627.7459 st	30	27	3p ² - 3p5d	g ³ P - ³ D°	1 - 1	R2
Si I	1629.403 st	20	29	3p ² - 3p7s	g ³ P - (1/2, 1/2)°	2 - 1	K5
Si I	1629.438 st	100	27	3p ² - 3p5d	g ³ P - ³ D°	1 - 2	K5
Si I	1629.9477 st	100	27	3p ² - 3p5d	g ³ P - ³ D°	2 - 3	R2
Si I	1631.1676 st	70	26	3p ² - 3p5d	g ³ P - ¹ P°	0 - 1	K5
Si I	1631.62		27	3p ² - 3p5d	g ³ P - ³ D°	2 - 1	M19
Si I	1633.2230 st	45	26	3p ² - 3p5d	g ³ P - ¹ P°	1 - 1	K5
Si I	1633.3277 st	40	27	3p ² - 3p5d	g ³ P - ³ D°	2 - 2	R2
Si I	1633.9851 st	90	28	3p ² - 3p5d	g ³ P - ¹ F°	2 - 3	R2
Si I	1637.0106 st	4 - A	104	3s 3p ² - 3s 3p ² (⁴ P)3d	⁵ S° - ⁵ P	2 - 1	K5
Si I	1638.2823 st	2 - A	104	3s 3p ² - 3s 3p ² (⁴ P)3d	⁵ S° - ⁵ P	2 - 2	K5
Si I	1640.267 st	1 - A	104	3s 3p ² - 3s 3p ² (⁴ ?)3d	⁵ S° - ⁵ P	2 - 3	K5
Si I	1651.0279 st	25	25	3p ² - 3p5d	g ³ P - ³ F°	1 - 2	R2
Si I	1653.3760 st	40	25	3p ² - 3p5d	g ³ P - ³ F°	2 - 3	R2
Si I	1655.012	1h	25	3p ² - 3p5d	g ³ P - ³ F°	2 - 2	M19
Si I	1660.4748 st	15	24	3p ² - 3p5d	g ³ P - ¹ D°	1 - 2	R2
Si I	1664.5111 st	35	24	3p ² - 3p5d	g ³ P - ¹ D°	2 - 2	R2
Si I	1666.3762 st	60	23	3p ² - 3p4d	g ³ P - ³ P°	0 - 1	R2
Si I	1667.6288 st	70	23	3p ² - 3p4d	g ³ P - ³ P°	1 - 0	R2
Si I	1668.5204 st	70	23	3p ² - 3p4d	g ³ P - ³ P°	1 - 1	R2
Si I	1671.1168 st	40	23	3p ² - 3p4d	g ³ P - ³ P°	1 - 2	R2
Si I	1672.5961 st	80	23	3p ² - 3p4d	g ³ P - ³ P°	2 - 1	R2
Si I	1675.7053 st	200	23	3p ² - 3p4d	g ³ P - ³ P°	2 - 2	R2
Si I	1676.8207 st	15	21	3p ² - 3p6s	g ³ P - (3/2, 1/2)°	0 - 1	R2
Si I	1678.992		22	3p ² - 3p6s	g ³ P - (3/2, 1/2)°	1 - 1	M19
Si I	1682.6734 st	70	21	3p ² - 3p6s	g ³ P - (3/2, 1/2)°	1 - 2	R2
Si I	1683.1189 st	3	22	3p ² - 3p6s	g ³ P - (3/2, 1/2)°	2 - 1	R2
Si I	1686.8185 st	100	21	3p ² - 3p6s	g ³ P - (3/2, 1/2)°	2 - 2	R2
Si I	1687.0923 st	20	21	3p ² - 3p6s	g ³ P - (1/2, 1/2)°	0 - 1	R2
Si I	1689.2902 st	60	21	3p ² - 3p6s	g ³ P - (1/2, 1/2)°	1 - 1	R2
Si I?	1689.921	1					K5
Si I	1690.7889 st	60	21	3p ² - 3p6s	g ³ P - (1/2, 1/2)°	1 - 0	R2
Si I	1693.2934 st	125	18	3p ² - 3p4d	g ³ P - ³ D°	0 - 1	R2
Si I	1693.4681 st	60	21	3p ² - 3p6s	g ³ P - (1/2, 1/2)°	2 - 1	R2
Si I	1695.5074 st	90	18	3p ² - 3p4d	g ³ P - ³ D°	1 - 1	R2
Si I	1696.2065 st	200	18	3p ² - 3p4d	g ³ P - ³ D°	1 - 2	R2
Si I	1697.9409 st	250	18	3p ² - 3p4d	g ³ P - ³ D°	2 - 3	K2
Si I	1699.7162 st	10	18	3p ² - 3p4d	g ³ P - ³ D°	2 - 1	R2
Si I	1700.4193 st	90	18	3p ² - 3p4d	g ³ P - ³ D°	2 - 2	R2
Si I	1700.6360 st	80	16	3p ² - 3p4d	g ³ P - ¹ P°	0 - 1	R2
Si I?	1702.6978	1					K5
Si I	1702.8694 st	70	16	3p ² - 3p4d	g ³ P - ¹ P°	1 - 1	R2
Si I	1704.4416 st	100	17	3p ² - 3p4d	g ³ P - ¹ F°	2 - 3	R2
Si I	1707.1148 st	8	16	3p ² - 3p4d	g ³ P - ¹ P°	2 - 1	R2
Si I?	1710.744	1					K5
Si I	1713.412		81.05	3p ² - 3p9d	¹ D - ³ D°	2 - 3	M19
Si I	1713.85		81.05	3p ² - 3p9d	¹ D - ³ D°	2 - 2	M19
Si I	1722.562 st	4	81.04	3p ² - 3p10s	¹ D - (3/2, 1/2)°	2 - 1	K5
Si I	1725.242 st	6	81.03	3p ² - 3p8d	¹ D - ³ D°	2 - 3	K5
Si I	1727.444 st	2	81.02	3p ² - 3p8d	¹ D - ¹ F°	2 - 3	K5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J-J	References
Si I	1733.346 st	1	81.01	3p ² - 3p8d	¹ D - ³ F°	2-2	K5
Si I	1734.718 st	8	81.01	3p ² - 3p8d	¹ D - ³ F°	2-3	K5
Si I	1736.538 st	3	81	3p ² - 3p9s	¹ D - (³ / ₂ , ¹ / ₂)°	2-1	K5
Si I	1740.2988 st	20	80	3p ² - 3p7d	¹ D - ³ D°	2-3	R2
Si I	1745.8941 st	20	79	3p ² - 3p7d	¹ D - ¹ F°	2-3	R2
Si I	1745.3475 st	25	15	3p ² - 3p4d	g ³ P - ³ F°	1-2	R2
Si I	1745.647 st	1	77.03	3p ² - 3p9s	¹ D - (³ / ₂ , ¹ / ₂)°	2-1	K5
Si I	1747.4141 st	40	15	3p ² - 3p4d	g ³ P - ³ F°	2-3	R2
Si I	1749.8076 st	3	15	3p ² - 3p4d	g ³ P - ³ F°	2-2	R2
Si I	1752.634 st	3	77.02	3p ² - 3p7d	¹ D - ³ F°	2-2	K5
Si I	1753.101 st	15	77.02	3p ² - 3p7d	¹ D - ³ F°	2-3	K5
Si I	1757.2827 st	3	77.01	3p ² - 3p7d	¹ D - ¹ D°	2-2	R2
Si I	1759.5831 st	10	77	3p ² - 3p8s	¹ D - (³ / ₂ , ¹ / ₂)°	2-1	R2
Si I	1763.6607 st	80	14	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	0-1	R2
Si I	1765.0296 st	90	14	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	1-0	R2
Si I	1765.6215 st	50	76	3p ² - 3p6d	¹ D - ³ D°	2-3	R2
Si I	1765.9452 st	8	76	3p ² - 3p6d	¹ D - ³ D°	2-1	K5
Si I	1766.0627 st	100	14	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	1-1	R2
Si I	1766.3541 st	50	14	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	1-2	R2
Si I	1767.54		76	3p ² - 3p6d	¹ D - ³ D°	2-2	M19
Si I	1769.4609 st	2	75.01	3p ² - 3p8s	¹ D - (³ / ₂ , ¹ / ₂)°	2-1	K5
Si I	1769.7859 st	70	75	3p ² - 3p6d	¹ D - ¹ F°	2-3	R2
Si I	1770.6295 st	125	14	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	2-1	R2
Si I	1770.9223 st	300	14	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	2-2	R2
Si I	1772.2254 st	12	13	3p ² - 3p4d	g ³ P - ¹ D°	1-2	R2
Si I	1774.08		73.01	3p ² - 3p6d	¹ D - ¹ P°	2-1	M19
Si I	1776.8241 st	150	13	3p ² - 3p4d	g ³ P - ¹ D°	2-2	R2
Si I	1783.2315 st	25	73	3p ² - 3p6d	¹ D - ³ F°	2-3	R2
Si I	1784.0884 st	8	73	3p ² - 3p6d	¹ D - ³ F°	2-2	R2
Si I	1790.2548 st	25	72	3p ² - 3p6d	¹ D - ¹ D°	2-2	R2
Si I	1797.3560 st	6	70	3p ² - 3p5d	¹ D - ³ P°	2-1	R2
Si I	1799.1193 st	30	71	3p ² - 3p7s	¹ D - (³ / ₂ , ¹ / ₂)°	2-1	R2
Si I	1800.404 st	1	70	3p ² - 3p5d	¹ D - ³ P°	2-2	K5
Si I	1801.000		69	3p ² - 3p7s	¹ D - (³ / ₂ , ¹ / ₂)°	2-2	M19
Si I	1808.4301 st	20	69	3p ² - 3p7s	¹ D - (³ / ₂ , ¹ / ₂)°	2-1	R2
Si I	1809.1047 st	100	67	3p ² - 3p5d	¹ D - ³ D°	2-3	R2
Si I	1813.27	1h	68.01	3p ² - 3p5d	¹ D - ³ D°	2-2	M19
Si I	1814.0794 st	250	68	3p ² - 3p5d	¹ D - ¹ F°	2-3	R2
Si I	1817.9562 st	10	66	3p ² - 3p5d	¹ D - ¹ P°	2-1	R2
Si I	1822.4553 st	30	12	3p ² - 3p5s	g ³ P - ¹ P°	0-1	R2
Si I	1825.021 st	1	12	3p ² - 3p5s	g ³ P - ¹ P°	1-1	K5
Si I	1829.8975 st	10	12	3p ² - 3p5s	g ³ P - ¹ P°	2-1	R2
Si I	1836.5102 st	200	11	3p ² - 3p5s	g ³ P - ³ P°	1-2	R2
Si I	1838.0120 st	40	65	3p ² - 3p5d	¹ D - ³ F°	2-3	R2
Si I	1840.0418 st	8	65	3p ² - 3p5d	¹ D - ³ F°	2-2	R2
Si I	1841.1520 st	125	11	3p ² - 3p5s	g ³ P - ³ P°	0-1	R2
Si I	1841.4490 st	400	11	3p ² - 3p5s	g ³ P - ³ P°	2-2	R2
Si I	1843.7700 st	200	11	3p ² - 3p5s	g ³ P - ³ F°	1-1	R2
Si I	1845.5203 st	200	10	3p ² - 3p3d	g ³ P - ³ D°	0-1	R2
Si I	1846.1118 st	200	11	3p ² - 3p5s	g ³ P - ³ P°	1-0	R2
Si I	1847.4737 st	300	10	3p ² - 3p3d	g ³ P - ³ D°	1-2	R2
Si I	1848.1504 st	200	10	3p ² - 3p3d	g ³ P - ³ D°	1-1	R2
Si I	1848.7480 st	250	11	3p ² - 3p5s	g ³ P - ³ P°	2-1	R2
Si I	1850.6719 st	400	10	3p ² - 3p3d	g ³ P - ³ D°	2-3	R2
Si I	1851.7829 st	70	64	3p ² - 3p5d	¹ D - ¹ D°	2-2	R2
Si I	1852.4717 st	250	10	3p ² - 3p3d	g ³ P - ³ D°	2-2	R2
Si I	1853.1521 st	35	10	3p ² - 3p3d	g ³ P - ³ D°	2-1	R2
Si I	1861.7949 st	2	63	3p ² - 3p4d	¹ D - ³ P°	2-1	K5
Si I	1865.0278 st	2	63	3p ² - 3p4d	¹ D - ³ P°	2-2	K5
Si I	1873.1036 st	25	9	3p ² - 3p3d	g ³ P - ¹ P°	0-1	R2
Si I	1874.8423 st	175	62	3p ² - 3p6s	¹ D - (³ / ₂ , ¹ / ₂)°	2-1	R2
Si I	1875.8129 st	30	9	3p ² - 3p3d	g ³ P - ¹ P°	1-1	R2
Si I	1879.434		61	3p ² - 3p6s	¹ D - (³ / ₂ , ¹ / ₂)°	2-2	M19
Si I	1880.5657 st	5	9	3p ² - 3p3d	g ³ P - ¹ P°	2-1	R2
Si I	1881.8538 st	30	8	3p ² - 3p3d	g ³ P - ¹ F°	2-3	R2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si I	1887.6928 st	45	61	$3p^2 - 3p6s$	$^1D - ({}^1/2, {}^1/2)^{\circ}$	2 - 1	R2
Si I	1893.252 st	175	58	$3p^2 - 3p4d$	$^1D - {}^3D^{\circ}$	2 - 3	K5
Si I	1895.461 st	1	58	$3p^2 - 3p4d$	$^1D - {}^3D^{\circ}$	2 - 1	K5
Si I	1896.339 st	1	58	$3p^2 - 3p4d$	$^1D - {}^3D^{\circ}$	2 - 2	K5
Si I	1901.3377 st	400	57	$3p^2 - 3p4d$	$^1D - {}^1F^{\circ}$	2 - 3	R2
Si I	1904.6647 st	40	56	$3p^2 - 3p4d$	$^1D - {}^1P^{\circ}$	2 - 1	R2
Si I	1954.9681 st	50	55	$3p^2 - 3p4d$	$^1D - {}^3F^{\circ}$	2 - 3	R2
Si I	1957.965 st	1	55	$3p^2 - 3p4d$	$^1D - {}^3F^{\circ}$	2 - 2	K5
Si I	1977.5978 st	400	7	$3p^2 - 3p3d$	$g^2P - {}^2P^{\circ}$	0 - 1	R2
Si I	1979.2056 st	400	7	$3p^2 - 3p3d$	$g^2P - {}^2P^{\circ}$	1 - 0	R2
Si I	1980.6185 st	300	7	$3p^2 - 3p3d$	$g^2P - {}^2D^{\circ}$	1 - 1	R2
Si I	1983.2336 st	300	7	$3p^2 - 3p3d$	g^2P	1 - 2	R2
Si I	1984.0719 st	3	53.01	$3s^2 3p^2 - 3s 3p^2$	$^1D - {}^2P^{\circ}$	2 - 1	R2
Si I	1984.4400 st	20	53.01	$3s^2 3p^2 - 3s 3p^2$	$^1D - {}^2P^{\circ}$	2 - 2	R2
Si I	1986.3640 st	500	7	$3p^2 - 3p3d$	$g^2P - {}^2P^{\circ}$	2 - 1	R2
Si I	1988.9937 st	1000	7	$3p^2 - 3p3d$	$g^2P - {}^2P^{\circ}$	2 - 2	R2
Si I	1991.8537 st	50	53	$3p^2 - 3p4d$	$^1D - {}^1D^{\circ}$	2 - 2	R2

SILICON II (Si¹⁺), Z = 14Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 P_{1/2}$ (13 electrons)Ionization Potential 131 838.4 cm⁻¹; 16.345 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si II	711.34	0h -A	6.09	$3s^2 3p - 3s 3p(2P^{\circ})4p$	$g^2P^{\circ} - {}^2D$	$1/2 - 3/2$	M18
Si II	711.83	1h -A	6.09	$3s^2 3p - 3s 3p(2P^{\circ})4p$	$g^2P^{\circ} - {}^2D$	$3/2 - 5/2$	M18
Si II	755.362	2 -A	6.08	$3s^2 3p - 3s 3p(2P^{\circ})4p$	$g^2P^{\circ} - {}^2P$	$3/2 - 3/2$	M18
Si II	803.234	3h	6.07	$3p - 8d$	$g^2P^{\circ} - {}^2D$	$1/2 - 3/2$	M18
Si II	805.101	10h	6.07	$3p - 8d$	$g^2P^{\circ} - {}^2D$	$3/2 - 5/2$	M18
Si II	818.590	2h	6.06	$3p - 7d$	$g^2P^{\circ} - {}^2D$	$1/2 - 3/2$	M18
Si II	819.49	0h -A	8.08	$3s 3p^2 - 3s 3p(2P^{\circ})5d$	$4p - 4P^{\circ}$	$3/2 - 5/2$	M18
Si II	820.516	20h	6.06	$3p - 7d$	$g^2P^{\circ} - {}^2D$	$3/2 - 5/2$	M18
Si II	820.63	3h -A	8.08	$3s 3p^2 - 3s 3p(2P^{\circ})5d$	$4p - 4P^{\circ}$	$3/2 - 5/2$	M18
Si II	820.9210 st	3h	6.05	$3p - 8s$	$g^2P^{\circ} - {}^2S$	$1/2 - 1/2$	K7, M18
Si II	821.450	2h -A	8.07	$3s 3p^2 - 3s 3p(2P^{\circ})5d$	$4p - 4D^{\circ}$	$5/2 - 7/2$	M18
Si II	822.8613 st	5h	6.05	$3p - 8s$	$g^2P^{\circ} - {}^2S$	$3/2 - 1/2$	K7, M18
Si II	826.42	1h -A	8.06	$3s 3p^2 - 3s 3p(2P^{\circ})6s$	$4p - 4P^{\circ}$	$5/2 - 5/2$	M18
Si II	843.7192 st	20h	6.04	$3p - 6d$	$g^2P^{\circ} - {}^2D$	$1/2 - 3/2$	K7, M18
Si II	845.7684 st	40h	6.04	$3p - 6d$	$g^2P^{\circ} - {}^2D$	$3/2 - 5/2$	K7, M18
Si II	848.0700 st	5	6.03	$3p - 7s$	$g^2P^{\circ} - {}^2S$	$1/2 - 1/2$	K7, M18
Si II	850.1409 st	10	6.03	$3p - 7s$	$g^2P^{\circ} - {}^2S$	$3/2 - 1/2$	K7, M18
Si II	889.7228 st	100	6.02	$3p - 5d$	$g^2P^{\circ} - {}^2D$	$1/2 - 3/2$	K7, M18
Si II	892.0007 st	200	6.02	$3p - 5d$	$g^2P^{\circ} - {}^2D$	$3/2 - 5/2$	K7, M18
Si II	899.4063 st	10	6.01	$3p - 6s$	$g^2P^{\circ} - {}^2S$	$1/2 - 1/2$	K7, M18
Si II	901.7359 st	20	6.01	$3p - 6s$	$g^2P^{\circ} - {}^2S$	$3/2 - 1/2$	K7, M18
Si II	905.71	0 -A	8.05	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4P^{\circ}$	$1/2 - 1/2$	M18
Si II	906.126	0 -A	8.05	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4P^{\circ}$	$1/2 - 3/2$	M18
Si II	906.586	1 -A	8.05	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4P^{\circ}$	$3/2 - 1/2$	M18
Si II	907.033	0 -A	8.05	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4P^{\circ}$	$3/2 - 3/2$	M18
Si II	907.762	0 -A	8.05	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4P^{\circ}$	$3/2 - 5/2$	M18
Si II	908.461	1 -A	8.05	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4P^{\circ}$	$5/2 - 3/2$	M18
Si II	909.209	3 -A	8.05	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4P^{\circ}$	$5/2 - 5/2$	M18
Si II	912.375	5 -A	8.04	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4D^{\circ}$	$1/2 - 3/2$	M18
Si II	912.459	5 -A	8.04	$3s 3p^2 - 3s 3p(2P^{\circ})4d$	$4p - 4D^{\circ}$	$1/2 - 1/2$	M18

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si II	913.012	10 -A	8.04	3s 3p ² - 3s 3p(² P°) 4d	⁴ P - ⁴ D°	½ - ½	M18
Si II	913.264	3 -A	8.04	3s 3p ² - 3s 3p(² P°) 4d	⁴ P - ⁴ D°	½ - ½	M18
Si II	913.853	20 -A	8.04	3s 3p ² - 3s 3p(² P°) 4d	⁴ P - ⁴ D°	½ - ½	M18
Si II	914.476	2 -A	8.04	3s 3p ² - 3s 3p(² P°) 4d	⁴ P - ⁴ D°	½ - ½	M18
Si II	928.297	5 -A	8.03	3s 3p ² - 3s 3p(² P°) 5s	⁴ P - ⁴ P°	½ - ½	M18
Si II	929.206	1 -A	8.03	3s 3p ² - 3s 3p(² P°) 5s	⁴ P - ⁴ P°	½ - ½	M18
Si II	929.810	20 -A	8.03	3s 3p ² - 3s 3p(² P°) 5s	⁴ P - ⁴ P°	½ - ½	M18
Si II	930.242	0 -A	8.03	3s 3p ² - 3s 3p(² P°) 5s	⁴ P - ⁴ P°	½ - ½	M18
Si II	931.200	5 -A	8.03	3s 3p ² - 3s 3p(² P°) 5s	⁴ P - ⁴ P°	½ - ½	M18
Si II	931.667	5 -A	8.03	3s 3p ² - 3s 3p(² P°) 5s	⁴ P - ⁴ P°	½ - ½	M18
Si II	989.8730 st	100	6	3p - 4d	g ² P° - ² D	½ - ½	K7, M18
Si II	992.6826 sl	200	6	3p - 4d	g ² P° - ² D	½ - ½	K7, M18
Si II	1020.6988 sl	25	5.91	3p - 5s	g ² P° - ² S	½ - ½	K7, M18
Si II	1023.7002 st	50	5.01	3p - 5s	g ² P° - ² S	½ - ½	K7, M18
Si II	1034.967	0 -A	13.08	3s 3p ² - 3s 3p(² P°) 5s	² D - ² P°	½ - ½	M18
Si II	1056.899	2 -A	13.07	3s 3p ² - 3s 3p(² P°) 4d	² D - ² D°	½ - ½	M18
Si II	1057.050	30 -A	13.07	3s 3p ² - 3s 3p(² P°) 4d	² D - ² D°	½ - ½	M18
Si II	1057.503	15 -A	13.07	3s 3p ² - 3s 3p(² P°) 4d	² D - ² D°	½ - ½	M18
Si II	1057.690	2 -A	13.07	3s 3p ² - 3s 3p(² P°) 4d	² D - ² D°	½ - ½	M18
Si II?	1082.400	2					M18
Si II?	1084.144	3					M18
Si II	1127.442	20h -A	13.06	3s 3p ² - 3p ²	² D - ² P°	½ - ½	M18
Si II	1127.907	40h -A	13.06	3s 3p ² - 3p ²	² D - ² P°	½ - ½	M18
Si II	1190.4157 st	100	5	3s ² 3p - 3s 3p ²	g ² P° - ² P	½ - ½	K7, M18
Si II	1193.2894 st	200	5	3s ² 3p - 3s 3p ²	g ² P° - ² P	½ - ½	K7, M18
Si II	1194.5001 st	250	5	3s ² 3p - 3s 3p ²	g ² P° - ² P	½ - ½	K7, M18
Si II	1197.3936 sl	100	5	3s ² 3p - 3s 3p ²	g ² P° - ² P	½ - ½	K7, M18
Si II?	1216.117	10h					M18
Si II	1222.288	0	8.02	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ P°	½ - ½	M18
Si II	1222.635	5	8.02	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ P°	½ - ½	M18
Si II	1223.907	20	8.02	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ P°	½ - ½	M18
Si II	1224.252	20	8.02	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ P°	½ - ½	M18
Si II	1224.972	10	8.02	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ P°	½ - ½	M18
Si II	1226.814	50	8.01	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ D°	½ - ½	M18
Si II	1226.887	20	8.02	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ P°	½ - ½	M18
Si II	1226.986	40	8.01	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ D°	½ - ½	M18
Si II	1227.604	100	8.02	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ P°	½ - ½	M18
Si II	1228.437	10	8.01	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ D°	½ - ½	M18
Si II	1228.617	25	8.01	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ D°	½ - ½	M18
Si II	1228.746	150	8.01	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ D°	½ - ½	M18
Si II	1229.388	200	8.01	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ D°	½ - ½	M18
Si II	1231.406	5	8.01	3s 3p ² - 3s 3p(² P°) 3d	⁴ P - ⁴ D°	½ - ½	M18
Si II?	1233.354	5h					M18
Si II?	1235.920	10					M18
Si II?	1237.36	3h					M18
Si II	1246.738	100	8	3s 3p ² - 3p ²	⁴ P - ⁴ S°	½ - ½	M18
Si II	1248.426	150	8	3s 3p ² - 3p ²	⁴ P - ⁴ S°	½ - ½	M18
Si II	1250.089	100 -A	13.05	3s 3p ² - 3p ²	² D - ² D°	½ - ½	M18
Si II	1250.433	150 -A	13.05	3s 3p ² - 3p ²	² D - ² D°	½ - ½	M18
Si II	1251.164	200	8	3s 3p ² - 3p ²	⁴ P - ⁴ S°	½ - ½	M18
Si II	1260.4212 sl	500	4	3p - 3d	g ² P° - ² D	½ - ½	K7, M18
Si II	1264.7374 sl	1000	4	3p - 3d	g ² P° - ² D	½ - ½	K7, M18
Si II	1265.0010 sl	100	4	3p - 3d	g ² P° - ² D	½ - ½	K7, M18
Si II	1274.300	3h					M18
Si II	1275.662	5h					M18
Si II	1304.3720 st	100	3	3s ² 3p - 3s 3p ²	g ² P° - ² S	½ - ½	K7, M18
Si II	1305.590	50h -A	13.04	3s 3p ² - 3s 3p(² P°) 3d	² D - ² F°	½ - ½	M18
Si II	1309.2769 st	200	3	3s ² 3p - 3s 3p ²	g ² P° - ² S	½ - ½	K7, M18
Si II	1309.458	20h	13.04	3s 3p ² - 3s 3p(² P°) 3d	² D - ² F°	½ - ½	M18
Si II	1309.77	2h	13.04	3s 3p ² - 3s 3p(² P°) 3d	² D - ² F°	½ - ½	M18
Si II	1311.265	2h					M18
Si II	1346.873	100	7	3s 3p ² - 3s 3p(² P°) 4s	⁴ P - ⁴ P°	½ - ½	M18
Si II	1348.543	100	7	3s 3p ² - 3s 3p(² P°) 4s	⁴ P - ⁴ P°	½ - ½	M18
Si II	1350.057	150	7	3s 3p ² - 3s 3p(² P°) 4s	⁴ P - ⁴ P°	½ - ½	M18
Si II	1350.520	20	7	3s 3p ² - 3s 3p(² P°) 4s	⁴ P - ⁴ P°	½ - ½	M18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si II	1350.658	20	7	$3s3p^2 - 3s3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	M18
Si II	1352.635	100	7	$3s3p^2 - 3s3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1353.718	100	7	$3s3p^2 - 3s3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1403.783	5h	13.03	$3s3p^2 - 3s^210p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1404.170	1h	13.03	$3s3p^2 - 3s^210p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1404.478	6h	13.03	$3s3p^2 - 3s^210p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1409.073	10h	15.02	$3s3p^2 - 3s3p(^2P^o)3d$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1409.99	2h	13.02	$3s3p^2 - 3s3p(^2P^o)3d$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1410.219	20h	13.02	$3s3p^2 - 3s3p(^2P^o)3d$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1416.972	10h - A	18.06	$3s^23d - 3s3p(^2P^o)4d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1417.781	5 - A	18.06	$3s^23d - 3s3p(^2P^o)4d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1418.110	0 - A	18.06	$3s^23d - 3s3p(^2P^o)4d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1434.400	1h	13.01	$3s3p^2 - 3s^29p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1434.542	2h	13.01	$3s3p^2 - 3s^29p$	$^3D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1438.576	2h	13	$3s3p^2 - 3s^28f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1438.931	4h	13	$3s3p^2 - 3s^28f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1471.775	2 - A	30	$3s3p^2 - 3s^29p(^2P^o)5s$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1474.304	1h	12.02	$3s3p^2 - 3s^28p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1474.649	15h	12.02	$3s3p^2 - 3s^28p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1475.188	5h	12.02	$3s3p^2 - 3s^28p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1476.928	1	12.01	$3s3p^2 - 3p^3$	$^2D - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1484.873	15	12	$3s3p^2 - 3s^27f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1485.024	90h - A	15.04	$3s3p^2 - 3p^3$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	M18
Si II	1485.224	30	12	$3s3p^2 - 3s^27f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1485.513	100h - A	15.04	$3s3p^2 - 3p^3$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	M18
Si II	1508.741	3h	11.01	$3s3p^2 - 3s3p(^2P^o)4s$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1509.101	100h	11.01	$3s3p^2 - 3s3p(^2P^o)4s$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1512.072	50h	11.01	$3s3p^2 - 3s3p(^2P^o)4s$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1513.570	30 - A	29	$3s3p^2 - 3s3p(^2P^o)4d$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	M18
Si II	1516.910	60 - A	29	$3s3p^2 - 3s3p(^2P^o)4d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1518.221	5 - A	29	$3s3p^2 - 3s3p(^2P^o)4d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1526.7076 st	500	2	$3p - 4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K7, M18
Si II	1533.4320 st	1000	2	$3p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K7, M18
Si II	1562.451	10	11	$3s3p^2 - 3s^26f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1562.845	15	11	$3s3p^2 - 3s^26f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1563.765	10	10.02	$3s3p^2 - 3s^27p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1564.066	5	10.02	$3s3p^2 - 3s^27p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1661.059	3h - A	28	$3s3p^2 - 3p^3$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	M18
Si II	1661.633	1h - A	28	$3s3p^2 - 3p^3$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	M18
Si II	1667.267	0 - A	28	$3s3p^2 - 3p^3$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1704.967	2h	10.01	$3s3p^2 - 3s^26p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1710.826	10h	10	$3s3p^2 - 3s^25f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1711.296	20h	10	$3s3p^2 - 3s^25f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1786.817	4 - A	18.05	$3s^23d - 3p^3$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1787.538	8 - A	18.05	$3s^23d - 3p^3$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1808.0117	150	1	$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K5, M18
Si II	1816.9278	200	1	$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K5, M18
Si II	1817.4511	10	1	$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K5, M18
Si II	1868.765	1	9.02	$3s3p^2 - 3s3p(^2P^o)3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1869.317	20	9.02	$3s3p^2 - 3s3p(^2P^o)3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1870.227	15	9.02	$3s3p^2 - 3s3p(^2P^o)3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1870.782	3	9.02	$3s3p^2 - 3s3p(^2P^o)3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1902.459	100h - A	18.04	$3s^23d - 3s3p(^2P^o)3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1904.326	5h - A	31	$3s^24d - 3s3p(^2P^o)4d$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1905.878	3h - A	31	$3s^24d - 3s3p(^2P^o)4d$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1910.621	50h	18.04	$3s^23d - 3s3p(^2P^o)3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1911.265	0h	18.04	$3s^23d - 3s3p(^2P^o)3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1941.667	50 - A	27	$3s3p^2 - 3p^3$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	M18
Si II	1944.586	15 - A	23	$3s^24p - 3s3p(^2P^o)4p$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M18
Si II	1945.504	3 - A	23	$3s^24p - 3s3p(^2P^o)4p$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M18
Si II	1947.769	1 - A	23	$3s^24p - 3s3p(^2P^o)4p$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M18
Si II	1949.331	10 - A	27	$3s3p^2 - 3p^3$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si II	1949.564	100 - A	27	$3s3p^2 - 3p^3$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M18

SILICON III (Si^{2+}), $Z = 14$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential $270\,139.3 \text{ cm}^{-1}$; 33.492 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
Si III	423.817	P	3.04	$3s^2 - 3p4s$	$g^1S - ^1P^o$	0 - 1	M18
Si III	426.644	P	3.03	$3s^2 - 3s6p$	$g^1S - ^1P^o$	0 - 1	M18
Si III	437.255	P	3.02	$3s^2 - 3p3d$	$g^1S - ^1P^o$	0 - 1	M18
Si III	466.129	P	3.01	$3s^2 - 3s5p$	$g^1S - ^1P^o$	0 - 1	E6, M18
Si III	510.079	P	6.08	$3s3p - 3p4p$	$^3P^o - ^3S$	0 - 1	M18
Si III	510.414	P	6.08	$3s3p - 3p4p$	$^3P^o - ^3S$	1 - 1	M18
Si III	511.096	P	6.08	$3s3p - 3p4p$	$^3P^o - ^3S$	2 - 1	M18
Si III	511.994	P	6.07	$3s3p - 3p4p$	$^3P^o - ^3S$	1 - 2	M18
Si III	512.219	P	6.07	$3s3p - 3p4p$	$^3P^o - ^3P$	0 - 1	M18
Si III	512.557	P	6.07	$3s3p - 3p4p$	$^3P^o - ^3P$	1 - 1	M18
Si III	512.681	P	6.07	$3s3p - 3p4p$	$^3P^o - ^3P$	2 - 2	M18
Si III	512.772	P	6.07	$3s3p - 3p4p$	$^3P^o - ^3P$	1 - 0	M18
Si III	513.245	P	6.07	$3s3p - 3p4p$	$^3P^o - ^3P$	2 - 1	M18
Si III	520.79	P	6.06	$3s3p - 3p4p$	$^3P^o - ^3D$	1 - 2	M18
Si III	520.92	P	6.06	$3s3p - 3p4p$	$^3P^o - ^3D$	2 - 3	M18
Si III	521.149	P	6.06	$3s3p - 3p4p$	$^3P^o - ^3D$	1 - 1	M18
Si III	521.510	P	6.06	$3s3p - 3p4p$	$^3P^o - ^3D$	2 - 2	M18
Si III	521.861	P	6.05	$3s3p - 3p4p$	$^3P^o - ^3D$	2 - 1	M18
Si III	533.226	P	6.05	$3s3p - 3s6d$	$^3P^o - ^3D$	0 - 1	M18
Si III	533.530	P	6.05	$3s3p - 3s6d$	$^3P^o - ^3D$	1 - 2	M18
Si III	533.592	P	6.05	$3s3p - 3s6d$	$^3P^o - ^3D$	1 - 1	M18
Si III	534.189	P	6.05	$3s3p - 3s6d$	$^3P^o - ^3D$	2 - 3	M18
Si III	534.276	P	6.05	$3s3p - 3s6d$	$^3P^o - ^3D$	2 - 2	M18
Si III	534.359	P	6.05	$3s3p - 3s6d$	$^3P^o - ^3D$	2 - 1	M18
Si III	565.289	P	6.04	$3s3p - 3s6s$	$^3P^o - ^3S$	0 - 1	M18
Si III	565.698	P	6.04	$3s3p - 3s6s$	$^3P^o - ^3S$	1 - 1	M18
Si III	566.546	P	6.04	$3s3p - 3s6s$	$^3P^o - ^3S$	2 - 1	M18
Si III	566.613	P	3	$3s^2 - 3s4p$	$g^1S - ^1P^o$	0 - 1	E6, M18
Si III	567.878	P	19	$3s3p - 3p4p$	$^1P^o - ^1S$	1 - 0	M18
Si III	573.538	P	6.03	$3s3p - 3s5d$	$^3P^o - ^3D$	0 - 1	M18
Si III	573.551	P	6.03	$3s3p - 3s5d$	$^3P^o - ^3D$	1 - 2	M18
Si III	573.961	P	6.03	$3s3p - 3s5d$	$^3P^o - ^3D$	1 - 1	M18
Si III	574.799	P	6.03	$3s3p - 3s5d$	$^3P^o - ^3D$	2 - 3	M18
Si III	574.814	P	6.03	$3s3p - 3s5d$	$^3P^o - ^3D$	2 - 2	M18
Si III	574.824	P	6.03	$3s3p - 3s5d$	$^3P^o - ^3D$	2 - 1	M18
Si III	605.873	P	18	$3s3p - 3p4p$	$^1P^o - ^1D$	1 - 2	M18
Si III	624.997	P	17	$3s3p - 3p4p$	$^1P^o - ^1P$	1 - 1	M18
Si III	634.255	P	16	$3s3p - 3s6d$	$^1P^o - ^1D$	1 - 2	M18
Si III	651.668	P	6.02	$3s3p - 3s5s$	$^3P^o - ^3S$	0 - 1	E6, M18
Si III	652.223	P	6.02	$3s3p - 3s5s$	$^3P^o - ^3S$	1 - 1	E6, M18
Si III	653.332	P	6.02	$3s3p - 3s5s$	$^3P^o - ^3S$	2 - 1	E6, M18
Si III	671.718	P	6.01	$3s3p - 3s4d$	$^3P^o - ^3D$	0 - 1	M18
Si III	672.293	P	6.01	$3s3p - 3s4d$	$^3P^o - ^3D$	1 - 2	M18
Si III	673.477	P	6.01	$3s3p - 3s4d$	$^3P^o - ^3D$	2 - 3	M18
Si III	678.055	P	6.01	$3s3p - 3s4d$	$^3P^o - ^3D$	1 - 0	M18
Si III	690.689	P	14	$3s3p - 3s5d$	$^1P^o - ^1D$	1 - 2	M18
Si III	800.066	P	13	$3s3p - 3s5s$	$^1P^o - ^1S$	1 - 0	M18
Si III	822.004	P	29	$3p^2 - 3s6f$	$^1D - ^1F^o$	2 - 3	M18
Si III	823.408	P	12	$3s3p - 3s4d$	$^1P^o - ^1D$	1 - 2	E6, M18
Si III	879.233	P	28	$3p^2 - 3p4s$	$^1D - ^1P^o$	2 - 1	M18
Si III	883.398	P	27	$3p^2 - 3p3d$	$^1D - ^1F^o$	2 - 3	M18
Si III	891.479	P	26	$3p^2 - 3s6p$	$^1D - ^1F^o$	2 - 1	M18
Si III	936.056	P	44	$3s3d - 3s7f$	$^3D - ^3F^o$	3 - 4	M18
Si III	936.058	P	44	$3s3d - 3s7f$	$^3D - ^3F^o$	3 - 3	M18
Si III	936.060	P	44	$3s3d - 3s7f$	$^3D - ^3F^o$	3 - 2	M18
Si III	936.077	P	44	$3s3d - 3s7f$	$^3D - ^3F^o$	2 - 3	M18
Si III	936.079	P	44	$3s3d - 3s7f$	$^3D - ^3F^o$	2 - 2	M18
Si III	936.100	P	44	$3s3d - 3s7f$	$^3D - ^3F^o$	1 - 2	M18
Si III	939.093	P	25	$3p^2 - 3p3d$	$^1D - ^1P^o$	2 - 1	E6, M18
Si III	967.946	P	24	$3p^2 - 3s5f$	$^1D - ^1F^o$	2 - 3	E6, M18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si III	993.519	200	6	3s3p - 3s4s	$^2P^{\circ} - ^2S$	0-1	E6, M18
Si III	994.787	260	6	3s3p - 3s4s	$^2P^{\circ} - ^2S$	1-1	E6, M18
Si III	997.389	320	6	3s3p - 3s4s	$^2P^{\circ} - ^2S$	2-1	E6, M18
Si III	1005.349	60	43	3s3d - 3s6f	$^2D - ^2F^{\circ}$	3-4	M18
Si III	1005.353	5	43	3s3d - 3s6f	$^2D - ^2F^{\circ}$	3-3	M18
Si III	1005.357	1	43	3s3d - 3s6f	$^2D - ^2F^{\circ}$	3-2	M18
Si III	1005.374	40	43	3s3d - 3s6f	$^2D - ^2F^{\circ}$	2-3	M18
Si III	1005.378	5	43	3s3d - 3s6f	$^2D - ^2F^{\circ}$	2-2	M18
Si III	1005.403	30	43	3s3d - 3s6f	$^2D - ^2F^{\circ}$	1-2	M18
Si III	1031.169	140	33	$3p^2 - 3p4s$	$^2P - ^2P^{\circ}$	1-2	M18
Si III	1032.851	60	33	$3p^2 - 3p4s$	$^2P - ^2P^{\circ}$	0-1	M18
Si III	1033.920	160	33	$3p^2 - 3p4s$	$^2P - ^2P^{\circ}$	2-2	M18
Si III	1034.287	80	33	$3p^2 - 3p4s$	$^2P - ^2P^{\circ}$	1-1	M18
Si III	1035.657	60	33	$3p^2 - 3p4s$	$^2P - ^2P^{\circ}$	1-0	M18
Si III	1037.053	140	33	$3p^2 - 3p4s$	$^2P - ^2P^{\circ}$	2-1	M18
Si III	1083.210	120	23	$3p^2 - 3s5p$	$^1D - ^1P^{\circ}$	2-1	M18
Si III	1092.915	P	42	3s3d - 3s6p	$^2D - ^2P^{\circ}$	3-2	M18
Si III	1092.940	P	42	3s3d - 3s6p	$^2D - ^2P^{\circ}$	2-2	M18
Si III	1092.969	P	42	3s3d - 3s6p	$^2D - ^2P^{\circ}$	1-2	M18
Si III	1093.105	P	42	3s3d - 3s6p	$^2D - ^2P^{\circ}$	2-1	M18
Si III	1093.133	P	42	3s3d - 3s6p	$^2D - ^2P^{\circ}$	1-1	M18
Si III	1093.293	P	42	3s3d - 3s6p	$^2D - ^2P^{\circ}$	1-0	M18
Si III	1108.368	280	5	3s3p - 3s3d	$^2P^{\circ} - ^2D$	0-1	E6, M18
Si III	1109.965	320	5	3s3p - 3s3d	$^2P^{\circ} - ^2D$	1-2	E6, M18
Si III	1113.228	360	5	3s3p - 3s3d	$^2P^{\circ} - ^2D$	2-3	E6, M18
Si III	1140.545	120	32	$3p^2 - 3p3d$	$^2P - ^2D^{\circ}$	0-1	M18
Si III	1141.580	140	32	$3p^2 - 3p3d$	$^2P - ^2D^{\circ}$	1-2	M18
Si III	1142.282	120	32	$3p^2 - 3p3d$	$^2P - ^2D^{\circ}$	1-1	M18
Si III	1144.306	160	32	$3p^2 - 3p3d$	$^2P - ^2D^{\circ}$	2-3	M18
Si III	1144.959	120	32	$3p^2 - 3p3d$	$^2P - ^2D^{\circ}$	2-2	M18
Si III	1145.122	150	41	3s3d - 3s5f	$^2D - ^2F^{\circ}$	3-4	M18
Si III	1145.149	13	41	3s3d - 3s5f	$^2D - ^2F^{\circ}$	3-3	M18
Si III	1145.16	1	41	3s3d - 3s5f	$^2D - ^2F^{\circ}$	3-2	M18
Si III	1145.177	80	41	3s3d - 3s5f	$^2D - ^2F^{\circ}$	2-3	M18
Si III	1145.19	10	41	3s3d - 3s5f	$^2D - ^2F^{\circ}$	2-2	M18
Si III	1145.22	50	41	3s3d - 3s5f	$^2D - ^2F^{\circ}$	1-2	M18
Si III	1145.669	P	32	$3p^2 - 3p3d$	$^2P - ^2D^{\circ}$	2-1	M18
Si III	1154.998	120	31	$3p^2 - 3p3d$	$^2P - ^2P^{\circ}$	0-1	M18
Si III	1155.957	120	31	$3p^2 - 3p3d$	$^2P - ^2P^{\circ}$	1-0	M18
Si III	1156.782	80	31	$3p^2 - 3p3d$	$^2P - ^2P^{\circ}$	1-1	M18
Si III	1158.102	140	31	$3p^2 - 3p3d$	$^2P - ^2P^{\circ}$	1-2	M18
Si III	1160.255	120	31	$3p^2 - 3p3d$	$^2P - ^2P^{\circ}$	2-1	M18
Si III	1161.579	160	31	$3p^2 - 3p3d$	$^2P - ^2P^{\circ}$	2-2	M18
Si III	1172.529	80	30	$3p^2 - 3s5p$	$^2P - ^2P^{\circ}$	0-1	M18
Si III	1174.369	100	30	$3p^2 - 3s5p$	$^2P - ^2P^{\circ}$	1-1	M18
Si III	1174.432	120	30	$3p^2 - 3s5p$	$^2P - ^2P^{\circ}$	1-2	M18
Si III	1178.004	160	30	$3p^2 - 3s5p$	$^2P - ^2P^{\circ}$	2-2	M18
Si III	1182.018	60	64	3s3d - 3s7f	$^1D - ^1F^{\circ}$	2-3	M18
Si III	1192.228	P	40	3s3d - 3p4s	$^2D - ^2P^{\circ}$	3-2	M18
Si III	1192.258	P	40	3s3d - 3p4s	$^2D - ^2P^{\circ}$	2-2	M18
Si III	1192.293	P	40	3s3d - 3p4s	$^2D - ^2P^{\circ}$	1-2	M18
Si III	1196.436	P	40	3s3d - 3p4s	$^2D - ^2P^{\circ}$	2-1	M18
Si III	1196.470	P	40	3s3d - 3p4s	$^2D - ^2P^{\circ}$	1-1	M18
Si III	1198.297	P	40	3s3d - 3p4s	$^2D - ^2P^{\circ}$	1-0	M18
Si III	1206.510	600	2	$3s^2 - 3s3p$	$g^1S - ^1P^{\circ}$	0-1	M18
Si III	1206.533	600	11	3s3p - 3s3d	$^1P^{\circ} - ^1D$	1-2	M18
Si III	1207.517	180	22	$3p^2 - 3p3d$	$^1D - ^1D^{\circ}$	2-2	M18
Si III	1210.456	200	21	$3p^2 - 3s4f$	$^1D - ^1F^{\circ}$	2-3	M18
Si III	1212.011	40	50	$3p^2 - 3p4s$	$^1S - ^1P^{\circ}$	0-1	M18
Si III	1212.247	P	74	3s4p - 3p4p	$^1P^{\circ} - ^1S$	1-0	M18
Si III	1235.431	140	49	$3p^2 - 3s6p$	$^1S - ^1P^{\circ}$	0-1	M18
Si III	1280.354	120	63	3s3d - 3s6f	$^1D - ^1F^{\circ}$	2-3	M18
Si III	1294.543	340	4	3s3p - 3p ²	$^2P^{\circ} - ^2P$	1-2	E6, M18
Si III	1296.726	280	4	3s3p - 3p ²	$^2P^{\circ} - ^2P$	0-1	E6, M18
Si III	1298.891	300	4	3s3p - 3p ²	$^2P^{\circ} - ^2P$	1-1	E6, M18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si III	1298.960	360	4				
Si III	1300.703	P	54	3s 3p - 3p ²	³ P° - ³ P	2 - 2	M18
Si III	1301.146	280	4	3s 4s - 3p 4s	¹ S - ¹ P°	0 - 1	M18
Si III	1303.320	320	4	3s 3p - 3p ²	³ P° - ³ P	1 - 0	E6, M18
Si III	1312.590	260	10	3s 3p - 3p ²	³ P° - ³ P	2 - 1	E6, M18
Si III				3s 3p - 3s 4s	¹ P° - ¹ S	1 - 0	E6, M18
Si III	1327.703	P	53				
Si III	1328.806	P	48	3s 4s - 3s 6p	¹ S - ¹ P°	0 - 1	M18
Si III	1341.465	160	39	3p ² - 3p 3d	¹ S - ¹ P°	0 - 1	M18
Si III	1341.496	P	39	3s 3d - 3p 3d	³ D - ³ D°	3 - 3	M18
Si III	1342.351	P	39	3s 3d - 3p 3d	³ D - ³ D°	2 - 3	M18
Si III				3s 3d - 3p 3d	³ D - ³ D°	3 - 2	M18
Si III	1342.392	140	39				
Si III	1342.432	P	39	3s 3d - 3p 3d	³ D - ³ D°	2 - 2	M18
Si III	1343.388	120	39	3s 3d - 3p 3d	³ D - ³ D°	1 - 2	M18
Si III	1359.751	P	68	3s 3d - 3p 3d	³ D - ³ D°	1 - 1	M18
Si III	1360.360	20	68	3s 4p - 3p 4p	³ P° - ³ S	0 - 1	M18
Si III				3s 4p - 3p 4p	³ P° - ³ S	1 - 1	M18
Si III	136.597	160	46				
Si III	1361.719	P	68	3s 4s - 3p 4s	³ S - ³ P°	1 - 2	E6, M18
Si III	1362.366	100	38	3s 4p - 3p 4p	³ P° - ³ S	2 - 1	M18
Si III	1363.459	140	38	3s 3d - 3p 3d	³ D - ³ P°	1 - 0	M18
Si III	1363.504	P	38	3s 3d - 3p 3d	³ D - ³ P°	2 - 1	M18
Si III				3s 3d - 3p 3d	³ D - ³ P°	1 - 1	M18
Si III	1365.253	160	38				
Si III	1365.292	P	38	3s 3d - 3p 3d	³ D - ³ P°	3 - 2	M18
Si III	1365.337	P	38	3s 3d - 3p 3d	³ D - ³ P°	2 - 2	M18
Si III	1367.049	140	46	3s 3d - 3p 3d	³ D - ³ P°	1 - 2	M18
Si III	1369.437	100	46	3s 4s - 3p 4s	³ S - ³ P°	1 - 1	E6, M18
Si III				3s 4s - 3p 4s	³ S - ³ P°	1 - 0	M18
Si III	1371.652	60	67				
Si III	1373.030	100	67	3s 4p - 3p 4p	³ P° - ³ P	1 - 2	M18
Si III	1375.083	40	67	3s 4p - 3p 4p	³ P° - ³ P	2 - 2	M18
Si III	1375.688	40	67	3s 4p - 3p 4p	³ P° - ³ P	0 - 1	M18
Si III	1377.082	60	67	3s 4p - 3p 4p	³ P° - ³ P	1 - 1	M18
Si III				3s 4p - 3p 4p	³ P° - ³ P	2 - 1	M18
Si III	1377.238	40	67				
Si III	1387.948	25	37	3s 4p - 3p 4p	³ P° - ³ P	1 - 0	M18
Si III	1387.979	10	37	3s 3d - 3s 5p	³ D - ³ P°	2 - 1	M18
Si III	1387.994	8	37	3s 3d - 3s 5p	³ D - ³ P°	1 - 0	M18
Si III	1388.011	50	37	3s 3d - 3s 5p	³ D - ³ P°	1 - 1	M18
Si III				3s 3d - 3s 5p	³ D - ³ P°	3 - 2	M18
Si III	1388.052	2	37				
Si III	1388.098	1	37	3s 3d - 3s 5p	³ D - ³ P°	2 - 2	M18
Si III	1389.615	P	73	3s 3d - 3s 5p	³ D - ³ P°	1 - 2	M18
Si III	1417.237	260	9	3s 4p - 3p 4p	¹ P° - ¹ D	1 - 2	M18
Si III	1424.775	40	62	3s 3p - 3p ²	¹ P° - ¹ S	1 - 0	E6, M18
Si III				3s 3d - 3p 4s	¹ D - ¹ P°	2 - 1	M18
Si III	1433.690	120	66				
Si III	1435.776	160	61	3s 4p - 3p 4p	³ P° - ³ D	2 - 3	M18
Si III	1436.166	140	52	3s 3d - 3p 3d	¹ D - ¹ F°	2 - 3	E6, M18
Si III	1436.724	80	65	3s 4s - 3p 3d	¹ S - ¹ P°	0 - 1	E6, M18
Si III	1438.228	40	66	3s 4p - 3p 4p	³ P° - ³ D	1 - 2	M18
Si III				3s 4p - 3p 4p	³ P° - ³ D	2 - 2	M18
Si III	1438.702	40	66				
Si III	1439.391	40	66	3s 4p - 3p 4p	³ P° - ³ D	0 - 1	M18
Si III	1440.908	P	66	3s 4p - 3p 4p	³ P° - ³ D	1 - 1	M18
Si III	1441.732	100	3.05	3s 3p - 3p ²	³ P° - ³ D	2 - 1	M18
Si III	1447.196	120	3.05	3s 3p - 3p ²	³ P° - ¹ D	1 - 2	M18
Si III				3s 3p - 3p ²	³ P° - ¹ D	2 - 2	M18
Si III	1501.57253	100	60				
Si III	1500.241	240	36	3s 3d - 3s 6p	¹ D - ¹ P°	2 - 1	M18
Si III	1501.150	P	36	3s 3d - 3s 4f	³ D - ³ F°	3 - 4	E6, M18
Si III	1501.191	200	36	3s 3d - 3s 4f	³ D - ³ F°	3 - 3	E6, M18
Si III	1501.780	P	36	3s 3d - 3s 4f	³ D - ³ F°	2 - 3	E6, M18
Si III				3s 3d - 3s 4f	³ D - ³ F°	3 - 2	M18
Si III	1501.827	P	36				
Si III	1501.870	180	36	3s 3d - 3s 4f	³ D - ³ F°	2 - 2	E6, M18
Si III	1506.060	120	72	3s 4p - 3p 4p	³ D - ³ F°	1 - 2	M18
Si III	1513.533	40	94	3p 3d - 3p 5f	¹ P° - ¹ P	1 - 1	M18
Si III	1560.974	P	71	3s 4p - 3s 6d	¹ F° - ¹ /2 [¹ /2]	3 - 3	M18
Si III				3s 4p - 3s 6d	¹ P° - ¹ D	1 - 2	M18
Si III	1588.950	40	59				
Si III	1622.892	P	45	3s 3d - 3p 3d	¹ D - ¹ P°	2 - 1	M18
Si III	1622.913	P	45	3s 4s - 3s 5p	³ S - ³ P°	1 - 0	M18
Si III	1623.055	P	45	3s 4s - 3s 5p	³ S - ³ P°	1 - 1	M18
Si III	1636.990	20	47	3s 4s - 3s 5p	³ S - ³ P°	1 - 2	M18
Si III				3p ² - 3s 5p	¹ S - ¹ P°	0 - 1	M18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si III	1673.315	140	58	3s 3d - 3s 5f	$^1D - ^1F^{\circ}$	2 - 3	M18
Si III	1778.715 P		35	3s 3d - 3p 3d	$^3D - ^3F^{\circ}$	3 - 4	M18
Si III	1783.079 P		35	3s 3d - 3p 3d	$^3D - ^3F^{\circ}$	3 - 3	M18
Si III	1783.146 P		35	3s 3d - 3p 3d	$^3D - ^3F^{\circ}$	2 - 3	M18
Si III	1786.571 P		35	3s 3d - 3p 3d	$^3D - ^3F^{\circ}$	3 - 2	M18
Si III	1786.438 P		35	3s 3d - 3p 3d	$^3D - ^3F^{\circ}$	2 - 2	M18
Si III	1786.515 P		35	3s 3d - 3p 3d	$^3D - ^3F^{\circ}$	1 - 2	M18
Si III	1803.023	60	51	3s 4s - 3s 5p	$^1S - ^1P^{\circ}$	0 - 1	M18
Si III	1838.466 P		65	3s 4p - 3s 6s	$^3P^{\circ} - ^3S$	0 - 1	M18
Si III	1839.585 P		65	3s 4p - 3s 6s	$^3P^{\circ} - ^3S$	1 - 1	M18
Si III	1842.964 P		65	3s 4p - 3s 6s	$^3P^{\circ} - ^3S$	2 - 1	M18
Si III	1842.547	180	20	$3p^2 - 3s 4p$	$^1D - ^1P^{\circ}$	2 - 1	M18
Si III	1856.062	20	70	3s 4p - 3s 6s	$^1P^{\circ} - ^1S$	1 - 0	M18
Si III	1892.030	60	1	$3s^2 - 3s 3p$	$g^1S - ^3P^{\circ}$	0 - 1	M18
Si III	1953.968 P		69	3s 4p - 3s 5d	$^1P^{\circ} - ^1D$	1 - 2	M18
Si III	1979.233 P		83	3s 4d - 3s 8f	$^1D - ^1F^{\circ}$	2 - 3	M18

SILICON IV (Si^{3+}), $Z = 14$ Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)Ionization Potential $364\,093.1\text{ cm}^{-1}$; 45.141 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si IV	327.137 P		2.02	3s - 6p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M18
Si IV	327.181 P		2.02	3s - 6p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M18
Si IV	361.560 P		2.01	3s - 5p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E6, M18
Si IV	361.659 P		2.01	3s - 5p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E6, M18
Si IV	412.155 P		9	3p - 6d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M18
Si IV	412.939 P		9	3p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M18
Si IV	437.849 P		8	3p - 6s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M18
Si IV	438.734 P		8	3p - 6s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M18
Si IV	454.112 P		7	3p - 5d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E6, M18
Si IV	455.065 P		7	3p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E6, M18
Si IV	457.818	250	2	3s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E6, M18
Si IV	458.155	200	2	3s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E6, M18
Si IV	515.118	150	6	3p - 5s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E6, M18
Si IV	516.348	200	6	3p - 5s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E6, M18
Si IV	559.533	2	5	3p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E6, S18, M18
Si IV	560.980	5	5	3p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E6, S18, M18
Si IV	645.759	150	15	3d - 6f	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M18
Si IV	688.194	1	14	3d - 6p	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M18, S18
Si IV	688.200 P		14	3d - 6p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M18
Si IV	688.395 P		14	3d - 6p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M18
Si IV	749.941	300	13	3d - 5f	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	E6, M18
Si IV	815.049	500	4	3p - 4s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E6, M18
Si IV	818.129	550	4	3p - 4s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E6, M18
Si IV	860.551	20	12	3d - 5p	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	M18, S18
Si IV	860.560 P		12	3d - 5p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M18
Si IV	861.118	5	..	3d - 5p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M18, S18
Si IV	895.228 P		17	4s - 6p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M18
Si IV	895.558 P		17	4s - 6p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M18
Si IV	1045.500 P		21	4p - 6d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M18
Si IV	1047.271 P		21	4p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si IV	1066.629	550	11	3d - 4f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{7}{2}$	E6, M18
Si IV	1122.486	550	3	3p - 3d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E6, M18
Si IV	1128.325 P		3	3p - 3d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E6, M18
Si IV	1128.340	650	3	3p - 3d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E6, M18
Si IV	1210.652 P		16	4s - 5p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	M18
Si IV	1211.757 P		16	4s - 5p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	M18
Si IV	1228.349 P		20	4p - 6s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M18
Si IV	1230.795 P		20	4p - 6s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M18
Si IV	1365.549 P		19	4p - 5d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M18
Si IV	1368.571 P		19	4p - 5d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M18
Si IV	1368.573 P		19	4p - 5d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M18
Si IV	1393.755	1000	1	3s - 3p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E6, M18
Si IV	1402.770	800	1	3s - 3p	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E6, M18
Si IV	1533.220 P		24	4d - 6f	$^3D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si IV	1634.607	70	28	4f - 6g	$^2F^o - ^2G$	$\frac{7}{2} - \frac{3}{2}$	M18
Si IV	1672.612 P		27	4f - 6d	$^2F^o - ^2D$	$\frac{7}{2} - \frac{3}{2}$	M18
Si IV	1722.534	400	10	3d - 4p	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si IV	1727.377	300	10	3d - 4p	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18
Si IV	1796.162 P		23	4d - 6p	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si IV	1796.166 P		23	4d - 6p	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M18
Si IV	1797.496 P		23	4d - 6p	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M18

SILICON V (Si^{4+}), $Z = 14$ Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)Ionization Potential $1\ 345\ 100\ cm^{-1}$; $166.77\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si V	78.611	50		$2p^6 - 2p^5(^2P^o)6d$	$g^4S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	78.903	50		$2p^6 - 2p^5(^2P^o)6d$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	80.807	00		$2p^6 - 2p^5(^2P^o)5d$	$g^4S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	81.113	100		$2p^6 - 2p^5(^2P^o)5d$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	85.175	500		$2p^6 - 2p^5(^2P^o)4d$	$g^4S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	85.579	300		$2p^6 - 2p^5(^2P^o)4d$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	90.453	200		$2p^6 - 2p^5(^2P^o)4s$	$g^4S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	F34
Si V	90.852	200		$2p^6 - 2p^5(^2P^o)4s$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	96.439	750		$2p^6 - 2p^5(^2P^o)3d$	$g^4S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	97.143	500		$2p^6 - 2p^5(^2P^o)3d$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F34
Si V	98.209	100		$2p^6 - 2p^5(^2P^o)3d$	$g^4S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	F34
Si V	117.860	1000		$2p^6 - 2p^5(^2P^o)3s$	$g^4S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E6, F34
Si V	118.468	1000		$2p^6 - 2p^5(^2P^o)3s$	$g^4S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E6, F34

SILICON VI (Si^{5+}), $Z = 14$
 Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
 Ionization Potential $1\ 653\ 900\ \text{cm}^{-1}$; $205.05\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si VI	65.004	20d		$2p^5 - 2p^4(^1D)5d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	65.211	10		$2p^5 - 2p^4(^1D)5d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VI	66.772	20		$2p^5 - 2p^4(^2P)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	66.796	10		$2p^5 - 2p^4(^1S)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	69.204	50d		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	69.236	250		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	69.421	50		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	69.448	1000d		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	71.181	250		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	71.273	100		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	71.304	10		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	71.340	10		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	71.366	150		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	71.384	200b		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	71.474	50		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	71.534	50		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	71.561	50		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VI	71.744	10		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	71.718	10		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	72.896	50		$2p^5 - 2p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	75.193	200b		$2p^5 - 2p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI?	75.398	150					F34
Si VI	75.486	50		$2p^5 - 2p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	75.587	50		$2p^5 - 2p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	77.429	500		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	77.718	300		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	80.395	250		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	80.449	500		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	80.491	250		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	80.501	500		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	80.577	600		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	80.698	500		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	80.725	500		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	80.821	400		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	80.908	400		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VI	81.030	350		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VI	83.006	200		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	83.128	750		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	83.258	250		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	83.283	50		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	83.358	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	83.526	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	83.611	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	83.639	150		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VI	83.684	50		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	83.729	50		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	83.802	300		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	83.965	10		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	84.032	600b		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	91.369	700		$2p^5 - 2p^4(^1S)3s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	91.798	200		$2p^5 - 2p^4(^1S)3s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VI	96.020	500		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	96.488	300		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	99.095	500		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VI	99.460	750		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	99.598	500		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VI	99.966	500		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	100.640	5000d		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	100.963	50		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VI	101.160	10		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	F34

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si VI	102.846	50					
Si VI	103.163	100		$2s 2p^6 - 2s 2p^5(^3P^o) 3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VI	246.001	400		$2s 2p^6 - 2s 2p^5(^3P^o) 3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VI	249.125	400		$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E6, F34
Si VI				$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E6, F34

SILICON VII (Si^{6+}), $Z = 14$ Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)Ionization Potential $1\ 988\ 400\ cm^{-1}$; $246.52\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si VII	54.462	50b					
Si VII	54.522	50d		$2p^4 - 2p^3(^2D^o) 5d$	$g^3P - ^3P^o$	2-2	F34
Si VII	56.528	50		$2p^4 - 2p^3(^2D^o) 5d$	$g^3P - ^3D^o$	2-3	F35, F34
Si VII	56.645	50d		$2p^4 - 2p^3(^4S^o) 5d$	$g^3P - ^3D^o$	2-3	F34
Si VII	57.325	50		$2p^4 - 2p^3(^4S^o) 5d$	$g^3P - ^3D^o$?	F34, K8
Si VII				$2p^4 - 2p^3(^2P^o) 4d$	$g^3P - ^3D^o$	2-3	F34
Si VII	57.434	50					
Si VII	57.589	50b		$2p^4 - 2p^3(^2P^o) 4d$	$g^3P - ^3P^o$	2-2	F34
Si VII	58.388	50		$2p^4 - 2p^3(^2P^o) 4d$	$g^3P - ^3P^o$	1-2	F34
Si VII	58.445	100		$2p^4 - 2p^3(^2D^o) 4d$	$g^3P - ^3S^o$	2-1	F34
Si VII	58.526	10		$2p^4 - 2p^3(^2D^o) 4d$	$g^3P - ^3P^o$	2-2	F34
Si VII				$2p^4 - 2p^3(^2D^o) 4d$	$g^3P - ^3S^o$	1-1	F34
Si VII	58.580	100					
Si VII	58.719	50		$2p^4 - 2p^3(^2D^o) 4d$	$g^3P - ^3D^o$	2-3	F34
Si VII	58.782	50		$2p^4 - 2p^3(^2D^o) 4d$	$g^3P - ^3D^o$	1-2	F34
Si VII	59.834	50		$2p^4 - 2p^3(^2P^o) 4d$	$^1D - ^1F^o$	2-3	F34
Si VII	59.966	100b		$2p^4 - 2p^3(^2P^o) 4s$	$g^3P - ^3P^o$	2-2	F34
Si VII				$2p^4 - 2p^3(^2D^o) 4d$	$^1D - ^1F^o$	2-3	F34, F35
Si VII	60.221	100					
Si VII	60.837	100		$2p^4 - 2p^3(^2D^o) 4d$	$^1D - ^1P^o$	2-1	F34
Si VII	60.989	100b		$2p^4 - 2p^3(^4S^o) 4d$	$g^3P - ^3D^o$	2-3	F34
Si VII	61.306	50		$2p^4 - 2p^3(^4S^o) 4d$	$g^3P - ^3D^o$	1-2	F34
Si VII	62.940	50		$2p^4 - 2p^3(^2D^o) 4s$	$g^3P - ^3D^o$	2-3	F34
Si VII				$2p^4 - 2p^3(^2D^o) 4s$	$^1D - ^1D^o$	2-2	F34
Si VII	65.595	50					
Si VII	68.026	10		$^3s 2p^5 - 2s 2p^4(^4P) 4s$	$^3P^o - ^3P$	2-2	F34, F35
Si VII	68.148	250		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3D^o$	2-2	F34
Si VII	68.190	50		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3D^o$	2-3	F34
Si VII	68.212	50		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^1D^o$	2-2	F34, K8
Si VII				$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3D^o$	1-2	F34
Si VII	68.270	50d					
Si VII	68.340	50		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^1P^o$?	F34, K8
Si VII	68.408	100		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3F^o$?	F34, K8
Si VII	68.555	10		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3P^o$	2-2	F34
Si VII	68.593	50		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3P^o$	2-1	F34
Si VII				$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3P^o$	1-2	F34
Si VII	69.642	50					
Si VII	68.669	50		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3P^o$	1-1	F34
Si VII	68.715	100		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3P^o$	1-0	F34
Si VII	69.385	150		$2p^4 - 2p^3(^2P^o) 3d$	$g^3P - ^3P^o$	0-1	F34
Si VII	69.580	100		$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3S^o$	2-1	F34
Si VII				$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3S^o$	1-1	F34
Si VII	69.602	100					
Si VII	69.663	200		$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^1F^o$	2-1	F34
Si VII	69.790	200b		$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3P^o$	2-2	F34
Si VII	69.861	100		$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3P^o$	1-0	F34
Si VII	69.872	100		$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3P^o$	1-2	F34
Si VII				$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3P^o$	0-1	F34
Si VII	70.027	250					
Si VII	70.072	250		$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3D^o$	2-3	F34
Si VII	70.123	20		$2p^4 - 2p^3(^2P^o) 3d$	$^1D - ^1F^o$	2-3	F34
Si VII	70.222	200		$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3F^o$	2-3	F34
Si VII	70.250	200		$2p^4 - 2p^3(^2D^o) 3d$	$g^3P - ^3D^o$	1-2	F34
Si VII				$2p^4 - 2p^3(^2P^o) 3d$	$^1D - ^1P^o$	2-1	F34

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si VII	70.323	50		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3F^o$	1 - 2	F34
Si VII	70.427	50		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^1D^o$	2 - 2	F34
Si VII	70.594	100		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^3F^o$? 2 - 3	F34, K8
Si VII	70.730	50		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^3P^o$	2 - 1	F34
Si VII	71.384	200b		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1F^o$	2 - 3	F34
Si VII	71.900	200		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^3P^o$? 2 - 1	F34, K8
Si VII	71.955	200		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1D^o$	2 - 2	F34, F35
Si VII	72.324	300b		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1P^o$	2 - 1	F34
Si VII	73.123	500		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2 - 3	F34
Si VII	73.350	250		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	1 - 2	F34
Si VII	73.433	200		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	0 - 1	F34
Si VII	75.193	200b		$2p^4 - 2p^3(^3D^o)3d$	$^1S - ^1P^o$	0 - 1	F34, F35
Si VII	79.236	250		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2 - 2	F34
Si VII	79.262	50		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2 - 1	F34
Si VII	79.491	100		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	1 - 2	F34
Si VII	79.523	100		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	1 - 1	F34
Si VII	79.615	100		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	0 - 1	F34
Si VII	81.449	50		$2s2p^5 - 2s2p^4(^3D)3s$	$^3P^o - ^3D$	2 - 3	F35
Si VII	81.558	250		$2p^4 - 2p^3(^3P^o)3s$	$^1D - ^1P^o$	2 - 1	F34
Si VII	81.620	600		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2 - 3	F34
Si VII	81.895	500		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	1 - 2	F34
Si VII	81.998	150		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	0 - 1	F34
Si VII	84.082	600b		$2p^4 - 2p^3(^3D^o)3s$	$^1D - ^1D^o$	2 - 2	F34
Si VII	85.219	100		$2p^4 - 2p^3(^3P^o)3s$	$^1S - ^1P^o$	0 - 1	F34
Si VII	85.289	500		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 1	F34
Si VII	85.584	500		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1 - 1	F34
Si VII	85.698	100		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	0 - 1	F34
Si VII	88.008	150		$2s2p^5 - 2s2p^4(^4P)3s$	$^3P^o - ^3P$	2 - 2	F34, F35
Si VII	217.826	350		$2s^32p^4 - 2s2p^5$	$^1D - ^1P^o$	2 - 1	E6, F34
Si VII	246.06			$2s^32p^4 - 2s2p^5$	$^1S - ^1P^o$	0 - 1	F16
Si VII	272.641	200		$2s^32p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 1	E6, F34
Si VII	274.175	200		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 0	E6, F34
Si VII	275.352	250		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 2	E6, F34
Si VII	275.665	200		$2s^32p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 1	E6, F34
Si VII	276.839	200b		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	0 - 1	E6, F34
Si VII	278.445	200		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 2	E6, F34

SILICON VIII (Si^{7+}), $Z = 14$
 Ground State $1s^2 2s^2 2p^3 4S_{3/2}^o$ (7 electrons)
 Ionization Potential $2\ 445\ 300\ cm^{-1}$; $303.17\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si VIII	49.987	10		$2p^3 - 2p^3(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	50.019	50d		$2p^3 - 2p^3(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	50.524	50b		$2p^3 - 2p^3(^1D)4d$	$^3D^o - ^2D$	$\frac{5}{2} - \frac{3}{2}$	F34
Si VIII	51.713	20		$2p^3 - 2p^2(^3P)4d$	$^3D^o - ^3F$	$\frac{5}{2} - \frac{7}{2}$	F34
Si VIII	51.819	20		$2p^3 - 2p^3(^3P)4d$	$^3D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	F34
Si VIII	52.554	20		$2p^3 - 2p^2(^3P)4d$	$^3P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	53.770	10		$2p^3 - 2p^2(^3P)4s$	$^3D^o - ^2P$	$\frac{5}{2} - \frac{3}{2}$	F34
Si VIII	58.385	150d		$2s^32p^3 - 2s2p^3(^6S^o)3p$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	60.989	100b		$2p^3 - 2p^3(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	61.019	100		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si VIII	61.070	200		$2p^3 - 2p^2(^2P)3d$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	61.175	50d		$2p^3 - 2p^2(^2P)3d$	$g^4S^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VIII	61.223	100		$2p^3 - 2p^2(^2P)3d$	$g^4S^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	61.395	50		$2p^3 - 2p^2(^1D)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	61.446	100d		$2p^3 - 2p^2(^1D)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VIII	61.798	100		$2p^3 - 2p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	61.852	100b		$2p^3 - 2p^2(^1D)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	61.895	150d		$2p^3 - 2p^2(^1D)3d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	61.914	150d		$2p^3 - 2p^2(^1D)3d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	62.586	50d		$2p^3 - 2p^2(^1D)3d$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VIII	62.808	100		$2p^3 - 2p^2(^1D)3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	62.849	150d		$2p^3 - 2p^2(^2P)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	62.884	50		$2p^3 - 2p^2(^2P)3d$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	63.229	150		$2p^3 - 2p^2(^1D)3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	63.266	50		$2p^3 - 2p^2(^1D)3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VIII	63.732	150		$2p^3 - 2p^2(^2P)3d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	63.879	50		$2p^3 - 2p^2(^2P)3d$	$^2D^\circ - ^4D$?	F34, K8
Si VIII	63.903	150		$2p^3 - 2p^2(^2P)3d$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	64.281	100		$2p^3 - 2p^2(^2P)3d$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	64.327	150		$2p^3 - 2p^2(^2P)3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	64.355	50		$2p^3 - 2p^2(^2P)3d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VIII	65.833	50		$2p^3 - 2p^2(^2P)3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	67.157	150		$2s2p^4 - 2s2p^3(^2S^\circ)3d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	67.318	100		$2s2p^4 - 2s2p^3(^2S^\circ)3d$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	67.408	150		$2s2p^4 - 2s2p^3(^2S^\circ)3d$	$^4P - ^4D^\circ$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VIII	68.853	100		$2p^3 - 2p^2(^2P)3s$	$g^4S^\circ - ^2P$?	F34, K8
Si VIII	69.632	150		$2p^3 - 2p^2(^2P)3s$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	69.790	200b		$2p^3 - 2p^2(^2P)3s$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	69.905	50		$2p^3 - 2p^2(^2P)3s$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VIII	70.458	100		$2p^3 - 2p^2(^1D)3s$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	70.473	100		$2p^3 - 2p^2(^1D)3s$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	72.228	200		$2p^3 - 2p^2(^2P)3s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	72.324	300b		$2p^3 - 2p^2(^1D)3s$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	72.420	200d		$2p^3 - 2p^2(^2P)3s$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VIII	74.186	100		$2p^3 - 2p^2(^2P)3s$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	74.371	20		$2p^3 - 2p^2(^2P)3s$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VIII	75.986	50		$2s2p^4 - 2s2p^3(^2S^\circ)3s$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	76.198	20		$2s2p^4 - 2s2p^3(^2S^\circ)3s$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	214.756	100		$2s^22p^3 - 2s2p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VIII	216.800	20d		$2s^22p^3 - 2s2p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	216.918	100		$2s^22p^3 - 2s2p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	232.864	10		$2s^22p^3 - 2s2p^4$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F34
Si VIII	233.159	10		$2s^22p^3 - 2s2p^4$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si VIII	235.221	10		$2s^22p^3 - 2s2p^4$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F34
Si VIII	235.563	20		$2s^22p^3 - 2s2p^4$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	250.45			$2s^22p^3 - 2s2p^4$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F16
Si VIII	250.79			$2s^22p^3 - 2s2p^4$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F16
Si VIII	252.79			$2s2p^4 - 2p^5$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F16
Si VIII	256.53			$2s2p^4 - 2p^5$	$^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F16
Si VIII	276.839	200b		$2s^22p^3 - 2s2p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	277.054	200		$2s^22p^3 - 2s2p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	307.65	P		$2s^22p^3 - 2s2p^4$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S22
Si VIII	308.26	P		$2s^22p^3 - 2s2p^4$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T10
Si VIII	314.31	50		$2s^22p^2 - 2s2p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T10
Si VIII	316.202	100		$2s^22p^2 - 2s2p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	319.829	100d		$2s^22p^3 - 2s2p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34
Si VIII	338.43			$2s2p^4 - 2p^5$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	F3
Si VIII	343.49			$2s2p^4 - 2p^5$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F3
Si VIII	345.10			$2s2p^4 - 2p^5$	$^2P - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F3
Si VIII	350.38			$2s2p^4 - 2p^5$	$^2P - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F3

SILICON IX (Si^{9+}), $Z = 14$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential $2\ 831\ 900\ \text{cm}^{-1}$; $351.10\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si IX	44.215	10		$2p^2 - 2p\ 4d$	$g^3P - ^3D^{\circ}$	1-2	F34
Si IX	44.249	10		$2p^2 - 2p\ 4d$	$g^3P - ^3D^{\circ}$	2-3	F34
Si IX	51.113	50		$2s^2 2p^2 - 2s\ 2p^2(^3D)3p$	$^1D - ^1D^{\circ}$	2-2	F34
Si IX	51.362	100		$2s^2 2p^2 - 2s\ 2p^2(^3D)3p$	$^1D - ^1F^{\circ}$	2-3	F34
Si IX	52.671	10		$2s\ 2p^3 - 2s\ 2p^2(^3P)3d$	$^3D^{\circ} - ^3F$	3-4	F35
Si IX	52.810	20		$2s^2 2p^3 - 2s\ 2p^2(^4P)3p$	$g^3P - ^3D^{\circ}$	1-2	F34
Si IX	52.838	50		$2s^2 2p^3 - 2s\ 2p^2(^4P)3p$	$g^3P - ^3D^{\circ}$	2-3	F34
Si IX	53.992	10		$2s^2 2p^3 - 2s\ 2p^2(^4P)3p$	$g^3P - ^3S^{\circ}$	2-1	F34
Si IX	54.403	50 ¹		$2p^3 - 2p\ 3d$	$g^3P - ^1P^{\circ}$? 0-1	F34, K8
Si IX	54.841	100 ¹		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3S^{\circ} - ^5P$	2-1	F34
Si IX	54.870	100		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3S^{\circ} - ^4P$	2-2	F34
Si IX	54.907	100		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3S^{\circ} - ^5P$	2-3	F34
Si IX	55.094	50		$2p^3 - 2p\ 3d$	$g^3P - ^3P^{\circ}$	1-0	F34
Si IX	55.116	50		$2p^3 - 2p\ 3d$	$g^3P - ^2P^{\circ}$	1-1	F34
Si IX	55.234	50		$2p^3 - 2p\ 3d$	$g^3P - ^2P^{\circ}$	2-1	F34
Si IX	55.272	150		$2p^2 - 2p\ 3d$	$g^2P - ^3P^{\circ}$	2-2	F34
Si IX	55.305	50		$2p^2 - 2p\ 3d$	$g^2P - ^3D^{\circ}$	0-1	F34
Si IX	55.356	100		$2p^2 - 2p\ 3d$	$g^2P - ^3D^{\circ}$	1-2	F34
Si IX	55.401	100		$2p^2 - 2p\ 3d$	$g^2P - ^3D^{\circ}$	2-3	F34
Si IX	55.511	50		$2s\ 2p^3 - 2s\ 2p^2(^3D)3d$	$^3D^{\circ} - ^3D$	3-3	F34, F35
Si IX	55.781	150		$2s\ 2p^3 - 2s\ 2p^2(^3D)3d$	$^3D^{\circ} - ^3F$	3-4	F34, F35
Si IX	56.027	150		$2p^3 - 2p\ 3d$	$^1D - ^1F^{\circ}$	2-3	F34
Si IX	57.157	50		$2s\ 2p^3 - 2s\ 2p^2(^3D)3d$	$^3P^{\circ} - ^3D$	2-3	F34, F35
Si IX	57.434	50		$2p^3 - 2p\ 3d$	$^1D - ^1D^{\circ}$	2-2	F34
Si IX	57.589	50b		$2p^2 - 2p\ 3d$	$^1D - ^3F^{\circ}$	2-2	F35
Si IX	57.778	100		$2p^2 - 2p\ 3d$	$^1S - ^1P^{\circ}$	0-1	F34
Si IX	58.150	50		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3D^{\circ} - ^3D$? 3-3	F34, K8
Si IX	58.906	50d		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3D^{\circ} - ^3F$	3-4	F34
Si IX	59.004	100		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3D^{\circ} - ^3F$	2-3	F34
Si IX	59.077	50		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3D^{\circ} - ^3F$	1-2	F34
Si IX	59.966	100b		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3P^{\circ} - ^3D$	2-3	F34, F35
Si IX	60.459	20		$2s\ 2p^3 - 2s\ 2p^2(^3D)3d$	$^1D^{\circ} - ^3D$? 2-2	F34, K8
Si IX	60.989	100b		$2s\ 2p^3 - 2s\ 2p^2(^4P)3s$	$^3S^{\circ} - ^5P$	2-3	F34
Si IX	61.109	50		$2s\ 2p^3 - 2s\ 2p^2(^4P)3s$	$^3S^{\circ} - ^5P$	2-2	F34
Si IX	61.190	50d		$2s\ 2p^3 - 2s\ 2p^2(^4P)3s$	$^3S^{\circ} - ^5P$	2-1	F34
Si IX	61.355	50		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^3P^{\circ} - ^3P$	2-2	F34
Si IX	61.502	50		$2p^2 - 2p\ 3s$	$g^3P - ^3P^{\circ}$	1-2	F34
Si IX	61.546	100		$2s\ 2p^3 - 2s\ 2p^2(^3D)3s$	$^3D^{\circ} - ^3D$	3-3	F34, F35
Si IX	61.600	50		$2p^2 - 2p\ 3s$	$g^3P - ^3P^{\circ}$	0-1	F34
Si IX	61.649	100		$2p^2 - 2p\ 3s$	$g^3P - ^2P^{\circ}$	2-2	F34
Si IX	61.852	100b		$2p^3 - 2p\ 3s$	$g^3P - ^3P^{\circ}$	2-1	F35
Si IX	62.454	20		$2s\ 2p^3 - 2s\ 2p^2(^3D)3d$	$^1P^{\circ} - ^3D$? 1-2	F34, K8
Si IX	62.974	50		$2p^2 - 2p\ 3s$	$^1D - ^1P^{\circ}$	2-1	F34
Si IX	63.476	20		$2p^2 - 2p\ 3s$	$^1D - ^3P^{\circ}$? 2-2	F34, K8
Si IX	63.586	100		$2s\ 2p^3 - 2s\ 2p^2(^3D)3s$	$^3P^{\circ} - ^3D$? 2-3	F34, K8
Si IX	65.236	10		$2p^2 - 2p\ 3s$	$^1S - ^1P^{\circ}$	0-1	F34
Si IX	66.912	100		$2s\ 2p^3 - 2s\ 2p^2(^4P)3s$	$^3D^{\circ} - ^5P$? 3-2	F34, K8
Si IX	67.574	50d		$2s\ 2p^3 - 2s\ 2p^2(^4P)3d$	$^1P^{\circ} - ^5P$? 1-2	F34, K8
Si IX	223.72	P	80	$2s^2 2p^2 - 2s\ 2p^3$	$g^3P - ^3S^{\circ}$	0-1	T10
Si IX	225.033	800		$2s^2 2p^2 - 2s\ 2p^3$	$g^3P - ^3S^{\circ}$	1-1	T10
Si IX	227.007	800		$2s^2 2p^2 - 2s\ 2p^3$	$g^3P - ^3S^{\circ}$	2-1	T10
Si IX	227.30			$2s^2 2p^2 - 2s\ 2p^3$	$^1D - ^1P^{\circ}$	2-1	F16
Si IX	257.27			$2s\ 2p^3 - 2p^4$	$^3D^{\circ} - ^3P$	1-0	F16
Si IX	258.10	P		$2s^2 2p^2 - 2s\ 2p^2$	$^1D - ^1D^{\circ}$	2-2	Z1
Si IX	258.36			$2s\ 2p^2 - 2p^4$	$^3D^{\circ} - ^3P$	2-1	F16
Si IX	259.75			$2s^2 2p^3 - 2s\ 2p^3$	$^1S - ^1P^{\circ}$	0-1	F16
Si IX	261.41			$2s\ 2p^2 - 2p^4$	$^3D^{\circ} - ^3P$	3-2	F16
Si IX	290.63	P	20	$2s^2 2p^2 - 2s\ 2p^2$	$g^3P - ^3P^{\circ}$	0-1	T10
Si IX	292.83	P	80	$2s^2 2p^2 - 2s\ 2p^3$	$g^3P - ^3P^{\circ}$	1-2	T10
Si IX	296.19	P	150	$2s^2 2p^2 - 2s\ 2p^3$	$g^3P - ^3P^{\circ}$	2-2	T10

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si IX	298.32			$2s2p^2 - 2p^4$	$2P^\circ - 3P$	2 - 1	F3
Si IX	302.51			$2s2p^2 - 2p^4$	$2P^\circ - 3P$	2 - 2	F3
Si IX	342.97			$2s^2 2p^3 - 2s2p^3$	$2P - 3D^\circ$	0 - 1	F3
Si IX	345.10	20		$2s^2 2p^2 - 2s2p^2$	$g^2P - 3D^\circ$	1 - 2	T10
Si IX	349.96	50		$2s^2 2p^2 - 2s2p^2$	$g^2P - 3D^\circ$	2 - 3	T10
Si IX	458.29			$2s2p^2 - 2p^4$	$1D - 1D$	2 - 2	F16
Si IX	477.10			$2s2p^2 - 2p^4$	$2S^\circ - 3P$	1 - 0	F3
Si IX	430.37			$2s2p^2 - 2p^4$	$2S^\circ - 2P$	1 - 1	F3
Si IX	438.94			$2s2p^2 - 2p^4$	$2S^\circ - 2P$	1 - 2	F3
Si IX	441.03			$2s2p^2 - 2p^4$	$1P^\circ - 1D$	1 - 2	F3

SILICON X (Si^{9+}), $Z = 14$ Ground State $1s^2 2s^2 2p^2 P_{1/2}^\circ$ (5 electrons)Ionization Potential $3\ 237\ 800\ cm^{-1}$; 401.43 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si X	34.040	5		$2s^2 2p - 2s2p(^3P^\circ)5p$	$g^2P^\circ - 3P$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	34.238	5		$2s^2 2p - 2s^2 6d$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	35.310	10		$2s2p^2 - 2s2p(^1P^\circ)5d$	$2D - 2D^\circ$	$\frac{5}{2} - \frac{5}{2}$	H7
Si X	35.353	10		$2s2p^2 - 2s2p(^1P^\circ)5d$	$2D - 2F^\circ$	$\frac{5}{2} - \frac{7}{2}$	H7
Si X	35.656	5		$2s2p^2 - 2s2p(^3P^\circ)5d$	$4P - 4P^\circ$	$\frac{5}{2} - \frac{5}{2}$	H7
Si X	35.709	20		$2s2p^2 - 2s2p(^3P^\circ)5d$	$4P - 4P^\circ$	$\frac{5}{2} - \frac{5}{2}$	H7
Si X	35.838	40		$2s2p^2 - 2p^2(^3P)4p$	$4P - 4D^\circ$	$\frac{5}{2} - \frac{7}{2}$	H7
Si X	35.932	20		$2s^2 2p - 2s^2 5d$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	37.159	20		$2s^2 2p - 2s2p(^3P^\circ)4p$	$g^2P^\circ - 3D$	$\frac{1}{2} - \frac{3}{2}$	H7
Si X	37.206	20		$2s^2 2p - 2s2p(^3P^\circ)4p$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	37.248	10		$2s^2 2p - 2s2p(^3P^\circ)4p$	$g^2P^\circ - 3D$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	38.830	60		$2s2p^2 - 2s2p(^1P^\circ)4d$	$2D - 2F^\circ$	$\frac{5}{2} - \frac{7}{2}$	H7
Si X	39.175	40		$2s2p^2 - 2s2p(^3P^\circ)4d$	$4P - 4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	39.203	50		$2s2p^2 - 2s2p(^3P^\circ)4d$	$4P - 4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	39.264	50		$2s2p^2 - 2s2p(^3P^\circ)4d$	$4P - 4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	39.305	80		$2s2p^2 - 2s2p(^3P^\circ)4d$	$4P - 4D^\circ$	$\frac{5}{2} - \frac{7}{2}$	H7
Si X	39.443	50		$2s^2 2p - 2s^2 4d$	$g^2P^\circ - 2D$	$\frac{1}{2} - \frac{5}{2}$	H7
Si X	39.552	70		$2s^2 2p - 2s^2 4d$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	40.407	10		$2s^2 2p - 2s^2 4s$	$g^2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$	H7
Si X	40.503	5		$2s2p^2 - 2s2p(^1P^\circ)4d$	$2P - 2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	41.023	30		$2s2p^2 - 2s2p(^3P^\circ)4d$	$2D - 2F^\circ$	$\frac{5}{2} - \frac{7}{2}$	H7
Si X	41.086	30		$2s2p^2 - 2s2p(^3P^\circ)4d$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	44.521	30		$2s^2 2p - 2s2p(^1P^\circ)3p$	$g^2P^\circ - 2S$	$\frac{1}{2} - \frac{1}{2}$	H7
Si X	44.655	30		$2s^2 2p - 2s2p(^1P^\circ)3p$	$g^2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$	H7
Si X	44.719	20		$2s^2 2p - 2s2p(^1P^\circ)3p$	$g^2P^\circ - 2P$	$\frac{1}{2} - \frac{1}{2}$	H7
Si X	44.830	30		$2s^2 2p - 2s2p(^1P^\circ)3p$	$g^2P^\circ - 2P$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	44.855	30		$2s^2 2p - 2s2p(^1P^\circ)3p$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	44.979	60		$2s2p^2 - 2p^2(^3P)3p$	$4P - 4S^\circ$	$\frac{5}{2} - \frac{5}{2}$	H7
Si X	45.606	5		$2s2p^2 - 2p^2(^3P)3p$	$4P - 4P^\circ$	$\frac{5}{2} - \frac{5}{2}$	H7
Si X	45.684	60		$2s2p^2 - 2p^2(^3P)3p$	$4P - 4D^\circ$	$\frac{5}{2} - \frac{7}{2}$	H7
Si X	46.563	30		$2s2p^2 - 2p^2(^1D)3p$	$2D - 2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	H7
Si X	46.895	20		$2s^2 2p - 2s2p(^3P^\circ)3p$	$g^2P^\circ - 2S$	$\frac{1}{2} - \frac{1}{2}$	H7
Si X	47.043	50		$2s^2 2p - 2s2p(^3P^\circ)3p$	$g^2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$	H7
Si X	47.489	50		$2s^2 2p - 2s2p(^3P^\circ)3p$	$g^2P^\circ - 2D$	$\frac{1}{2} - \frac{5}{2}$	H7
Si X	47.545	50		$2s^2 2p - 2s2p(^3P^\circ)3p$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	F34, F35
Si X	48.381	20		$2s^2 2p - 2s2p(^3P^\circ)3p$	$g^2P^\circ - 2P$	$\frac{1}{2} - \frac{3}{2}$	H7
Si X	48.440	40		$2s^2 2p - 2s2p(^3P^\circ)3p$	$g^2P^\circ - 2P$	$\frac{1}{2} - \frac{1}{2}$	H7
Si X	48.553	10		$2s^2 2p - 2s2p(^3P^\circ)3p$	$g^2P^\circ - 2P$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	48.596	20		$2s^2 2p - 2s2p(^3P^\circ)3p$	$g^2P^\circ - 2P$	$\frac{3}{2} - \frac{1}{2}$	H7
Si X	49.182	10		$2s2p^2 - 2s2p(^1P^\circ)3d$	$2D - 4P^\circ$	$\frac{5}{2} - \frac{3}{2}$	H7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
Si X	49.441	50		$2s2p^2 - 2s2p(^1P^o)3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	49.701	00		$2s2p^2 - 2s2p(^1P^o)3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	49.984	60		$2s2p^2 - 2s2p(^2P^o)3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	H7
Si X	50.018	90		$2s2p^2 - 2s2p(^2P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	50.124	70		$2s2p^2 - 2s2p(^3P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	50.154	50		$2s2p^2 - 2s2p(^1P^o)3s$	$^4P - ^2P^o$? $\frac{3}{2} - \frac{3}{2}$	F34
Si X	50.254	70		$2s2p^2 - 2s2p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	50.305	50		$2s2p^2 - 2s2p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F34
Si X	50.333	50		$2s2p^2 - 2s2p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F34
Si X	50.390	10		$2s2p^2 - 2s2p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	50.524	50b		$2s^22p - 2s^23d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F34, F35
Si X	50.691	100		$2s^22p - 2s^23d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	51.635	10		$2p^2 - 2p^2(^2P)3d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
Si X	51.676	20		$2p^2 - 2p^2(^2P)3d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	52.070	50		$2s2p^2 - 2s2p(^1P^o)3d$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	F34, F35
Si X	52.155	100d		$2s2p^2 - 2s2p(^1P^o)3d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	52.485	100		$2s2p^2 - 2s2p(^2P^o)3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	52.611	50		$2s2p^2 - 2s2p(^2P^o)3d$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	53.463	10		$2s2p^2 - 2s2p(^1P^o)3s$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F35
Si X	53.573	50d		$2s2p^2 - 2s2p(^2P^o)3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	53.595	50d		$2s2p^2 - 2s2p(^2P^o)3d$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	54.462	50b		$2s2p^2 - 2s2p(^2P^o)3s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	F34
Si X	54.522	50d		$2s2p^2 - 2s2p(^3P^o)3s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	F34, F35
Si X	54.571	50		$2s2p^2 - 2s2p(^3P^o)3s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	F34
Si X	54.599	50d		$2s2p^2 - 2s2p(^3P^o)3d$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	F34, F35
Si X	54.664	10		$2s2p^2 - 2s2p(^3P^o)3s$	$^4P - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F34
Si X	54.702	10		$2s2p^2 - 2s2p(^2P^o)3s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	F34
Si X	55.096	100		$2s^22p - 2s^23s$	$k^2P^o - ^2S$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	56.680	50d		$2s2p^2 - 2s2p(^1P^o)3s$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	56.804	50		$2s2p^2 - 2s2p(^3P^o)3d$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	57.209	20		$2s2p^2 - 2s2p(^3P^o)3s$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F34, F35
Si X	57.365	80		$2s2p^2 - 2s2p(^3P^o)3s$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	H7
Si X	60.151	20		$2p^2 - 2s2p3p$	$^2D^o - ^2D$? $\frac{3}{2} - \frac{3}{2}$	F34, K8
Si X	62.251	100		$2s2p^2 - 2s2p(^3P^o)3s$	$^2P - ^4P^o$? $\frac{3}{2} - \frac{3}{2}$	F34, K8
Si X	64.772	50		$2s2p^2 - 2s^23p$	$^2P - ^2P^o$? $\frac{3}{2} - \frac{1}{2}$	F34, K8
Si X	66.977	20d		$2p^2 - 2s2p(^3P^o)3p$	$^2D^o - ^2P$? $\frac{3}{2} - \frac{3}{2}$	F34, K8
Si X	253.772	70		$2s^22p - 2s2p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	H7
Si X	256.569	10		$2s^22p - 2s2p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	H7
Si X	258.347	120		$2s^22p - 2s2p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	261.27	P 200		$2s^22p - 2s2p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	Z1
Si X	271.995	40		$2s^22p - 2s2p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	H7
Si X	277.261	50		$2s^22p - 2s2p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	H7
Si X	278.15			$2s2p^2 - 2p^3$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	F3
Si X	278.61			$2s2p^2 - 2p^3$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F3
Si X	287.16			$2s2p^2 - 2p^3$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Si X	289.186	100		$2s2p^2 - 2p^3$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	292.220	60		$2s2p^2 - 2p^3$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	H7
Si X	347.43	100		$2s^22p - 2s2p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	T10
Si X	347.71			$2s2p^2 - 2p^3$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F3
Si X	356.07	100		$2s^22p - 2s2p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T10
Si X	357.51			$2s2p^2 - 2p^3$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	F3
Si X	358.30			$2s2p^2 - 2p^3$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Si X	388.62			$2s2p^2 - 2p^3$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Si X	389.59			$2s2p^2 - 2p^3$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	F3
Si X	394.71			$2s2p^2 - 2p^3$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F3
Si X	395.68			$2s2p^2 - 2p^3$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	F3
Si X	539.44			$2s2p^2 - 2p^3$	$^2P - ^2D^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Si X	551.20			$2s2p^2 - 2p^3$	$^2P - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F3

SILICON XI (Si^{10+}), $Z = 14$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential $3\ 839\ 800\ \text{cm}^{-1}$; $476.06\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si XI	30.126	5		$2s\ 2p - 2p\ 5p$	$^2P^\circ - ^3P$	2-2	H6
Si XI	30.322	5		$2s\ 2p - 2s\ 6d$	$^2P^\circ - ^2D$	2-3	H6
Si XI	30.368	10		$2s^2 - 2s\ 5p$	$g^1S - ^1P^\circ$	0-1	H6
Si XI	31.924	10		$2s\ 2p - 2s\ 5d$	$^2P^\circ - ^2D$	1-2	H6
Si XI	31.980	20		$2s\ 2p - 2s\ 5d$	$^2P^\circ - ^2D$	2-3	H6
Si XI	32.735	10		$2p^2 - 2p\ 5d$	$^3P - ^2P^\circ$? 2-2	H6
Si XI	33.153	10		$2p^2 - 2p\ 5d$	$^1D - ^1F^\circ$	2-3	H6
Si XI	33.222	20		$2s\ 2p - 2p\ 4p$	$^2P^\circ - ^3P$	2-2	H6
Si XI	33.298	20		$2s\ 2p - 2p\ 4p$	$^3P^\circ - ^2D$	2-3	H6
Si XI	33.515	20		$2s^2 - 2s\ 4p$	$g^1S - ^1P^\circ$	0-1	H6
Si XI	33.573	10		$2s\ 2p - 2s\ 5d$	$^1P^\circ - ^1D$	1-2	H6
Si XI	34.910	20		$2s\ 2p - 2p\ 4p$	$^1P^\circ - ^1D$	1-2	H6
Si XI	35.353	10		$2s\ 2p - 2s\ 4d$	$^2P^\circ - ^2D$	0-1	H6
Si XI	35.383	60		$2s\ 2p - 2s\ 4d$	$^2P^\circ - ^2D$	1-2	H6
Si XI	35.446	100		$2s\ 2p - 2s\ 4d$	$^2P^\circ - ^2D$	2-3	H6
Si XI	36.238	10		$2p^2 - 2p\ 4d$	$^2P - ^2P^\circ$? 1-2	H6
Si XI	36.311	80		$2p^2 - 2p\ 4d$	$^2P - ^2P^\circ$	2-2	H6
Si XI	36.335	80		$2p^2 - 2p\ 4d$	$^2P - ^2D^\circ$	2-3	H6
Si XI	36.772	70		$2p^2 - 2p\ 4d$	$^1D - ^1F^\circ$	2-3	H6
Si XI	37.060	10		$2p^2 - 2p\ 4d$	$^1D - ^1D^\circ$	2-2	H6
Si XI	37.340	50		$2s\ 2p - 2s\ 4d$	$^1P^\circ - ^1D$	1-2	H6
Si XI	38.336	20		$2p^2 - 2p\ 4d$	$^1S - ^1P^\circ$	0-1	H6
Si XI	42.730	40		$2s\ 2p - 2p\ 3p$	$^2P^\circ - ^3P$	1-2	H6
Si XI	42.773	10		$2s\ 2p - 2p\ 3p$	$^3P^\circ - ^3P$	1-1	H6
Si XI	42.826	70		$2s\ 2p - 2p\ 3p$	$^3P^\circ - ^3P$	2-2	H6
Si XI	42.866	30		$2s\ 2p - 2p\ 3p$	$^2P^\circ - ^2P$	2-1	H6
Si XI	42.910	10		$2s\ 2p - 2p\ 3p$	$^2P^\circ - ^2S$	0-1	H6
Si XI	42.950	20		$2s\ 2p - 2p\ 3p$	$^2P^\circ - ^2S$	1-1	H6
Si XI	43.046	20		$2s\ 2p - 2p\ 3p$	$^3P^\circ - ^2S$	2-1	H6
Si XI	43.290	10		$2s\ 2p - 2p\ 3p$	$^3P^\circ - ^2D$	2-3	F34
Si XI	43.329	10		$2s\ 2p - 2p\ 3p$	$^2P^\circ - ^2D$	1-1	H6
Si XI	43.385	10		$2s\ 2p - 2p\ 3p$	$^3P^\circ - ^2D$	2-2	H6
Si XI	43.763	10		$2s^2 - 2s\ 3p$	$g^1S - ^1P^\circ$	0-1	F34
Si XI	45.398	10		$2s\ 2p - 2p\ 3p$	$^1P^\circ - ^1D$	1-2	F34
Si XI	46.264	10		$2s\ 2p - 2s\ 3d$	$^2P^\circ - ^2D$	0-1	F34
Si XI	46.300	50		$2s\ 2p - 2s\ 3d$	$^3P^\circ - ^2D$	1-2	F34
Si XI	46.401	100		$2s\ 2p - 2s\ 3d$	$^3P^\circ - ^2D$	2-3	F34
Si XI	46.662	40		$2s\ 2p - 2p\ 3p$	$^1P^\circ - ^1P$	1-1	H6
Si XI	47.293	20		$2p^2 - 2p\ 3d$	$^2P - ^2P^\circ$	0-1	H6
Si XI	47.350	50		$2p^2 - 2p\ 3d$	$^2P - ^2P^\circ$	1-1	H6
Si XI	47.385	10		$2p^2 - 2p\ 3d$	$^2P - ^2P^\circ$	1-2	H6
Si XI	47.453	10		$2p^2 - 2p\ 3d$	$^3P - ^2P^\circ$	2-1	H6
Si XI	47.489	50		$2p^2 - 2p\ 3d$	$^3P - ^2P^\circ$	2-2	F34
Si XI	47.607	50		$2p^2 - 2p\ 3d$	$^2P - ^2D^\circ$	1-2	F34
Si XI	47.653	50		$2p^2 - 2p\ 3d$	$^3P - ^2D^\circ$	2-3	F34
Si XI	47.702	5		$2p^2 - 2p\ 3d$	$^3P - ^2D^\circ$	2-2	H6
Si XI	47.735	20		$2p^2 - 2p\ 3d$	$^1D - ^1P^\circ$	2-1	H6
Si XI	47.899	50		$2p^2 - 2p\ 3d$	$^1D - ^1F^\circ$	2-3	F34
Si XI	48.991	20		$2s\ 2p - 2s\ 3s$	$^3P^\circ - ^2S$	0-1	H6
Si XI	49.052	30		$2s\ 2p - 2s\ 3s$	$^3P^\circ - ^2S$	1-1	H6
Si XI	49.181	30		$2s\ 2p - 2s\ 3s$	$^3P^\circ - ^2S$	2-1	H6
Si XI	49.222	50		$2s\ 2p - 2s\ 3d$	$^1P^\circ - ^1D$	1-2	F34
Si XI	49.235	10		$2p^2 - 2p\ 3d$	$^1D - ^1D^\circ$	2-2	F34
Si XI	50.521	100		$2p^2 - 2p\ 3s$	$^2P - ^2P^\circ$	2-2	H6
Si XI	50.617	40		$2p^2 - 2p\ 3s$	$^1D - ^1P^\circ$	2-1	H6
Si XI	52.296	100		$2s\ 2p - 2s\ 3s$	$^1P^\circ - ^1S$	1-0	H6
Si XI	147.60			$2s\ 3d - 2s\ 4f$	$^2D - ^2F^\circ$	3-4	F6
Si XI	303.31	500		$2s^2 - 2s\ 2p$	$g^1S - ^1P^\circ$	0-1	J5,T10
Si XI	358.29			$2s\ 2p - 2p^2$	$^1P^\circ - ^1S$	1-0	F3
Si XI	358.63			$2s\ 2p - 2p^2$	$^3P^\circ - ^3P$	1-2	F3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si XI	361.41			2s 2p - 2p ²	² P° - ² P	0 - 1	F3
Si XI	364.50			2s 2p - 2p ²	² P° - ² P	1 - 1	F3
Si XI	365.42			2s 2p - 2p ²	² P° - ² P	2 - 2	F3
Si XI	368.28			2s 2p - 2p ²	² P° - ² P	1 - 0	F3
Si XI	371.48			2s 2p - 2p ²	² P° - ² P	2 - 1	F3
Si XI	582.9	?		2s ² - 2s 2p	^g 1S - ² P°	0 - 1	K8
Si XI	604.14			2s 2p - 2p ²	¹ P° - ¹ D	1 - 2	F3

SILICON XII (Si¹¹⁺), Z = 14
 Ground State 1s²2s ²S_{1/2} (3 electrons)
 Ionization Potential 4 222 400 cm⁻¹; 523.50 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si XII	5.816			1s ² 2p - 1s 2p 3p	² P° - ² S	?	D6
Si XII	6.717			1s ² 2s - 1s 2s 2p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	D6
Si XII	6.787			1s ² 2s - 1s 2s 2p	^g 2S - ⁴ P°	$\frac{1}{2} - \frac{3}{2}$	D6
Si XII	25.655	1		2s - 7p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	26.03			2p - 9d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	T5
Si XII	26.460	3		2s - 6p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	26.98			2p - 7d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	27.035	1		2p - 7d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	F28
Si XII	27.850	3		2p - 6d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	27.909	10		2p - 6d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	F28
Si XII	29.439	10		2p - 5d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	29.509	20		2p - 5d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	F28
Si XII	29.574	1		2p - 5s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$	F28
Si XII	29.645	3		2p - 5s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	F28
Si XII	31.015	60		2s - 4p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	32.888	35		2p - 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	32.972	90		2p - 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	F28
Si XII	40.911	200		2s - 3p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	40.951	200		2s - 3p	^g 2S - ² P°	$\frac{1}{2} - \frac{1}{2}$	F28
Si XII	44.021	200		2p - 3d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	F28
Si XII	44.165	250		2p - 3d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	F28
Si XII	45.519	10		2p - 3s	² P° - ² S	$\frac{1}{2} - \frac{1}{2}$	F28
Si XII	45.692	20		2p - 3s	² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	F28
Si XII	88.84			3d - 5f	² D - ² F°	$\frac{3}{2} - \frac{7}{2}$	T5
Si XII	126.43			3p - 4d	² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	F6
Si XII	126.77			3p - 4d	² P° - ² D	$\frac{3}{2} - \frac{5}{2}$	F6
Si XII	129.89			3d - 4f	² D - ² F°	$\frac{3}{2} - \frac{7}{2}$	T5
Si XII	130.02			3d - 4f	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$	T5
Si XII	499.37			2s - 2p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	F3
Si XII	520.66			2s - 2p	^g 2S - ² P°	$\frac{1}{2} - \frac{1}{2}$	F3

SILICON XIII (Si^{12+}), $Z = 14$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $19\ 661\ 693\ \text{cm}^{-1}$; $2437.676\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si XIII	5.283			$1s^2 - 1s5p$	$g^1S - ^1P^o$	0 - 1	D6
Si XIII	5.410			$1s^2 - 1s4p$	$g^1S - ^1P^o$	0 - 1	D6
Si XIII	5.68	P		$1s^2 - 1s3p$	$g^1S - ^2P^o$	0 - 1	K8
Si XIII	6.224			$1s^2 - 1s3p$	$g^1S - ^1P^o$	0 - 1	D6
Si XIII	6.272			$1s2p - 2p^2$	$^1P^o - ^1D$? 1 - 2	D6
Si XIII	6.650			$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	D6
Si XIII	6.690			$1s^2 - 1s2p$	$g^1S - ^2P^o$	0 - 1	D6
Si XIII	6.737		f	$1s^2 - 1s2s$	$g^1S - ^2S$	0 - 1	D6
Si XIII	35.96	P		$1s2s - 1s3p$	$^2S - ^2P^o$	1 - 2	K8
Si XIII	110.957	100		$1s3d - 1s4f$	$^1D - ^1F^o$? 2 - 3	F34, K8
Si XIII	763.36	P		$1s2s - 1s2p$	$^2S - ^2P^o$	1 - 2	K8

SILICON XIV (Si^{13+}), $Z = 14$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential $21\ 560\ 628\ \text{cm}^{-1}$; $2673.11\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Si XIV	4.770	P		$1s - 6n$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Si XIV	4.831	P		$1s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Si XIV	4.947	P	10	$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Si XIV	5.217	P	30	$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Si XIV	6.182	P	100	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Si XIV	20.21	P		2 - 7			G2
Si XIV	20.88	P		2 - 6			G2
Si XIV	27.09	P		2 - 5			G2
Si XIV	28.74	P		2 - 4			G2
Si XIV	33.39	P		2 - 3			G2
Si XIV	51.20	P		3 - 7			G2
Si XIV	55.72	P		3 - 6			G2
Si XIV	65.30	P		3 - 5			G2
Si XIV	95.5	P		3 - 4			G2
Si XIV	110.37	P		4 - 7			G2
Si XIV	133.8	P		4 - 6			G2
Si XIV	206.4	P		4 - 5			G2
Si XIV	237.2	P		5 - 7			G2
Si XIV	380.2	P		5 - 6			G2
Si XIV	631.6	P		6 - 7			G2

PHOSPHORUS I (P^0), $Z = 15$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential $84\,580\text{ cm}^{-1}$; 10.486 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P I	1241.49	1		$3p^2 - 3p^3(^2P)5d$	$g^4S^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1242.02	3		$3p^2 - 3p^3(^2P)7s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1243.37	3		$3p^2 - 3p^3(^2P)5d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1245.19	6		$3p^2 - 3p^3(^2P)5d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1247.31	2		$3p^2 - 3p^3(^2P)5d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1248.20	1		$3p^2 - 3p^3(^2P)7s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1248.61	1		$3p^2 - 3p^3(^2P)7s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1253.74	6		$3p^2 - 3p^3(^2P)5d$	$g^4S^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1278.57	3		$3p^2 - 3p^3(^2P)6s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1282.96	6w		$3p^2 - 3p^3(^2P)6s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1283.89	6		$3p^2 - 3p^3(^2P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1284.80	3		$3p^2 - 3p^3(^2P)4d$	$g^4S^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1285.84	2		$3p^2 - 3p^3(^2P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1286.44	9		$3p^2 - 3p^3(^2P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1372.03	9		$3p^2 - 3p^3(^2P)3d$	$g^4S^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1373.49	60		$3p^2 - 3p^3(^2P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1374.73	6		$3p^2 - 3p^3(^2P)3d$	$g^4S^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1377.06	60		$3p^2 - 3p^3(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1377.93	60		$3p^2 - 3p^3(^2P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1379.40	75		$3p^2 - 3p^3(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1381.47	75		$3p^2 - 3p^3(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1381.65	45		$3p^2 - 3p^3(^2P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1411.31	24		$3p^2 - 3p^3(^1D)3d$	$^3D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1411.75	2		$3p^2 - 3p^3(^1D)3d$	$^2D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1420.08	30		$3p^2 - 3p^3(^2P)6d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1425.29	30		$3p^2 - 3p^3(^2P)6d$	$^3D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1427.77	1		$3p^2 - 3p^3(^2P)8s$	$^3D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1428.05	1		$3p^2 - 3p^3(^2P)6d$	$^3D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1429.77	12		$3p^2 - 3p^3(^2P)6d$	$^3D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1430.13	150d		$3p^2 - 3p^3(^2P)6d$	$^3D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1430.73	30		$3p^2 - 3p^3(^2P)3d$	$g^4S^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1431.50	1		$3p^2 - 3p^3(^2P)6d$	$^3D^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1440.24	15		$3p^2 - 3p^3(^2P)7s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1442.76	15		$3p^2 - 3p^3(^2P)7s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1445.66	3		$3p^2 - 3p^3(^2P)5d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1446.01	12		$3p^2 - 3p^3(^2P)7s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1446.33	3		$3p^2 - 3p^3(^2P)7s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1447.50	60		$3p^2 - 3p^3(^2P)5d$	$^2D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1450.38	9		$3p^2 - 3p^3(^2P)5d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1453.01	45		$3p^2 - 3p^3(^2P)5d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1467.58	9		$3p^2 - 3p^3(^2P)5d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1469.71	3		$3p^2 - 3p^3(^2P)5d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1473.65	6		$3p^2 - 3p^3(^2P)5d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1476.11	9		$3p^2 - 3p^3(^2P)5d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1488.01	60		$3p^2 - 3p^3(^2P)6s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1491.36	150		$3p^2 - 3p^3(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1492.99	120		$3p^2 - 3p^3(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1493.34	45		$3p^2 - 3p^3(^1D)3d$	$^2D^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1499.51	24		$3p^2 - 3p^3(^2P)6s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1501.81	60		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1502.17	24		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1503.12	3		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1503.48	3		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1504.37	36		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1504.72	6b		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1505.84	2		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1506.63	2		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I	1506.98	18		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I?	1508.74	9w		$3p^2 - 3p^3(^2P)4d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M3
P I?	1515.10	6w					M3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P I	1530.58	12					
P I	1534.73	15		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I?	1541.69	30		$3p^2 - 3p^2(^1D)4s$	$g^4S^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1543.26	45					
P I	1545.95	45		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1546.32	9		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1548.43	180		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1551.04	105		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1551.42	-5		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1554.84	3		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1555.25	6			$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I?	1556.18	2		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1575.18	9					
P I	1575.47	3		$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1583.73	24		$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1586.25	3		$3p^2 - 3p^2(^2P)6d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1586.88	2		$3p^2 - 3p^2(^2P)6d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1595.08	6		$3p^2 - 3p^2(^2P)6d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1595.72	1		$3p^2 - 3p^2(^2P)8s$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1596.06	3		$3p^2 - 3p^2(^2P)8s$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1597.97	3		$3p^2 - 3p^2(^2P)6d$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I?	1598.76	3					
P I	1599.75	15		$3p^2 - 3p^2(^2P)6d$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1601.29	30		$3p^2 - 3p^2(^2P)8s$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1614.19	30		$3p^2 - 3p^2(^2P)7s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I?	1614.67	3		$3p^2 - 3p^2(^2P)7s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1614.87	9					
P I	1615.79	36		$3p^2 - 3p^2(^2P)7s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1616.20	120		$3p^2 - 3p^2(^2P)5s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1618.11	45		$3p^2 - 3p^2(^2P)5s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1618.93	36		$3p^2 - 3p^2(^2P)5d$	$^2F^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1621.33	9		$3p^2 - 3p^2(^2P)7s$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I?	1622.08	3		$3p^2 - 3p^2(^2P)5d$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1623.83	75					
P I	1623.99	30		$3p^2 - 3p^2(^2P)5s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1624.43	2		$3p^2 - 3p^2(^2P)5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1624.67	3		$3p^2 - 3p^2(^2P)5d$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1625.40	30		$3p^2 - 3p^2(^2P)5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1625.80	75		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1627.86	9		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1629.17	60		$3p^2 - 3p^2(^2P)5s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1629.59	15		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1633.69	2		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1634.10	21		$3p^2 - 3p^2(^2P)5s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1635.79	9		$3p^2 - 3p^2(^2P)5s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1636.20	9		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1638.68	3		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1638.89	15		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1639.09	24		$3p^2 - 3p^2(^2P)5s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1652.97	30		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1653.68	24		$3p^2 - 3p^2(^2P)5d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1671.07	210		$3p^2 - 3p^2(^2P)5d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1671.49	105		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1671.68	540		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1672.05	105	2	$3s^2 3p^3 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1672.48	270		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I?	1673.94	3					
P I	1674.61	690	2	$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1679.71	900	2	$3s^2 3p^3 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1685.99	360	6	$3p^2 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1688.64	9			$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1689.25	105		$3p^2 - 3p^2(^2P)6s$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1690.17	30		$3p^2 - 3p^2(^2P)4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1690.90	9		$3p^2 - 3p^2(^2P)4d$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1691.75	60		$3p^2 - 3p^2(^2P)4d$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P I	1692.48	15		$3p^3 - 3p^2(^2P)4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1694.06	300	6	$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1694.50	120	6	$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1695.35	45		$3p^3 - 3p^2(^2P)4d$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1706.41	180		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1707.57	120		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1708.03	3		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1708.45	12		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1708.90	3		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1718.55	60		$3p^3 - 3p^24s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M3
P I	1719.00	30		$3p^3 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1719.31	90		$3p^3 - 3p^24s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1727.85	15		$3p^3 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1754.40	90		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1755.86	9		$3p^3 - 3p^2(^2P)4d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M3
P I	1756.65	9		$3p^3 - 3p^2(^2P)4d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1757.47	60		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1757.95	60		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1759.91	30		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1760.40	45		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1761.67	30		$3s^23p^3 - 3s3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1768.45	60		$3s^23p^3 - 3s3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1768.94	45		$3s^23p^3 - 3s3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1774.99	750	1	$3p^3 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1782.87	600	1	$3p^3 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1787.68	540	1	$3p^3 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1833.98	30		$3p^3 - 3p^2(^2P)5s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M3
P I	1834.83	60		$3p^3 - 3p^2(^2P)5s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1844.33	60		$3p^3 - 3p^2(^2P)5s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M3
P I	1845.19	30		$3p^3 - 3p^2(^2P)5s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1847.19	300		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I?	1849.05	3					M3
F I	1849.84	105		$3p^3 - 3p^2(^2P)5s$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1851.22	240		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M3
P I	1852.09	120		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1855.48	1		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M3
P I	1857.04	45		$3p^3 - 3p^2(^2P)5s$	$^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M3
P I	1858.91	450	5	$3p^3 - 3p^2(^1D)4s$	$^1D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1859.43	450	5	$3p^3 - 3p^2(^1D)4s$	$^1D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1860.63	45		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1863.78	3		$3p^3 - 3p^2(^2P)5s$	$^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M3
P I	1864.37	105		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1864.64	3		$3p^3 - 3p^2(^2P)5s$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1905.48	90		$3s^23p^3 - 3s3p^4$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M3
P I	1906.40	60		$3s^23p^3 - 3s3p^4$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1907.66	120		$3s^23p^3 - 3s3p^4$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1954.01	12		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M2
P I	1954.20	21		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	M3
P I	1955.16	21		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M3
P I	1955.79	21		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	M3

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

PHOSPHORUS II (P^{+}), $Z = 15$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential $159\ 100\ \text{cm}^{-1}$; $19.725\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P II	782.59	5		$3p^2 - 3p4d$	$g^3P - ^3P^{\circ}$	1-2	M3
P II	782.72	1		$3p^2 - 3p4d$	$g^3P - ^3D^{\circ}$	1-1	M3
P II	782.90	1		$3p^2 - 3p4d$	$g^3P - ^3P^{\circ}$	1-0	M3
P II	783.71	5		$3p^2 - 3p4d$	$g^3P - ^3P^{\circ}$	0-1	M3
P II	784.46	1		$3p^2 - 3p4d$	$g^3P - ^3P^{\circ}$	2-2	M3
P II	784.81	5		$3p^2 - 3p4d$	$g^3P - ^3D^{\circ}$	2-3	M3
P II	786.18	5		$3p^2 - 3p4d$	$g^3P - ^3D^{\circ}$	1-2	M3
P II	786.52	5		$3p^2 - 3p4d$	$g^3P - ^3P^{\circ}$	2-1	M3
P II	801.35	1		$3p^2 - 3p4d$	$g^3P - ^3F^{\circ}$	1-2	M3
P II	802.20	1		$3p^2 - 3p4d$	$g^3P - ^3F^{\circ}$	2-3	M3
P II	808.25	50		$3p^2 - 3p5s$	$g^3P - ^3P^{\circ}$	1-2	M3
P II	810.00	30		$3p^2 - 3p5s$	$g^3P - ^3P^{\circ}$	0-1	M3
P II	810.24	100		$3p^2 - 3p5s$	$g^3P - ^3P^{\circ}$	2-2	M3
P II	811.10	20		$3p^2 - 3p5s$	$g^3P - ^3P^{\circ}$	1-1	M2
P II	811.85	30		$3p^2 - 3p5s$	$g^2P - ^3P^{\circ}$	1-0	M3
P II	813.10	40		$3p^2 - 3p5s$	$g^3P - ^3P^{\circ}$	2-1	M3
P II	813.768	5		$3p^2 - 3p4d$	$^1D - ^1P^{\circ}$	2-1	M3
P II	824.66	30		$3p^2 - 3p4d$	$^1D - ^1F^{\circ}$	2-3	M3
P II	840.04	1		$3p^2 - 3p4d$	$^1D - ^1D^{\circ}$	2-1	M3
P II	841.21	20		$3p^2 - 3p4d$	$^1D - ^1D^{\circ}$	2-2	M3
P II	844.01	20		$3p^2 - 3p4d$	$^1D - ^3D^{\circ}$	2-2	M3
P II	861.61	10		$3p^2 - 3p4d$	$^1D - ^3F^{\circ}$	2-2	M3
P II	865.44	100		$3p^2 - 3p5s$	$^1D - ^1P^{\circ}$	2-1	M3
P II	872.84	5		$3p^2 - 3p5s$	$^1D - ^3P^{\circ}$	2-1	M3
P II?	906.89	5					M3
P II	906.987	10		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^3S^{\circ}$	0-1	M3
P II	907.56	40		$3p^2 - 3p4d$	$^1S - ^1P^{\circ}$	0-1	M3
P II	908.38	1		$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^3S^{\circ}$	1-1	M3
P II	910.88	5		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^3S^{\circ}$	2-1	M3
P II	915.59	.0		$3p^2 - 3p3d$	$^1D - ^1P^{\circ}$	2-1	M3
P II	927.771	10		$3s 3p^2 - 3s 3p^2(^4P) 3d$	$^3S^{\circ} - ^3P$	2-1	M3
P II	928.550	10		$3s 3p^2 - 3s 3p^2(^4F) 3d$	$^3S^{\circ} - ^3P$	2-2	M3
P II	929.642	10		$3s 3p^2 - 3s 3p^2(^4P) 3d$	$^3S^{\circ} - ^3P$	2-3	M3
P II	961.04	1		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	0-1	M3
P II	962.13	5		$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	1-2	M3
P II	962.57	5		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	1-1	M3
P II	963.59	1		$3p^2 - 3p3d$	$g^2P - ^3P^{\circ}$	1-0	M5
P II	963.81	5		$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	0-1	M3
P II	964.09	10		$3p^2 - 3p3d$	$^1D - ^1D^{\circ}$	2-2	M3
P II	964.55	10		$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	2-2	M3
P II	965.43	20		$3p^2 - 3p3d$	$g^2P - ^3D^{\circ}$	2-3	M3
P II	966.52	10		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	1-2	M3
P II	968.17	1		$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	2-1	M3
P II	969.38	5		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	2-2	M3
P II	972.24	5		$3p^2 - 3p5s$	$^1S - ^1P^{\circ}$	0-1	M3
P II	972.807	30		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^1P^{\circ}$	0-1	M3
P II	974.36	5		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^1P^{\circ}$	1-1	M3
P II	977.258	1		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^1P^{\circ}$	2-1	M3
P II	1015.47	100		$3p^2 - 3p3d$	$^1D - ^1F^{\circ}$	2-3	M3
P II	1033.41	100		$3p^2 - 3p3d$	$^1S - ^1P^{\circ}$	0-1	M3
P II	1064.80	150		$3s^2 3p^2 - 3s 3p^3$	$^1D - ^1P^{\circ}$	2-1	M3
P II	1124.945	10		$3p^2 - 3p4s$	$g^3P - ^1P^{\circ}$	0-1	M3
P II	1130.925	10		$3p^2 - 3p4s$	$g^3P - ^1P^{\circ}$	2-1	M3
P II	1141.00	5		$3p^2 - 3p3d$	$g^3P - ^3F^{\circ}$	1-2	M3
P II	1142.88	20		$3p^2 - 3p3d$	$g^3P - ^3F^{\circ}$	2-3	M3
P II?	1143.71	1					M3
P II	1145.01	1		$3p^2 - 3p3d$	$g^3P - ^3F^{\circ}$	2-2	M3
P II	1149.96	70	3	$3p^2 - 3p4s$	$g^2P - ^3P^{\circ}$	1-2	M3
P II	1152.81	50	3	$3p^2 - 3p4s$	$g^3P - ^3P^{\circ}$	0-1	M3
P II	1153.99	120	3	$3p^2 - 3p4s$	$g^3P - ^3P^{\circ}$	2-2	M3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P II	1155.00	40	3	$3p^2 - 3p4s$	$g^2P - ^2P^o$	1 - 1	M3
P II	1156.96	50	3	$3p^2 - 3p4s$	$g^2P - ^2P^o$	1 - 0	M3
P II	1159.08	80	3	$3p^2 - 3p4s$	$g^2P - ^2P^o$	2 - 1	M3
P II	1231.18	50		$3s^2 3p^2 - 3s 3p^2$	$^1S - ^1P^o$	0 - 1	M3
P II	1249.82	200		$3p^2 - 3p4s$	$^1D - ^1P^o$	2 - 1	M3
P II	1264.47	30		$3p^2 - 3p 3d$	$^1D - ^2F^o$	2 - 3	M3
P II	1267.06	5		$3p^2 - 3p 3d$	$^1D - ^2F^o$	2 - 2	M3
P II	1278.094	5		$3p^2 - 3p4s$	$^1D - ^2P^o$	2 - 2	M3
P II	1284.31	5		$3p^2 - 3p4s$	$^1D - ^2P^o$	2 - 1	M3
P II	1289.57	30		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^1D^o$	1 - 2	M3
P II	1294.64	150		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^1D^o$	2 - 2	M3
P II	1301.87	200	2	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	0 - 1	M3
P II	1304.47	200	2	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	1 - 0	M3
P II	1304.68	150	2	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	1 - 1	M3
P II	1305.48	350	2	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	1 - 2	M3
P II	1309.87	250	2	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	2 - 1	M3
P II	1310.70	600	2	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	2 - 2	M3
P II	1452.89	300		$3s^2 3p^2 - 3s 3p^2$	$^1D - ^1D^o$	2 - 2	M3
P II	1473.129	10		$3s^2 3p^2 - 3s 3p^2$	$^1D - ^2P^o$	2 - 2	M3
P II	1485.49	250		$3p^2 - 3p4s$	$^1S - ^1P^o$	0 - 1	M3
P II	1489.834	10		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2D$	1 - 1	M3
P II	1494.990	10		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2D$	2 - 2	M3
P II	1496.44	5		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2D$	3 - 3	M3
P II	1506.44	30		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2G$	3 - 4	M3
P II	1506.975	10		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2G$	2 - 3	M3
P II	1512.87	5h		$3s 3p^2 - 3s^2 3p 5p$	$^2D^o - ^1D$	1 - 2	M3
P II	1521.62	300w		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2F$	3 - 4	M3
P II	1522.11	4		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2F$	1 - 2	M3
P II	1522.392	10		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2F$	3 - 3	M3
P II	1522.59	5		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^2F$	2 - 2	M3
P II	1523.44	10		$3s 3p^2 - 3s^2 3p 4f$	$^2D^o - ^1F$	2 - 3	M3
P II	1525.58	1		$3s 3p^2 - 3s^2 3p 5p$	$^2D^o - ^2S$	1 - 1	M3
P II	1532.51	700w	1	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2D^o$	0 - 1	M3
P II	1535.90	1000w	1	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2D^o$	1 - 2	M3
P II	1536.39	700w	1	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2D^o$	1 - 1	M3
P II	1542.29	1000w	1	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2D^o$	2 - 3	M3
P II	1543.09	400	1	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2D^o$	2 - 2	M3
P II	1543.61	150	1	$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2D^o$	2 - 1	M3
P II	1552.51	5h		$3s 3p^2 - 3s^2 3p 5p$	$^2D^o - ^2D$	1 - 2	M3
P II	1552.94	1		$3s 3p^2 - 3s^2 3p 5p$	$^2D^o - ^2D$	2 - 2	M3
P II	1553.392	1		$3s 3p^2 - 3s^2 3p 5p$	$^1D^o - ^2P$	1 - 1	M3
P II	1553.82	10		$3s 3p^2 - 3s^2 3p 5p$	$^2D^o - ^2D$	3 - 2	M3
P II	1714.88	1		$3s 3p^2 - 3s^2 3p 4p$	$^2S^o - ^2D$	2 - 2	M3
P II	1772.30	30		$3s^2 3p^2 - 3s 3p^2$	$^1D - ^2D^o$	2 - 5	M3
P II	1777.54	10		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^1D$	2 - 2	M3
P II	1778.37	5		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^2D$	2 - 1	M3
P II	1779.10	50		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^1D$	1 - 2	M3
P II	1779.91	20		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^2D$	1 - 1	M3
P II	1800.27	20		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^2D$	0 - 1	M3
P II	1805.11	30		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^2D$	2 - 2	M3
P II	1805.17	150		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^2D$	2 - 3	M3
P II	1806.67	50		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^2D$	1 - 2	M3
P II	1828.63	30		$3s 3p^2 - 3s^2 3p 4f$	$^1D^o - ^1D$	2 - 2	M3
P II	1836.47	10		$3s 3p^2 - 3s^2 3p 4f$	$^1D^o - ^2D$	2 - 2	M3
P II	1837.51	20		$3s 3p^2 - 3s^2 3p 4f$	$^1D^o - ^2D$	2 - 3	M3
P II	1844.06	5		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^2F$	2 - 3	M3
P II	1846.78	20		$3s 3p^2 - 3s^2 3p 4f$	$^2P^o - ^1F$	2 - 3	M3
P II	1850.61	20		$3s 3p^2 - 3s^2 3p 5p$	$^2P^o - ^2S$	2 - 1	M3
P II	1852.27	20		$3s 3p^2 - 3s^2 3p 5p$	$^2P^o - ^2S$	1 - 1	M3
P II	1852.65	10		$3s 3p^2 - 3s^2 3p 5p$	$^2P^o - ^2S$	0 - 1	M3
P II	1854.59	150		$3s 3p^2 - 3s^2 3p 4f$	$^1D^o - ^2G$	2 - 3	M3
P II	1864.22	150		$3s 3p^2 - 3s^2 3p 5p$	$^1D^o - ^1D$	2 - 2	M3
P II	1872.36	1		$3s 3p^2 - 3s^2 3p 5p$	$^2P^o - ^2P$	2 - 2	M3
P II	1876.79	100		$3s 3p^2 - 3s^2 3p 4f$	$^1D^o - ^2F$	2 - 3	M3
P II	1879.62	250		$3s 3p^2 - 3s^2 3p 4f$	$^1D^o - ^1F$	2 - 3	M3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P II	1928.30	5		$3s3p^2 - 3s^23p5p$	$^1D^o - ^3D$	2 - 1	M3
P II	1945.54	50		$3s3p^2 - 3s^23p5p$	$^1D^o - ^1P$	2 - 1	M3

PHOSPHORUS III (P^{2+}), $Z = 15$
 Ground State $1s^22s^22p^63s^23p^2P^o_{1/2}$ (13 electrons)
 Ionization Potential 243 400 cm^{-1} ; 30.18 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P III	568.09	10		3p - 5s	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	R19
P III	565.90	200h		3p - 5s	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R19
P III	579.98	1h		3p - 4d	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	R19
P III	581.90	1l		3p - 4d	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$	R19
P III	781.73	100		$3s3p^1 - 3s3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	R:9
P III	782.98	100		$3s3p^2 - 3s3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	R:19
P III	783.75	100		$3s3p^2 - 3s3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	785.39	100		$3s3p^2 - 3s3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	R19
P III	786.24	100		$3s3p^2 - 3s3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	844.64	100	5	$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	M23,R19
P III	845.05	100	5	$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	R19
P III	845.66	100	5	$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	M23,R19
P III	846.12	100b	5	$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$	R19
P III	846.49	10b	5	$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$	R:9
P III	847.66	300b	5	$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	M23,R19
P III	848.02	200d	5	$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	848.44	100	5	$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	848.64	300d	5	$3p - 4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	R19
P III	852.68	500		3p - 4s	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R19
P III	853.35	10		$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	R19
P III	854.22	100		$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	R19
P III	854.86	100		$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	R19
P III	855.62	500	4	$3p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$	M23,R19
P III	856.96	200		$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	858.14	100		$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	859.41	10		$3s3p^2 - 3s3p(^2P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	859.68	800	4	3p - 3d	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M23,R19
P III	909.85	100		$3s3p^2 - 3s3p(^2P^o)3d$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	913.99	500	3	$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M23,R19
P III	917.13	400	3	$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M23,R19
P III	918.71	500	3	$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M23,R19
P III	921.86	500	3	$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M23,R19
P III	963.99	100h		$3s3p^2 - 3s^24f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	964.25	100		$3s3p^2 - 3s^24f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{1}{2}$	R19
P III	972.81	300		$3s3p^2 - 3p^2$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	R19
P III	974.78	300		$3s3p^2 - 3p^2$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	977.89	400		$3s3p^2 - 3p^2$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	998.00	800	2	$3s^23p - 3s3p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M23,R19
P III	1003.59	1000	2	$3s^23p - 3s3p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M23,R19
P III	1049.82	400		$3s3p^2 - 3p^2$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	K19
F III	1050.52	100		$3s3p^2 - 3p^2$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	1050.82	400		$3s3p^2 - 3p^2$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	R19
P III	1093.63	200		$3s3p^2 - 3s^25p$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	R19
P III	1210.60	100		$3s3p^2 - 3s^25p$	$^2P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	R19
P III	1283.95	10		$3s3p^2 - 3s3p(^2P^o)4s$	$^2P - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	R19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P III	1290.13	1		3s 3p ² - 3s 3p(2P ^o) 4s	2P - 2P ^o	1/2 - 3/2	R19
P III	1318.91	10		3s 3p ² - 3s 3p(2P ^o) 3d	2P - 2P ^o	1/2 - 3/2	R19
P III	1325.51	70		3s 3p ² - 3s 3p(2P ^o) 3d	2P - 2P ^o	1/2 - 3/2	R19
P III	1334.87	650	1	3s ² 3p - 3s 3p ²	g ² P ^o - 2D	1/2 - 3/2	M23, R19
P III	1337.50	70		3d - 5p	2D - 2P ^o	1/2 - 3/2	R19
P III	1337.71	150		3d - 5p	2D - 2P ^o	1/2 - 3/2	R19
P III	1343.8	70 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4P ^o - 4D	1/2 - 3/2	R19
P III	1344.34	1000	1	3s ² 3p - 3s 3p ²	g ² P ^o - 2D	1/2 - 3/2	M23, R19
P III	1344.90	650	1	3s ² 3p - 3s 3p ²	g ² P ^o - 2D	1/2 - 3/2	M23, R19
P III	1347.00	200 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4P ^o - 4D	1/2 - 3/2	R19
P III	1347.51	10 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4P ^o - 4D	1/2 - 3/2	R19
P III	1348.45	10 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4P ^o - 4D	1/2 - 3/2	R19
P III	1349.11	200 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4P ^o - 4D	1/2 - 3/2	R19
P III	1354.96	10		4s - 5p	2S - 2P ^o	1/2 - 3/2	R19
P III	1370.39	10 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4D ^o - 4D	1/2 - 3/2	R19
P III	1372.01	100 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4D ^o - 4D	1/2 - 3/2	R19
P III	1372.71	300 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4D ^o - 4D	1/2 - 3/2	R19
P III	1374.78	100 -A		3s 3p(2P ^o) 3d - 3s 3p(2P ^o) 4f	4D ^o - 4D	1/2 - 3/2	R19
P III	1379.87	300	7	4p - 6d	2P ^o - 2D	1/2 - 3/2	M23, R19
P III	1380.46	1000	7	3s 3p ² - 3p ²	2D - 2D ^o	1/2 - 3/2	M23, R19
P III	1381.11	1000	7	3s 3p ² - 3p ²	2D - 2D ^o	1/2 - 3/2	M23, R19
P III	1381.63	800	7	3s 3p ² - 3p ²	2D - 2D ^o	1/2 - 3/2	M23, R19
P III	1429.24	100		3s 3p ² - 3p ²	2S - 2P ^o	1/2 - 3/2	R19
P III	1436.41	200		3s 3p ² - 3p ²	2S - 2P ^o	1/2 - 3/2	R19
P III	1447.51	200		3s ² 4s - 3s 3p(2P ^o) 4s	2S - 2P ^o	1/2 - 3/2	R19
P III	1471.2	10		3s ² 3d - 3s 3p(2P ^o) 3d	2D - 2P ^o	? 1/2 - 3/2	R19
P III	1492.1	500		3s ² 4s - 3s 3p(2P ^o) 3d	2S - 2P ^o	? 1/2 - 3/2	R19
P III	1501.55	700	6	3s 3p ² - 3s ² 4p	2D - 2P ^o	1/2 - 3/2	M23, R19
P III	1502.27	1000	6	3s 3p ² - 3s ² 4p	2D - 2P ^o	1/2 - 3/2	M23, R19
P III	1504.72	900b	6	3s 3p ² - 3s ² 4p	2D - 2P ^o	1/2 - 3/2	R19
P III	1618.66	600		3d - 4f	2D - 2F ^o	1/2 - 3/2	R19
P III	1618.94	600		3d - 4f	2D - 2F ^o	1/2 - 3/2	R19
P III	1635.80	200		3s 3p ² - 3p ²	2P - 2P ^o	1/2 - 3/2	R19
P III	1637.38	100		3s 3p ² - 3p ²	2P - 2P ^o	1/2 - 3/2	R19
P III	1645.91	200		3s 3p ² - 3p ²	2P - 2P ^o	1/2 - 3/2	R19
P III	1647.55	300		3s 3p ² - 3p ²	2P - 2P ^o	1/2 - 3/2	R19
P III	1674.26	1		4p - 6s	2P ^o - 2S	1/2 - 3/2	R19
P III	1678.12	10		4p - 6s	2P ^o - 2S	1/2 - 3/2	R19
P III	1693.03	100		4p - 5d	2P ^o - 2D	1/2 - 3/2	R19
P III	1696.92	100		4p - 5d	2P ^o - 2D	1/2 - 3/2	R19
P III	1756.82	10		3s ² 3p - 3s 3p ²	2P ^o - 4P	1/2 - 3/2	R19
P III	1757.68	100		3s ² 3p - 3s 3p ²	2P ^o - 4P	1/2 - 3/2	R19

PHOSPHORUS IV (P³⁺), Z = 15
 Ground State 1s²2s²2p⁶3s² 1S₀ (12 electrons)
 Ionization Potential 414 312.4 cm⁻¹; 51.37 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P IV	284.0	20h		3s ² - 3s 6p	g ¹ S - 1F ^o	0 - 1	R19
P IV	312.44	160		3s ² - 3s 5p	g ¹ S - 1P ^o	0 - 1	R19
P IV	359.63	20		3s 3p - 3s 6s	2P ^o - 2S	2 - 1	R19
P IV	388.32	240		3s ² - 3s 4p	g ¹ S - 1P ^o	0 - 1	R19
P IV	414.60	10h		3s 3p - 3s 5s	2P ^o - 2S	? 0 - 1	R19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P IV	415.02	20					
P IV	415.82	46		3s3p - 3s5s	$^3P^o - ^3S$	1-1	R19
P IV	444.25	20		3s3p - 3s5s	$^3P^o - ^3S$	2-1	R19
P IV	445.19	20		3s3p - 3s4d	$^3P^o - ^3D$	1-2	R19
P IV	472.96	80		3s3p - 3s4d	$^3P^o - ^3D$	2-3	R19
				3s3p - 3s5s	$^1P^o - ^1S$	1-0	R19
P IV	522.02	10h					
P IV	629.02	120	4	3s3p - 3s4d	$^1P^o - ^1D$	1-2	R19
P IV	629.92	160	4	3s3p - 3s4s	$^3P^o - ^3S$	0-1	M23,R19
P IV	631.79	400	4	3s3p - 3s4s	$^3P^o - ^3S$	1-1	M23,R19
P IV	648.51	50		3s3p - 3s4s	$^3P^o - ^3S$	2-1	M25,R19
				3s3d - 3s5f	$^3D - ^3F^o$	3-4	R19
P IV	649.69	20					
P IV	652.79	80		3s3d - 3s5f	$^3D - ^3F^o$	2-3	R19
P IV	653.51	80		$3p^2 - 3p4s$	$^3P - ^3P^o$	1-2	R19
P IV	654.54	40		$3p^2 - 3p4s$	$^3P - ^3P^o$	0-1	R19
P IV	654.86	120		$3p^2 - 3p4s$	$^3P - ^3P^o$	1-1	R19
				$3p^2 - 3p4s$	$^3P - ^3P^o$	2-2	R19
P IV	655.78	80					
P IV	656.55	80		$3p^2 - 3p4s$	$^3P - ^3P^o$	1-0	R19
P IV	680.57	20		$3p^2 - 3p4s$	$^3P - ^3P^o$	2-1	R19
P IV	756.51	240		$3p^2 - 3p4s$	$^1D - ^1P^o$	2-1	R19
P IV	765.28	10		$3p^2 - 3p3d$	$^1D - ^1P^o$	2-1	R19
				3s3d - 3s5p	$^3D - ^3P^o$	2-1	R19
P IV	776.37	120					
P IV	823.18	800	3	3s3p - 3s4s	$^1P^o - ^1S$	1-0	R19
P IV	824.73	800	3	3s3p - 3s3d	$^3P^o - ^3D$	0-1	M23,R19
P IV	827.93	1000	3	3s3p - 3s3d	$^3P^o - ^3D$	1-2	M23,R19
P IV	843.98	40		3s3p - 3s3d	$^3P^o - ^3D$	2-3	M23,k15
				$3p^2 - 3p4s$	$^1S - ^1P^o$	0-1	R19
P IV	845.95	80					
P IV	846.12	80b		$3p^2 - 3p3d$	$^3P - ^3D^o$	0-1	R19
P IV	846.49	40b		3s3d - 3p3d	$^1D - ^1D^o$	2-2	R19
P IV	847.00	200		3s3d - 3p3d	$^1D - ^1F^o$	2-3	R19
P IV	847.66	240b		$3p^2 - 3p3d$	$^3P - ^3D^o$	1-2	R19
				$3p^2 - 3p3d$	$^3P - ^3D^o$	1-1	R19
P IV	849.76	160					
P IV	850.39	120		$3p^2 - 3p3d$	$^3P - ^3D^o$	2-3	R19
P IV	851.09	10		$3p^2 - 3p3d$	$^3P - ^3D^o$	2-2	R19
P IV	860.45	80		$3p^2 - 3p3d$	$^3P - ^3D^o$	2-1	R19
P IV	861.55	40		$3p^2 - 3p3d$	$^3P - ^3P^o$	1-0	R19
				$3p^2 - 3p3d$	$^3P - ^3P^o$	1-1	R19
P IV	863.32	120					
P IV	865.04	120		$3p^2 - 3p3d$	$^3P - ^3P^o$	1-2	R19
P IV	866.84	20		$3p^2 - 3p3d$	$^3P - ^3P^o$	2-1	R19
P IV	875.13	440		$3p^2 - 3p3d$	$^3P - ^3P^o$	2-2	R19
P IV	877.49	440		3s3d - 3s4f	$^3D - ^3F^o$	3-4	R19
				3s3d - 3s4f	$^3D - ^3F^o$	2-3	R19
P IV	879.31	80					
P IV	907.59	80		3s3d - 3s4f	$^3D - ^3F^o$	1-2	R19
P IV	908.05	160		$3p^2 - 3p3d$	$^1D - ^1D^o$	2-2	R19
P IV	950.66	1000	1	$3p^2 - 3p3d$	$^1D - ^1F^o$	2-3	R19
P IV	963.99	100b		$3s^2 - 3s3p$	$^1S - ^1P^o$	0-1	M23,R19
				$3p^2 - 3p3d$	$^1S - ^1P^o$	0-1	R19
P IV	1006.22	40					
P IV	1025.56	160	2	3s3d - 3s4p	$^1D - ^1P^o$	2-1	R19
P IV	1028.09	40	2	3s3p - 3p ²	$^3P^o - ^3P$	1-2	M23,R19
P IV	1030.51	400	2	3s3p - 3p ²	$^3P^o - ^3P$	0-1	M23,R19
P IV	1033.10	320	2	3s3p - 3p ²	$^3P^o - ^3P$	2-2	M23,R19
				3s3p - 3p ²	$^3P^o - ^3P$	1-0	M23,R19
P IV	1035.50	320	2				
P IV	1064.60	120		3s3p - 3p ²	$^3P^o - ^3P$	2-1	M23,R19
P IV	1065.55	120		3s3d - 3p3d	$^3D - ^3D^o$	3-3	R19
P IV	1066.64	80		3s3d - 3p3d	$^3D - ^3D^o$	2-2	R19
P IV	1072.53	120		3s3d - 3p3d	$^3D - ^3D^o$	1-1	R19
				3s4s - 3s5p	$^3S - ^3P^o$	1-2	R19
P IV	1073.37	120					
P IV	1086.94	80		3s4s - 3s5p	$^3S - ^3P^o$	1-1	R19
P IV	1088.61	120		3s3d - 3p3d	$^3D - ^3P^o$	1-0	R19
P IV	1091.44	160		3s3d - 3p3d	$^3D - ^3P^o$	2-1	R19
P IV	1093.32	80		3s3d - 3p3d	$^3D - ^3P^o$	3-2	R19
				3s4s - 3p4s	$^3S - ^3P^o$	1-2	R19
P IV	1098.18	80					
P IV	1101.65	40		3s4s - 3p4s	$^3S - ^3P^o$	1-1	R19
P IV	1111.13	40		3s4s - 3p4s	$^3S - ^3P^o$	1-0	R19
P IV	1116.92	20		3s3p - 3s3d	$^3P^o - ^1D$	1-2	R19
P IV	1118.59	160		3s3p - 3s3d	$^3P^o - ^1D$	2-2	R19
				3s3p - 3p ²	$^1P^o - ^1S$	1-0	R19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P IV	1161.87	40		3s4s - 3s5p	$^1S - ^1P^{\circ}$	0 - 1	R19
P IV	1197.82	40		3s4p - 3s5d	$^1P^{\circ} - ^1D$	1 - 2	R19
P IV	1203.41	40		3s4p - 3s5d	$^3P^{\circ} - ^3D$	0 - 1	R19
P IV	1204.30	40		3s4p - 3s5d	$^3P^{\circ} - ^3D$	1 - 2	R19
P IV	1205.52	40d		3s4p - 3s5d	$^3P^{\circ} - ^3D$	2 - 3	R19
P IV	1264.48	40		3s4s - 3p4s	$^1S - ^1P^{\circ}$	0 - 1	R19
P IV	1467.59	40	P	3s ² - 3s3p	$^1S - ^3P^{\circ}$	0 - 1	R19
P IV	1484.51	240		3s3d - 3s4p	$^3D - ^3P^{\circ}$	3 - 2	R19
P IV	1487.80	160		3s3d - 3s4p	$^3D - ^3P^{\circ}$	2 - 1	R19
P IV	1489.10	160		3s3d - 3s4p	$^3D - ^3P^{\circ}$	1 - 0	R19
P IV	1589.02	P		3p ² - 3s4p	$^1S - ^1P^{\circ}$	0 - 1	K8
P IV	1612.53	P		3p ² - 3s4p	$^1S - ^3P^{\circ}$	0 - 1	K8
P IV	1640.58	120		3s3p - $^3P^{\circ}$	$^1P^{\circ} - ^1D$	1 - 2	R19
P IV	1673.76	20		3s3p - p ²	$^1P^{\circ} - ^3P$	1 - 0	R15
P IV	1691.81	40		3s4p - 3s5s	$^1P^{\circ} - ^1S$	1 - 0	R19
P IV	1888.65	400	5	3s3p - 3s3d	$^1P^{\circ} - ^1D$	1 - 2	M23, R19
P IV	1902.62	40		3s4p - 3s5s	$^3P^{\circ} - ^3S$	0 - 1	R19
P IV	1904.80	40		3s4p - 3s5s	$^3P^{\circ} - ^3S$	1 - 1	R19
P IV	1910.18	40		3s4p - 3s5s	$^3P^{\circ} - ^3S$	2 - 1	R19

PHOSPHORUS V (P⁴⁺), Z = 15
 Ground State 1s²2s²2p⁶3s $^2S_{1/2}$ (11 electrons)
 Ionization Potential 524 460 cm⁻¹; 65.023 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P V	210.00	10		3s - 8p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	217.22	20		3s - 7p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	229.83	200		3s - 6p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	255.60	500		3s - 5p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	255.69	500		3s - 5p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	264.94	300		3p - 7d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R19
P V	273.13	10		3p - 7s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R19
P V	280.61	150		3p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R19
P V	296.11	70		3p - 6s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R19
P V	310.58	200		3p - 5d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	311.35	250		3p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R19
P V	328.46	300		3s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	328.77	300		3s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	347.24	150		3p - 5s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	348.19	250		3p - 5s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R15
P V	389.50	200		3p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	390.70	550		3p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R19
P V	410.07	150h		3d - 6f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	R19
P V	475.61	550h		3d - 5f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	R19
P V	542.57	500		3p - 4s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	544.91	550		3p - 4s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R19
P V	673.89	650		3d - 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	R19
P V	865.44	1000		3p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	871.40	1000d		3p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R19
P V	997.64	200		3d - 4p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	R19
P V	1000.36	200		3d - 4p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	R19
P V	1117.98	1000		3s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	1128.01	650		3s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R19
P V	1385.11	20		4p - 5s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R19
P V	1447.92	150		4d - 5f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	R19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P V	1610.54	20		4f - 5g	$^3F^o - ^3G$	$\frac{3}{2} - \frac{3}{2}$	R19

PHOSPHORUS VI (P^{5+}), Z = 15Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)Ionization potential $1\ 777\ 900\ \text{cm}^{-1}$; 220.43 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P VI	57.93	P		$2p^6 - 2p^5(^3P^o)9d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	58.29	P		$2p^6 - 2p^5(^3P^o)8d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	58.73	P		$2p^6 - 2p^5(^3P^o)7d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	58.96	P		$2p^6 - 2p^5(^3P^o)7d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	59.78	P		$2p^6 - 2p^5(^3P^o)6d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	60.02	P		$2p^6 - 2p^5(^3P^o)6d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	60.57	P		$2p^6 - 2p^5(^3P^o)6s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	61.622	50		$2p^6 - 2p^5(^3P^o)5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	61.869	50		$2p^6 - 2p^5(^3P^o)5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	61.970	50		$2p^6 - 2p^5(^3P^o)5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	63.18	P		$2p^6 - 2p^5(^3P^o)5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	63.45	P		$2p^6 - 2p^5(^3P^o)5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	M22
P VI	65.308	150		$2p^6 - 2p^5(^3P^o)4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	65.640	350		$2p^6 - 2p^5(^3P^o)4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	65.940	350		$2p^6 - 2p^5(^3P^o)4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	69.121	50		$2p^6 - 2p^5(^3P^o)4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	74.951	400		$2p^6 - 2p^5(^3P^o)3d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	75.648	200		$2p^6 - 2p^5(^3P^o)3d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	76.534	50		$2p^6 - 2p^5(^3P^o)3d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	90.647	500		$2p^6 - 2p^5(^3P^o)3s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18
P VI	91.471	500		$2p^6 - 2p^5(^3P^o)3s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F18

PHOSPHORUS VII (P^{6+}), Z = 15Ground State $1s^2 2s^2 2p^5 \ ^2P^o_{3/2}$ (9 electrons)Ionization Potential $2\ 123\ 100\ \text{cm}^{-1}$; 263.22 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P VII	54.708	50		$2p^5 - 2p^4(^1D)4d$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	F18
P VII	54.887	100		$2p^5 - 2p^4(^1D)4d$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	F18
P VII	56.174	50		$2p^5 - 2p^4(^3P)4d$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	F18
P VII	56.282	10		$2p^5 - 2p^4(^3P)4d$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	56.322	120		$2p^5 - 2p^4(^3P)4d$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P VII	57.42	P		$2p^3 - 2p^3(^3P)4s$	$g^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M22
P VII	57.66	P		$2p^3 - 2p^3(^3P)4s$	$g^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M22
P VII	58.972	35		$2p^3 - 2p^3(^3P)4s$	$g^3P - ^3P$	$\frac{1}{2} - \frac{1}{2}$	F18
P VII	59.028	15		$2p^3 - 2p^3(^3P)4s$	$g^3P - ^3P$	$\frac{1}{2} - \frac{1}{2}$	F18
P VII	62.245	150		$2p^3 - 2p^3 3d$	$g^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	62.515	50		$2p^3 - 2p^3 3d$	$g^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	64.286	150		$2p^3 - 2p^3(^1D)3d$	$g^3P - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F18
P VII	64.361	250		$2p^3 - 2p^3(^1D)3d$	$g^3P - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F18
P VII	64.579	150		$2p^3 - 2p^3(^1D)3d$	$g^3P - ^3P$	$\frac{3}{2} - \frac{1}{2}$	F18
P VII	64.587	100		$2p^3 - 2p^3(^1D)3d$	$g^3P - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F18
P VII	64.635	200		$2p^3 - 2p^3(^1D)3d$	$g^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	66.17	P		$2p^3 - 2p^3(^3P)3d$	$g^3P - ^3P$	$\frac{3}{2} - \frac{3}{2}$	M22
P VII	66.432	150		$2p^3 - 2p^3(^3P)3d$	$g^3P - ^3P$	$\frac{3}{2} - \frac{1}{2}$	F18
P VII	66.488	50		$2p^3 - 2p^3(^3P)3d$	$g^3P - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	66.576	100		$2p^3 - 2p^3(^3P)3d$	$g^3P - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F18
P VII	66.691	150		$2p^3 - 2p^3(^3P)3d$	$g^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	66.75	P		$2p^3 - 2p^3(^3P)3d$	$g^3P - ^3P$	$\frac{1}{2} - \frac{1}{2}$	M22
P VII	67.989	50		$2s 2p^3 - 2s 2p^3(^3P) 3d$	$^3S - 4^{\circ}$	$\frac{1}{2} -$	F18
P VII	68.147	50		$2s 2p^3 - 2s 2p^3(^3P) 3d$	$^3S - 3^{\circ}$	$\frac{1}{2} -$	F18
P VII	72.684	100		$2p^3 - 2p^3$	$g^3P - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F18
P VII	73.070	100		$2p^3 - 2p^3 3s$	$g^3P - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F18
P VII	75.924	450		$2p^3 - 2p^3(^1D) 3s$	$g^3P - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F18
P VII	76.344	200		$2p^3 - 2p^3(^1D) 3s$	$g^3P - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	77.969	250		$2p^3 - 2p^3(^3P) 3s$	$g^3P - ^3P$	$\frac{3}{2} - \frac{1}{2}$	F18
P VII	78.285	400		$2p^3 - 2p^3(^3P) 3s$	$g^3P - ^3P$	$\frac{3}{2} - \frac{3}{2}$	F18
P VII	78.414	150		$2p^3 - 2p^3(^3P) 3s$	$g^3P - ^3P$	$\frac{1}{2} - \frac{1}{2}$	F18
P VII	78.734	250		$2p^3 - 2p^3(^3P) 3s$	$g^3P - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	80.567	50		$2s 2p^3 - 2s 2p^3(^3P) 3s$	$^3S - ^3P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	F18
P VII	80.813	100		$2s 2p^3 - 2s 2p^3(^3P) 3s$	$^3S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F18
P VII	219.91	450		$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F18
P VII	223.48	350		$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F18

PHOSPHORUS VIII (P^{7+}), $Z = 15$

Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)

Ionization Potential $2\ 495\ 600\ \text{cm}^{-1}$; $309.41\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P VIII	45.69	P		$2p^4 - 2p^3(^3D) 3s$	$^1D - ^1D^{\circ}$	2 - 2	M22
P VIII	48.86	P		$2p^4 - 2p^3(^4S) 4d$	$g^3P - ^3D^{\circ}$	2 - 3	M22
P VIII	49.47	P		$2p^4 - 2p^3(^3P) 4s$	$^1D - ^1P^{\circ}$	2 - 1	M22
P VIII	50.48	P		$2p^4 - 2p^3(^3D) 4s$	$^1D - ^1D^{\circ}$	2 - 2	M22
P VIII	50.95	P		$2p^4 - 2p^3(^3P) 4s$	$^1S - ^1P^{\circ}$	0 - 1	M22
P VIII	55.672	120		$2p^4 - 2p^3(^3P) 3d$	$g^3P - ^3D^{\circ}$	2 - 3	F18
P VIII	55.710	70		$2p^4 - 2p^3(^3P) 3d$	$g^3P - ^3D^{\circ}$	1 - 2	F18
P VIII	55.876	300		$2p^4 - 2p^3(^3P) 3d$	$g^3P - ^3P^{\circ}$	2 - 2	F18
P VIII	55.926	100		$2p^4 - 2p^3(^3P) 3d$	$g^3P - ^3P^{\circ}$	2 - 1	F18
P VIII	57.042	450		$2p^4 - 2p^3(^3D) 3d$	$g^3P - ^3D^{\circ}$	2 - 3	F18
P VIII	57.230	350		$2p^4 - 2p^3(^3D) 3d$	$g^3P - ^3D^{\circ}$	1 - 2	F18
P VIII	58.018	350		$2p^4 - 2p^3(^3D) 3d$	$^1D - ^1F^{\circ}$	2 - 3	F18
P VIII	58.506	150		$2p^4 - 2p^3(^3D) 3d$	$^1D - ^1D^{\circ}$	2 - 2	F18
P VIII	58.776	50		$2p^4 - 2p^3(^3D) 3d$	$^1D - ^1P^{\circ}$	2 - 1	F18
P VIII	59.302	350		$2p^4 - 2p^3(^4S) 3d$	$g^3P - ^3D^{\circ}$	2 - 3	F18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P VIII	59.516	250		$2p^4 - 2p^3(^4S^o) 3d$	$^4P - ^4D^o$	1-2	F18
P VIII	64.051	80		$2p^4 - 2p^3(^2P^o) 3s$	$^2P - ^2P^o$	2-2	F18
P VIII	64.190	20		$2p^4 - 2p^3(^2P^o) 3s$	$^2P - ^2P^o$	2-1	F18
P VIII	64.337	100		$2p^4 - 2p^3(^2P^o) 3s$	$^2P - ^2P^o$	1-1	F18
P VIII	64.361	300		$2p^4 - 2p^3(^2P^o) 3s$	$^2P - ^2P^o$	1-0	F18
P VIII	65.788	350		$2p^4 - 2p^3(^2D^o) 3s$	$^2P - ^2D^o$	2-3	F18
P VIII	66.051	350		$2p^4 - 2p^3(^2D^o) 3s$	$^2P - ^2D^o$	1-2	F18
P VIII	67.587	300		$2p^4 - 2p^3(^2D^o) 3s$	$^1D - ^1D^o$	2-2	F18
P VIII	68.384	200		$2p^4 - 2p^3(^4S^o) 3s$	$^2P - ^2S^o$	2-1	F18
P VIII	68.385	100		$2p^4 - 2p^3(^2P^o) 3s$	$^1S - ^1P^o$	0-1	F18
P VIII	68.654	100		$2p^4 - 2p^3(^4S^o) 3s$	$^2P - ^2S^o$	1-1	F18
P VIII	196.76	400		$2s^2 2p^4 - 2s 2p^4$	$^1D - ^1P^o$	2-1	F18
P VIII	244.55	100		$2s^2 2p^4 - 2s 2p^4$	$^2P - ^2P^o$	2-1	F18
P VIII	246.32	50		$2s^2 2p^4 - 2s 2p^4$	$^2P - ^2P^o$	1-0	F18
P VIII	247.64	250		$2s^2 2p^4 - 2s 2p^4$	$^2P - ^2P^o$	2-2	F18
P VIII	248.04	150		$2s^2 2p^4 - 2s 2p^4$	$^2P - ^2F^o$	1-1	F18
P VIII	249.32	100		$2s^2 2p^4 - 2s 2p^4$	$^2P - ^2P^o$	0-1	F18
P VIII	251.23	150		$2s^2 2p^4 - 2s 2p^4$	$^2P - ^2P^o$	1-2	F18

PHOSPHORUS IX (P^{8+}), $Z = 15$
 Ground State $1s^2 2s^2 2p^3 \ ^4S^o_{3/2}$ (7 electrons)
 Ionization Potential $2\ 998\ 300\ \text{cm}^{-1}$; $371.73\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P IX	41.556	150		$2p^2 - 2p^1(^1D) 4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	48.925	350		$2s^2 2p^4 - 2s 2p^3(^4S^o) 3p$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	50.511	200		$2p^2 - 2p^1(^2P) 3d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	50.560	300		$2p^2 - 2p^1(^2P) 3d$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	50.626	100		$2p^2 - 2p^1(^2P) 3d$	$^4S^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	51.156	450		$2p^2 - 2p^1(^1D) 3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	51.861	300		$2p^2 - 2p^1(^2P) 3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	51.889	100		$2p^2 - 2p^1(^2P) 3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	52.160	300		$2p^2 - 2p^1(^1D) 3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	52.552	150		$2p^2 - 2p^1(^2P) 3d$	$^2L^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	52.709	150		$2p^2 - 2p^1(^2P) 3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	52.980	250		$2p^2 - 2p^1(^2P) 3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	54.124	150		$2p^2 - 2p^1(^2P) 3d$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	55.066	100		$2s 2p^4 - 2s 2p^3(^4S^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	55.220	100		$2s 2p^4 - 2s 2p^3(^4S^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	55.299	50		$2s 2p^4 - 2s 2p^3(^4S^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	F18
P IX	57.083	450		$2p^2 - 2p^1(^2P) 3s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	57.266	350		$2p^2 - 2p^1(^2P) 3s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	57.339	150		$2p^2 - 2p^1(^2P) 3s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F18
P IX	57.683	100		$2p^2 - 2p^1(^1D) 3s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	57.711	50		$2p^2 - 2p^1(^1D) 3s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	61.065	50		$2p^2 - 2p^1(^2P) 3s$	$^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	61.270	50		$2p^2 - 2p^1(^2P) 3s$	$^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	61.320	50		$2s 2p^4 - 2s 2p^3(^2D^o) 3s$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	194.61	300		$2s^2 2p^4 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F18
P IX	197.25	400		$2s^2 2p^4 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	228.25	P		$2s^2 2p^4 - 2s 2p^4$	$^2P - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M22
P IX	234.94	P		$2s 2p^4 - 2p^4$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M22
P IX	250.05	P		$2s^2 2p^4 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M22
P IX	250.37	150		$2s^2 2p^4 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P IX	250.73	200		$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F18
P IX	285.36			$2s^2 2p^3 - 2s 2p^4$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M22
P IX	289.53			$2s^2 2p^3 - 2s 2p^4$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M22

PHOSPHORUS X (P^{9+}), $Z = 15$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential $3\ 423\ 900\ \text{cm}^{-1}$; $424.50\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P X	35.75	50b		$2p^2 - 2p 4d$	$g^3P - ^3D^o$	2 - 3	F18
P X	44.364	250		$2s^2 2p^3 - 2s 2p^2(^4P)3p$	$g^3P - ^3D^o$	2 - 3	F18
P X	55.905	75		$2s 2p^3 - 2s 2p^2(^4P)3d$	$^3S^o - ^3P$	2 - 1	F18
P X	45.931	125		$2s 2p^3 - 2s 2p^2(^4P)3d$	$^3S^o - ^3P$	2 - 2	F18
P X	45.963	200		$2s 2p^3 - 2s 2p^2(^4P)3d$	$^3S^o - ^3P$	2 - 3	F18
P X	46.294	450		$2p^2 - 2p 3d$	$g^3P - ^3D^o$	1 - 2	F18
P X	46.334	450		$2p^2 - 2p 3d$	$g^3P - ^3D^o$	2 - 3	F18
P X	46.636	300		$2s 2p^3 - 2s 2p^2(^2D)3d$	$^3D^o - ^3F$	3 - 4	F18
P X	46.769	350		$2p^2 - 2p 3d$	$^1D - ^1F^o$	2 - 3	F18
P X	47.702	100		$2s 2p^3 - 2s 2p^2(^2D)3d$	$^3P^o - ^3D$	2 - 3	F18
P X	47.896	50		$^1P - 2p 3d$	$^1D - ^1D^o$	2 - 2	F18
P X	49.765	50		$2s \ ^3P - 2s 2p^2(^4P)3d$	$^3P^o - ^3D$	2 - 3	F18
P X	49.803	25		$2s \ ^3P - 2s 2p^2(^4P)3d$	$^3P^o - ^3D$	1 - 2	F18
P X	49.865	15		$2s \ ^3P - 2s 2p^2(^4P)3d$	$^3P^o - ^3D$	0 - 1	F18
P X	51.155	450		$2p^2 - 2p 3s$	$g^3P - ^3P^o$	2 - 2	F18
P X	52.158	250		$2p^2 - 2p 3s$	$^1D - ^1P^o$	2 - 1	F18
P X	52.594	200		$2s 2p^3 - 2s 2p^2(^2D)3s$	$^3P^o - ^3D$	2 - 3	F18
P X	56.597	150		$2s 2p^3 - 2s 2p^2(^1D)3s$	$^1P^o - ^1D$	1 - 2	F18
P X	203.87			$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3S^o$	0 - 1	F16
P X	205.38	50		$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3S^o$	1 - 1	F18
P X	207.35			$2s^2 2p^3 - 2s 2p^3$	$^1D - ^1P^o$	2 - 1	F16
P X	207.67	200		$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3S^o$	2 - 1	F18
P X	235.27	400		$2s^2 2p^3 - 2s 2p^3$	$^1D - ^1D^o$	2 - 2	F18
P X	236.95			$2s^2 2p^3 - 2s 2p^3$	$^1S - ^1P^o$	0 - 1	F1
P X	238.53			$2s 2p^3 - 2p^4$	$^3D^o - ^3F$	3 - 2	F16
P X	263.22			$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3P^o$	0 - 1	F1
P X	265.62			$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3P^o$	1 - 2	F1
P X	265.79			$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3P^o$	1 - 0	F1
P X	269.48			$2s^2 2p^3 - 2s 2p^3$	$g^3F - ^3P^o$	2 - 2	F3
P X	309.44			$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3D^o$	0 - 1	F3
P X	312.87			$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3D^o$	1 - 2	F3
P X	318.29			$2s^2 2p^3 - 2s 2p^3$	$g^3P - ^3D^o$	2 - 3	F3

PHOSPHORUS XI (P^{10+}), $Z = 15$
 Ground State $1s^2 2s^2 2p^2 P_{1/2}^o$ (5 electrons)
 Ionization Potential $3\ 868\ 100\ \text{cm}^{-1}$; $479.57\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P XI	30.34	150		2p - 5d	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	33.01	200		$2s\ 2p^2 - 2s\ 2p(^2P^o)4d$	$^4 P - ^4 D^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	33.23	100		2p - 4d	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	34.35	150		$2s\ 2p^2 - 2s\ 2p(^2P^o)4d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	42.606	150		$2s\ 2p^2 - 2s\ 2p(^1P^o)3d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	42.468	100		$2s\ 2p^2 - 2s\ 2p(^2P^o)3d$	$^4 P - ^4 L$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	42.479	150		$2s\ 2p^2 - 2s\ 2p(^2P^o)3d$	$^4 P - ^4 D^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	42.599	150		2p - 3d	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F18
P XI	42.764	200		2p - 3d	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	43.488	50		$2p^2 - 2p^2(^2P)3d$	$^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	43.529	70		$2p^2 - 2p^2(^2P)3d$	$^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	43.806	100		$2s\ 2p^2 - 2s\ 2p(^1P^o)3d$	$^2 P - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	44.115	300		$2s\ 2p^2 - 2s\ 2p(^2P^o)3d$	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	44.987	100		$2s\ 2p^2 - 2s\ 2p(^2P^o)3d$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	45.997	400		2p - 3s	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	F18
P XI	46.203	450		2p - 3s	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	F18
P XI	231.67	100		$2s^2 2p - 2s\ 2p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	F18
P XI	234.84	400		$2s^2 2p - 2s\ 2p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$	F18
P XI	237.00	400		$2s^2 2p - 2s\ 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F18
P XI	240.31	100		$2s^2 2p - 2s\ 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$	F18
P XI	247.94			$2s^2 2p - 2s\ 2p^2$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	F3
P XI	253.90			$2s\ 2p^2 - 2p^2$	$^2 D - ^2 P^o$	$\frac{3}{2} - \frac{3}{2}$	F1
P XI	254.05			$2s^2 2p - 2s\ 2p^2$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	F3
P XI	254.54			$2s\ 2p^2 - 2p^2$	$^2 D - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$	F1
P XI	261.92			$2s\ 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{1}{2} - \frac{3}{2}$	F1
P XI	264.41			$2s\ 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{3}{2}$	F3
P XI	268.02			$2s\ 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{3}{2}$	F3
P XI	315.64			$2s^2 2p - 2s\ 2p^2$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F3
P XI	317.24			$2s\ 2p^2 - 2p^2$	$^2 D - ^2 D^o$	$\frac{3}{2} - \frac{3}{2}$	F3
P XI	325.31			$2s\ 2p^2 - 2p^2$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$	F1
P XI	325.52			$2s^2 2p - 2s\ 2p^2$	$g^2 P^o - ^2 L$	$\frac{3}{2} - \frac{3}{2}$	F3
P XI	326.45			$2s\ 2p^2 - 2p^2$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{1}{2}$	F1
P XI	352.26			$2s\ 2p^2 - 2p^2$	$^2 P - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$	F1
P XI	353.59			$2s\ 2p^2 - 2p^2$	$^2 P - ^2 P^o$	$\frac{1}{2} - \frac{1}{2}$	F1
P XI	358.94			$2s\ 2p^2 - 2p^2$	$^2 P - ^2 P^o$	$\frac{3}{2} - \frac{3}{2}$	F3
P XI	360.36			$2s\ 2p^2 - 2p^2$	$^2 P - ^2 P^o$	$\frac{3}{2} - \frac{1}{2}$	F1
P XI	487.63			$2s\ 2p^2 - 2p^2$	$^2 S - ^2 D^o$	$\frac{1}{2} - \frac{3}{2}$	F3

PHOSPHORUS XII (P^{11+}), $Z = 15$
 Ground State $1s^2 2s^2\ ^1S_0$ (4 electrons)
 Ionization Potential $4\ 520\ 100\ \text{cm}^{-1}$; $560.41\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P XII	25.788	0		$2s^2 - 2s\ 5p$	$g^1 S - ^1 F^o$	0 - 1	G18
P XII	27.049	10		$2s\ 2p - 2s\ 5d$	$^3 P^o - ^2 D$	1 - 2	G18
P XII	27.101	10		$2s\ 2p - 2s\ 5d$	$^3 P^o - ^2 D$	2 - 3	G18
P XII	27.677	0		$2p^2 - 2p\ 5d$	$^2 P - ^2 D^o$	2 - 3	G18
P XII	28.017	10		$2p^2 - 2p\ 5d$	$^1 D - ^1 F^o$	2 - 3	G18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P XII	28.304	30		2s2p - 2p4p	$^3P^{\circ} - ^3P$	2-2	G18
P XII	28.549	10		2s ² - 2s4p	$g^1S - ^1P^{\circ}$	0-1	G18
P XII	29.622	10		2s2p - 2p4p	$^1P^{\circ} - ^1D$	1-2	G18
P XII	29.973	1 ^c		2s2p - 2s4d	$^3P^{\circ} - ^3D$	0-1	G18
P XII	29.996	4 ^c		2s2p - 2s4d	$^3P^{\circ} - ^3D$	1-2	G18
P XII	30.060	60		2s2p - 2s4d	$^3P^{\circ} - ^3D$	2-3	G18
P XII	30.667	0		2p ² - 2p4d	$^3P^{\circ} - ^3P^{\circ}$	1-2	G18
P XII	50.722	40		2p ² - 2p4d	$^3P^{\circ} - ^3P^{\circ}$	2-2	G18
P XII	30.749	40		2p ² - 2p4d	$^3P^{\circ} - ^3D^{\circ}$	2-3	G18
P XII	31.090	40		2p ² - 2p4d	$^1D - ^1F^{\circ}$	2-3	G18
P XII	31.327	10		2p ² - 2p4d	$^1D - ^1D^{\circ}$	2-2	G18
P XII	31.527	30		2s2p - 2s4d	$^1P^{\circ} - ^1D$	1-2	G18
P XII	32.304	0		2p ² - 2p4d	$^1S - ^1P^{\circ}$	0-1	G18
P XII	36.520	30		2s2p - 2p3p	$^3P^{\circ} - ^3P$	1-2	G18
P XII	36.562	50		2s2p - 2p3p	$^3P^{\circ} - ^3P$	1-1	G12
P XII	36.613	80		2s2p - 2p3p	$^3P^{\circ} - ^3P$	2-2	G18
P XII	36.655	60		2s2p - 2p3p	$^3P^{\circ} - ^3P$	2-1	G18
P XII	36.697	40		2s2p - 2p3p	$^3P^{\circ} - ^3S$	1-1	G18
P XII	36.792	70		2s2p - 2p3p	$^3P^{\circ} - ^3S$	2-1	G18
P XII	36.975	100		2s2p - 2p3p	$^3P^{\circ} - ^3D$	2-3	G18
P XII	37.041	10		2s2p - 2p3p	$^3P^{\circ} - ^3D$	1-1	G18
P XII	37.074	10		2s2p - 2p3p	$^3P^{\circ} - ^3D$	2-2	G18
P XII	37.347	150		2s ² - 2s3p	$g^1S - ^1P^{\circ}$	0-1	G18
P XII	38.629	90		2s2p - 2p3p	$^1P^{\circ} - ^1D$	1-2	G18
P XII	39.310	120		2s2p - 2s3d	$^3P^{\circ} - ^3D$	0-1	G18
P XII	39.354	300		2s2p - 2s3d	$^3P^{\circ} - ^3D$	1-2	G18
P XII	39.456	500		2s2p - 2s3d	$^3P^{\circ} - ^3D$	2-3	G18
P XII	39.664	40		2s2p - 2p3p	$^1P^{\circ} - ^1P$	1-1	G18
P XII	40.171	10		2p ² - 2p3d	$^3P^{\circ} - ^3P^{\circ}$	1-1	G18
P XII	40.171	30		2p ² - 2p3d	$^3P^{\circ} - ^3P^{\circ}$	1-2	G18
P XII	40.301	200		2p ² - 2p3d	$^3P^{\circ} - ^3P^{\circ}$	2-2	G18
P XII	40.348	50		2p ² - 2p3d	$^3P^{\circ} - ^3D^{\circ}$	0-1	G18
P XII	40.388	120		2p ² - 2p3d	$^3P^{\circ} - ^3D^{\circ}$	1-2	G18
P XII	40.429	150		2p ² - 2p3d	$^3P^{\circ} - ^3D^{\circ}$	2-3	G18
P XII	40.478	20		2p ² - 2p3d	$^1D - ^1P^{\circ}$	2-1	G18
P XII	40.613	120		2p ² - 2p3d	$^1D - ^1F^{\circ}$	2-3	G18
P XII	41.471	50		2s2p - 2s3s	$^3P^{\circ} - ^3S$	0-1	G18
P XII	41.518	60		2s2p - 2s3s	$^3P^{\circ} - ^3S$	1-1	G18
P XII	41.634	120		2s2p - 2s3s	$^3P^{\circ} - ^3S$	2-1	G18
P XII	41.700	70		2p ² - 2p3d	$^1D - ^1D^{\circ}$	2-2	G18
P XII	42.553	20		2p ² - 2p3s	$^3P^{\circ} - ^3P^{\circ}$	1-2	G18
P XII	42.647	40		2p ² - 2p3s	$^3P^{\circ} - ^3P^{\circ}$	2-2	G18
P XII	42.679	20		2p ² - 2p3s	$^3P^{\circ} - ^3P^{\circ}$	1-1	G18
P XII	42.763	140		2p ² - 2p3s	$^1D - ^1P^{\circ}$	2-1	G18
P XII	42.779	20		2p ² - 2p3s	$^3F - ^3P^{\circ}$	2-1	G18
P XII	44.044	10		2s2p - 2s3s	$^1P^{\circ} - ^1S$	1-0	G18
P XII	278.30			2s ² - 2s2p	$g^1S - ^1P^{\circ}$	0-1	F3
P XII	327.0			2s2p - 2p ²	$^1P^{\circ} - ^1S$	1-0	K8
P XII	327.27			2s2p - 2p ²	$^3P^{\circ} - ^3P$	1-2	F3
P XII	330.29			2s2p - 2p ²	$^3P^{\circ} - ^3P$	0-1	F3
P XII	333.88			2s2p - 2p ²	$^3P^{\circ} - ^3P$	1-1	F3
P XII	335.07			2s2p - 2p ²	$^3P^{\circ} - ^3P$	2-2	F3
P XII	338.41			2s2p - 2p ²	$^3P^{\circ} - ^3P$	1-0	F3
P XII	342.06			2s2p - 2p ²	$^3P^{\circ} - ^3P$	2-1	F3
P XII	548.38			2s2p - 2p ²	$^1P^{\circ} - ^1D$	1-2	F3

PHOSPHORUS XIII (P^{12+}), $Z = 15$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential $4\ 935\ 000\ \text{cm}^{-1}$; $611.85\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P XIII	22.64	50		2p - 8d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18
P XIII	23.08	56		2p - 7d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F18
P XIII	23.810	10		2p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	G18
P XIII	25.103	20		2p - 5d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G18
P XIII	25.169	20		2p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	G18
P XIII	26.608	10		2s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G18
P XIII	28.044	50		2p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G18
P XIII	28.128	70		2p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	G18
P XIII	28.66	10		2p - 4s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F18
P XIII	35.095	150		2s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G18
P XIII	35.136	100		2s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	G18
P XIII	37.561	150		2p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G18
P XIII	37.706	200		2p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	G18
P XIII	37.723	20		2p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	G18
P XIII	38.754	30		2p - 3s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	G18
P XIII	38.921	50		2p - 3s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	G18
P XIII	455.78			2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F3
P XIII	480.42			2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	F3

PHOSPHORUS XIV (P^{13+}), $Z = 15$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $22\ 720\ 766\ \text{cm}^{-1}$; $2816.943\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
P XIV	4.58	P		$1s^2 - 1s5p$	$g^1S - ^1P^{\circ}$	0 - 1	K8
P XIV	4.68	P		$1s^2 - 1s4p$	$g^1S - ^1P^{\circ}$	0 - 1	K8
P XIV	4.92	P		$1s^2 - 1s3p$	$g^1S - ^1P^{\circ}$	0 - 1	K8
P XIV	5.76	P		$1s^2 - 1s2p$	$g^1S - ^1P^{\circ}$	0 - 1	K8
P XIV	5.79	P		$1s^2 - 1s2p$	$g^1S - ^1P^{\circ}$	0 - 1	K8
P XIV	5.84	?	f	$1s^2 - 1s2s$	$g^1S - ^2S$	0 - 1	K8

PHOSPHORUS XV (P^{14+}), $Z = 15$
 Ground State $1s^2S_{1/2}$ (1 electron)
 Ionization Potential $24\ 759\ 943\ \text{cm}^{-1}$; $3069.76\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J i	References
P XV	4.154	P		$1s-6p$	g^2S-2p^0	$1/2 - 3/2$	G2
P XV	4.207	P		$1s-5p$	g^2S-2p^0	$1/2 - 3/2$	G2
P XV	4.308	P		$1s-4p$	g^2S-2p^0	$1/2 - 3/2$	G2, K8
P XV	4.543	P		$1s-3p$	g^2S-2p^0	$1/2 - 3/2$	G2, K8
P XV	5.383	P		$1s-2p$	g^2S-2p^0	$1/2 - 3/2$	G2, K8
P XV	17.60	P					
P XV	18.18	P		2-7			G ⁺
P XV	19.24	P		2-6			G2
P XV	21.54	P		2-5			G2
P XV	25.07	P		2-4			G2
P XV				2-3			G2
P XV	44.59	P					
P XV	48.53	P		3-7			G2
P XV	56.87	P		3-6			G2
P XV	83.2	P		3-5			G2
P XV	96.13	P		3-4			G2
P XV				4-7			G2
P XV	116.5	P					
P XV	179.8	P		4-6			G2
P XV	206.6	P		4-5			G2
P XV	331.1	P		5-7			G2
P XV	549.3	P		5-6			G2
P XV				6-7			G2

SULFUR I (S⁰⁺), Z = 16
Ground State 1s²2s²2p⁶3s²3p⁴ ³P₂ (16 electrons)
Ionization Potential 83 558.0 cm⁻¹; 10.360 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S I	1214.295	1		3p ⁴ - 3p ³ (⁴ S°)10d	g ³ P - ³ D°	2-2	K2
S I	1214.318	7		3p ⁴ - 3p ³ (⁴ S°)10d	g ³ P - ³ D°	2-3	K2
S I	1218.571	2		3p ⁴ - 3p ³ (⁴ S°)9d	g ³ P - ³ D°	2-2	K2
S I	1218.595	19		3p ⁴ - 3p ³ (⁴ S°)9d	g ³ P - ³ D°	2-3	K2
S I	1220.162	5		3p ⁴ - 3p ³ (⁴ S°)10d	g ³ P - ³ D°	1-2	K2
S I	1221.753	6		3p ⁴ - 3p ³ (⁴ S°)10s	g ³ P - ³ S°	2-1	K2
S I	1222.797	1		3p ⁴ - 3p ³ (⁴ S°)10d	g ³ P - ³ D°	0-1	K2
S I	1224.424	1		3p ⁴ - 3p ³ (⁴ S°)9d	g ³ P - ³ D°	1-1	K2
S I	1224.479	7		3p ⁴ - 3p ³ (⁴ S°)9d	g ³ P - ³ D°	1-2	K2
S I	1224.544	7		3p ⁴ - 3p ³ (⁴ S°)8d	g ³ P - ³ D°	2-3	K2
S I	1227.069	4		3p ⁴ - 3p ³ (⁴ S°)9d	g ³ P - ³ D°	0-1	K2
S I	1227.692	5		3p ⁴ - 3p ³ (⁴ S°)10s	g ³ P - ³ S°	1-1	K2
S I	1229.608	10		3p ⁴ - 3p ³ (⁴ S°)9s	g ³ P - ³ S°	2-1	K2
S I	1230.374	2		3p ⁴ - 3p ³ (⁴ S°)10s	g ³ P - ³ S°	0-1	K2
S I	1230.473	4		3p ⁴ - 3p ³ (⁴ S°)8d	g ³ P - ³ D°	1-2	K2
S I	1233.132	1		3p ⁴ - 3p ³ (⁴ S°)8d	g ³ P - ³ D°	0-1	K2
S I	1233.922	3		3s ² 3p ⁴ - 3s 3p ⁵	g ³ P ¹ P°	1-1	K2
S I	1235.624	7		3p ⁴ - 3p ³ (⁴ S°)9s	g ³ P - ³ S°	1-1	K2
S I	1236.632	4		3s ² 3p ⁴ - 3s 3p ⁵	g ³ P - ¹ P°	0-1	K2
S I	1238.340	5		3p ⁴ - 3p ³ (⁴ S°)9s	g ³ P - ³ S°	0-1	K2
S I	1241.905	30		3p ⁴ - 3p ³ (⁴ S°)8s	g ³ P - ³ S°	2-1	K2
S I	1247.160	45		3p ⁴ - 3p ³ (⁴ S°)6d	g ³ P - ³ D°	2-3	K2
S I	1248.045	22		3p ⁴ - 3p ³ (⁴ S°)8s	g ³ P - ³ S°	1-1	K2
S I	1250.814	12		3p ⁴ - 3p ³ (⁴ S°)8s	g ³ P - ³ S°	0-1	K2
S I	1253.297	20		3p ⁴ - 3p ³ (⁴ S°)6d	g ³ P - ³ D°	1-1	K2
S I	1253.325	40		3p ⁴ - 3p ³ (⁴ S°)6d	g ³ P - ³ D°	1-2	K2
S I	1256.093	22		3p ⁴ - 3p ³ (⁴ S°)6d	g ³ P - ³ D°	0-1	K2
S I	1262.8596	70		3p ⁴ - 3p ³ (⁴ S°)7s	g ³ P - ³ S°	2-1	K2
S I	1269.2086	50		3p ⁴ - 3p ³ (⁴ S°)7s	g ³ P - ³ S°	1-1	K2
S I	1270.7821	100		3p ⁴ - 3p ³ (⁴ S°)5d	g ³ P - ³ D°	2-3	K2
S I	1272.0749	30		3p ⁴ - 3p ³ (⁴ S°)7s	g ³ P - ³ S°	0-1	K2
S I	1277.199	40		3p ⁴ - 3p ³ (⁴ S°)5d	g ³ P - ³ D°	1-1	K2
S I	1277.216	90		3p ⁴ - 3p ³ (⁴ S°)5d	g ³ P - ³ D°	1-2	K2
S I	1280.0991	50		3p ⁴ - 3p ³ (⁴ S°)5d	g ³ P - ³ D°	0-1	K2
S I	1295.6526	110	9	3p ⁴ - 3p ³ (³ P°)4s	g ³ P - ³ P°	2-2	K2
S I	1296.1738	70	9	3p ⁴ - 3p ³ (³ P°)4s	g ³ P - ³ P°	2-1	K2
S I	1302.3370	100	9	3p ⁴ - 3p ³ (³ P°)4s	g ³ P - ³ P°	1-2	K2
S I	1302.8633	80	9	3p ⁴ - 3p ³ (³ P°)4s	g ³ P - ³ P°	1-1	K2
S I	1303.1105	80	9	3p ⁴ - 3p ³ (³ P°)4s	g ³ P - ³ P°	1-0	K2
S I	1303.4295	85	9	3p ⁴ - 3p ³ (³ P°)6s	g ³ P - ³ S°	2-1	K2
S I	1305.8834	55	9	3p ⁴ - 3p ³ (³ P°)4s	g ³ P - ³ P°	0-1	K2
S I	1310.1940	100		3p ⁴ - 3p ³ (⁴ S°)6s	g ³ P - ³ S°	1-1	K2
S I	1313.2493	60		3p ⁴ - 3p ³ (⁴ S°)6s	g ³ P - ³ S°	0-1	K2
S I	1316.5423	160	8	3p ⁴ - 3p ³ (⁴ S°)4d	g ³ P - ³ D°	2-3	K2
S I	1316.6183	120	8	3p ⁴ - 3p ³ (⁴ S°)4d	g ³ P - ³ D°	2-2	K2
S I	1323.5153	180	8	3p ⁴ - 3p ³ (⁴ S°)4d	g ³ P - ³ D°	1-2	K2
S I	1323.5220	45	8	3p ⁴ - 3p ³ (⁴ S°)4d	g ³ P - ³ D°	1-1	K2
S I	1326.6432	160	8	3p ⁴ - 3p ³ (⁴ S°)4d	g ³ P - ³ D°	0-1	K2
S I	1333.792	2		3p ⁴ - 3p ³ (⁴ S°)4d	g ³ P - ³ D°	2-3	K2
S I	1381.5521	650	7	3s ² 3p ⁴ - 3s 3p ⁵	g ³ P - ³ P°	2-1	K2
S I	1385.041	1		3s ² 3p ⁴ - 3s 3p ⁵	¹ D - ¹ P°	2-1	K2
S I	1385.5100	550	7	3s ² 3p ⁴ - 3s 3p ⁵	g ³ P - ³ P°	1-0	K2
S I	1388.4347	950	7	3s ² 3p ⁴ - 3s 3p ⁵	g ³ P - ³ P°	2-2	K2
S I	1389.1538	450	7	3s ² 3p ⁴ - 3s 3p ⁵	g ³ P - ³ P°	1-1	K2
S I	1392.5878	650	7	3s ² 3p ⁴ - 3s 3p ⁵	g ³ P - ³ P°	0-1	K2
S I	1396.1122	1000	7	3s ² 3p ⁴ - 3s 3p ⁵	g ³ P - ³ P°	1-2	K2
S I	1401.5136	100	6	3p ⁴ - 3p ³ (⁴ S°)5s	g ³ P - ³ S°	2-1	K2
S I	1409.3369	125	6	3p ⁴ - 3p ³ (⁴ S°)5s	g ³ P - ³ S°	1-1	K2
S I	1412.8726	100	6	3p ⁴ - 3p ³ (⁴ S°)5s	g ³ P - ³ S°	0-1	K2
S I	1414.365	2		3p ⁴ - 3p ³ (⁴ S°)5s	g ³ P - ³ S°	2-2	K2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S I	1425.0301	300	5	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	2-3	K2
S I	1425.1882	90	5	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	2-2	K2
S I	1425.2190	65	5	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	2-1	K2
S I	1433.2800	225	5	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	1-2	K2
S I	1433.3105	100	5	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	1-1	K2
S I	1436.9675	125	5	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	0-1	K2
S I	1444.2967	30		$3p^4 - 3p^3(^2D^o)4s$	$g^2P - ^1D^o$	2-2	K2
S I	1448.2290	125	12	$3p^4 - 3p^3(^2P^o)4s$	$^1D - ^1P^o$	2-1	K2
S I	1471.832	25	12	$3p^4 - 3p^3(^2P^o)4s$	$^1D - ^2P^o$	2-2	K2
S I	1472.503	4	12	$3p^4 - 3p^3(^2P^o)4s$	$^1D - ^2P^o$	2-1	K2
S I	1472.972	225	4	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	2-3	K2
S I	1473.019	120	4	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	2-2	K2
S I	1473.995	350	3	$3p^4 - 3p^3(^2D^o)4s$	$g^2P - ^2D^o$	2-3	K2
S I	1474.380	125	3	$3p^4 - 3p^3(^2D^o)4s$	$g^2P - ^2D^o$	2-2	K2
S I	1474.572	60	3	$3p^4 - 3p^3(^2D^o)4s$	$g^2P - ^2D^o$	2-1	K2
S I	1481.665	170	4	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	1-2	K2
S I	1481.712	100	4	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	1-1	K2
S I	1483.039	280	3	$3p^4 - 3p^3(^2D^o)4s$	$g^2P - ^2D^o$	1-2	K2
S I	1483.233	125	3	$3p^4 - 3p^3(^2D^o)4s$	$g^2P - ^2D^o$	1-1	K2
S I	1485.622	150	4	$3p^4 - 3p^3(^4S^o)3d$	$g^2P - ^2D^o$	0-1	K2
S I	1487.150	200	3	$3p^4 - 3p^3(^2D^o)4s$	$g^2P - ^2D^o$	0-1	K2
S I	1498.850	2		$3p^4 - 3p^3(^4S^o)4d$	$^1D - ^2D^o$	2-3	K2
S I	1498.942	1		$3p^4 - 3p^3(^4S^o)4d$	$^1D - ^2D^o$	2-2	K2
S I	1583.683	1		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^2P^o$	2-1	K2
S I	1592.736	4		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^2P^o$	2-2	K2
S I	1641.085	7		$3p^4 - 3p^3(^4S^o)3d$	$^1D - ^2D^o$	2-3	K2
S I	1641.296	10		$3p^4 - 3p^3(^4S^o)3d$	$^1D - ^2D^o$	2-2	K2
S I	1666.6875	500	11	$3p^4 - 3p^3(^2D^o)4s$	$^1D - ^1D^o$	2-2	K2
S I	1687.5305	45C		$3s^2 3p^4 - 3s 3p^5$	$^1S - ^1P^o$	0-1	K2
S I	1704.986	5		$3p^4 - 3p^3(^4S^o)3d$	$^1D - ^2D^o$	2-3	K2
S I	1705.115	3		$3p^4 - 3p^3(^4S^o)3d$	$^1D - ^2D^o$	2-1	K2
S I	1706.360	10	10	$3p^4 - 3p^3(^2D^o)4s$	$^1D - ^2D^o$	2-3	K2
S I	1707.132	8	10	$3p^4 - 3p^3(^2D^o)4s$	$^1D - ^2D^o$	2-1	K2
S I	1782.2626	50	13	$3p^4 - 3p^3(^2P^o)4s$	$^1S - ^1P^o$	0-1	K2
S I	1807.3108	550	2	$3p^4 - 3p^3(^4S^o)4s$	$g^2P - ^2S^o$	2-1	K2
S I	1820.3426	500	2	$3p^4 - 3p^3(^4S^o)4s$	$g^2P - ^2S^o$	1-1	K2
S I	1826.2451	450	2	$3p^4 - 3p^3(^4S^o)4s$	$g^2P - ^2S^o$	0-1	K2
S I	1900.2863	550	1	$3p^4 - 3p^3(^4S^o)4s$	$g^2P - ^2S^o$	2-2	K2
S I	1914.6982	350	1	$3p^4 - 3p^3(^4S^o)4s$	$g^2P - ^2S^o$	1-2	K2
S I	1991.9369	8		$3s^2 3p^4 - 3s 3p^5$	$^1S - ^2P^o$	0-1	K2

SULFUR II (S^{1+}), $Z = 16$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential $188\ 200\ \text{cm}^{-1}$; 23.33 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S II	640.41	50		$3p^3 - 3p^2(^2P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	I5
S II	640.93	50		$3p^3 - 3p^2(^2P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	I5
S II	641.81	100		$3p^3 - 3p^2(^2P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	I5
S II	694.71	50		$3p^3 - 3p^2(^2P)4d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	I5
S II	705.62	50		$3p^3 - 3p^2(^2P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{7}{2}$	I5
S II	707.86	50		$3p^3 - 3p^2(^2P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	I5
S II	798.92	50		$3p^3 -$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	I5
S II	799.14	50		$3p^3 -$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	I5
S II	800.04	50		$3p^3 -$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	I5
S II	843.82	200		$3p^3 -$	$^2D^o - 1$	$\frac{3}{2} - \frac{1}{2}$	I5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S II	865.87	50		$3p^2$	3P	$\frac{1}{2} - \frac{3}{2}$	I5
S II	866.23	100		$3p^2$	3P	$\frac{1}{2} - \frac{3}{2}$	I5
S II	867.15	100		$3p^2$	3P	$\frac{1}{2} - \frac{3}{2}$	I5
S II	867.50	100		$3p^2$	3P	$\frac{1}{2} - \frac{3}{2}$	I5
S II	906.87	300	2	$3p^2 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	910.49	300	2	$3p^2 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	912.74	300	2	$3p^2 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	918.82	300		$3p^2$	$^3P^{\circ} - I$	$\frac{1}{2} - \frac{3}{2}$	I5
S II	919.24	100		$3p^2$	$^3P^{\circ} - I$	$\frac{1}{2} - \frac{3}{2}$	I5
S II	937.41	300	6	$3p^2 - 3p^2(^1D)4s$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	937.69	300	6	$3p^2 - 3p^2(^1D)4s$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	957.88	100		$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{5}{2}$	I5
S II	968.37	50		$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{5}{2}$	I5
S II	996.00	200	5	$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1000.48	200	5	$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1000.75	65	5	$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^3F$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1006.15	270		$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1006.95	35		$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1014.09	50	4	$3p^2 - 3p^2(^2P)4s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{5}{2}$	I5
S II	1014.42	200	4	$3p^2 - 3p^2(^2P)4s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1019.53	200	4	$3p^2 - 3p^2(^2P)4s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1030.87	100	9	$3p^2 - 3p^2(^1D)4s$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1031.34	100	9	$3p^2 - 3p^2(^1D)4s$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1045.74	65		$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1047.56	35		$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1047.86	35		$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1048.43	35		$3p^2 - 3p^2(^2P)4s$	$^3D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1049.06	35		$3p^2 - 3p^2(^2P)3d$	$^3D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1053.21	35		$3p^2 - 3p^2(^2P)4s$	$^3D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	R22, K8
S II	1096.57	200	3	$3s^2 3p^2 - 3s 3p^4$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1102.32	300	3	$3s^2 3p^2 - 3s 3p^4$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1124.39	100	8	$3p^2 - 3p^2(^2P)4s$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1125.00	100	8	$3p^2 - 3p^2(^2P)4s$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1131.05	200	8	$3p^2 - 3p^2(^2P)4s$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1131.65	200	8	$3p^2 - 3p^2(^2P)4s$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II?	1204.30	500					T8, R22
S II	1226.70	100	7	$3s^2 3p^2 - 3s 3p^4$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1277.45	100	7	$3s^2 3p^2 - 3s 3p^4$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1233.36	50	7	$3s^2 3p^2 - 3s 3p^4$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1234.14	300	7	$3s^2 3p^2 - 3s 3p^4$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	I5, M23
S II	1250.50	300	1	$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1253.79	500	1	$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1259.53	500	1	$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	I5, M23
S II	1936.71	300		$3s 3p^4 - 3s^2 3p^2(^2P)4p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G8
S II	1950.45	300		$3s 3p^4 - 3s^2 3p^2(^2P)4p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G8
S II	1958.45	300		$3s 3p^4 - 3s^2 3p^2(^2P)4p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G8
S II	1970.86	400		$3s 3p^4 - 3s^2 3p^2(^2P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G8
S II	1981.64	200		$3s 3p^4 - 3s^2 3p^2(^2P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G8
S II	1985.07	200		$3s 3p^4 - 3s^2 3p^2(^2P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G8
S II	1998.80	200		$3s 3p^4 - 3s^2 3p^2(^2P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G8

SULFUR III (S²⁺), Z = 16
Ground State 1s²2s²2p⁶3s²3p² ³P₀ (14 electrons)
Ionization Potential 280 900 cm⁻¹; 34.83 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S III	484.58	50		3p ² - 3p4d	g ³ P - ³ D°	1 - 2	I6
S III	485.22	50		3p ² - 3p4d	g ³ P - ³ D°	2 - 3	I6
S III	499.98	300		3p ² - 3p5s	¹ D - ¹ P°	2 - 1	R20
S III	543.03	200		3p ² - 3p5s	¹ S - ¹ P°	0 - 1	R20
S III	677.75	200	7	3p ² - 3p3d	g ³ P - ³ L°	0 - 1	I6, M23
S III	678.46	200	7	3p ² - 3p3d	g ³ P - ³ D°	1 - 2	I6, M23
S III	679.11	200	7	3p ² - 3p3d	g ³ P - ³ D°	1 - 1	I6, M23
S III	680.69	200	7	3p ² - 3p3d	g ³ P - ³ D°	2 - 3	I6, M23
S III	680.75	200b	7	3p ² - 3p3d	g ³ P - ³ D°	2 - 2	I6, M23
S III	681.50	100b	6	3p ² - 3p4s	g ³ P - ³ P°	0 - 1	I6, M23
S III	683.07	50	6	3p ² - 3p4s	g ³ P - ³ P°	1 - 0	I6, M23
S III	683.47	100	6	3p ² - 3p4s	g ³ P - ³ P°	2 - 2	I6, M23
S III	685.35	50	6	3p ² - 3p4s	g ³ P - ³ P°	2 - 1	I6, M23
S III	698.73	200	5	3p ² - 3p3d	g ³ P - ³ P°	0 - 1	I6, M23
S III	700.15	300	5	3p ² - 3p3d	g ³ P - ³ P°	1 - 2	I6, M23
S III	700.29	300	5	3p ² - 3p3d	g ³ P - ³ P°	1 - 0	I6, M23
S III	702.78	P	5	3p ² - 3p3d	g ³ P - ³ P°	2 - 2	M23
S III	702.82	P	5	3p ² - 3p3d	g ³ P - ³ P°	2 - 1	M23
S III	724.29	300	4	3s ² 3p ² - 3s3p ²	g ³ P - ³ S°	0 - 1	I6, M23
S III	725.86	3	4	3s ² 3p ² - 3s3p ²	g ³ P - ³ S°	1 - 1	I6, M23
S III	728.69	300	4	3s ² 3p ² - 3s3p ²	g ³ P - ³ S°	2 - 1	I6, M23
S III	729.53	400	12	3p ² - 3p4s	¹ D - ¹ P°	2 - 1	R20
S III	730.78	300	3	3s ² 3p ² - 3s3p ²	g ³ P - ¹ F°	0 - 1	R20
S III	732.38	500	3	3s ² 3p ² - 3s3p ²	g ³ P - ¹ P°	1 - 1	R20
S III	732.98	50		3p ² - 3p3d	¹ D - ³ D°	2 - 3	R20
S III	733.34	50		3p ² - 3p3d	¹ D - ³ D°	2 - 2	R20
S III	734.05	P		3p ² - 3p3d	¹ D - ³ D°	2 - 1	R20
S III	735.25	400	3	3s ² 3p ² - 3s3p ²	g ³ P - ¹ P°	2 - 1	R20
S III	736.25	200	11	3p ² - 3p4s	¹ D - ³ P°	2 - 2	R20
S III	738.47	400	11	3p ² - 3p4s	¹ D - ³ P°	2 - 1	R20
S III	788.98	400	10	3s ² 3p ² - 3s3p ²	¹ D - ³ S°	2 - 1	R20
S III	796.69	400	9	3s ² 3p ² - 3s3p ²	¹ D - ¹ P°	2 - 1	R20
S III	824.88	400	14	3p ² - 3p4s	¹ S - ¹ P°	0 - 1	R20
S III	836.31	400	13	3p ² - 3p4s	¹ S - ³ P°	0 - 1	R20
S III	911.77	20		3s ² 3p ² - 3s3p ²	¹ S - ¹ F°	0 - 1	R20
S III	1012.49	300	2	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	0 - 1	I6, M23
S III	1015.51	200	2	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	1 - 1	I6, M23
S III	1015.76	100	2	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	1 - 2	I6, M23
S III	1021.10	100	2	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	2 - 1	I6, M23
S III	1021.32	200	2	3s ² 3p ² - 3s3p ²	g ³ P - ³ P°	2 - 2	I6, M23
S III	1077.13	800	8	3s ² 3p ² - 3s3p ²	¹ D - ¹ D°	2 - 2	R20
S III	1122.42	200		3s3p ² - 3s ² 3p4p	³ D° - ³ P	3 - 2	I6
S III	1126.48	50		3s3p ² - 3s ² 3p4p	³ D° - ³ P	1 - 1	I6
S III	1126.85	100		3s3p ² - 3s ² 3p4p	³ D° - ³ P	2 - 1	I6
S III	1155.34	200		3s3p ² - 3s ² 3p4p	³ D° - ³ D	3 - 3	I6
S III	1162.52	100		3s3p ² - 3s ² 3p4p	³ D° - ³ D	2 - 2	I6
S III	1166.13	50		3s3p ² - 3s ² 3p4p	³ D° - ³ D	1 - 1	I6
S III	1190.17	200	1	3s ² 3p ² - 3s3p ²	g ³ P - ³ D°	0 - 1	I6, M23
S III	1194.02	400	1	3s ² 3p ² - 3s3p ²	g ³ P - ³ D°	1 - 2	I6, M23
S III	1194.40	300	1	3s ² 3p ² - 3s3p ²	g ³ P - ³ D°	1 - 1	I6, M23
S III	1200.97	400	1	3s ² 3p ² - 3s3p ²	g ³ P - ³ D°	2 - 3	I6, M23
S III	1201.71	200	1	3s ² 3p ² - 3s3p ²	g ³ P - ³ D°	2 - 2	I6, M23
S III	1202.10	50	1	3s ² 3p ² - 3s3p ²	g ³ P - ³ D°	2 - 1	I6, M23
S III	1328.12	50		3s3p ² - 3s ² 3p4p	³ P° - ³ S	2 - 1	I6
S III	1328.52	50		3s3p ² - 3s ² 3p4p	³ P° - ³ S	1 - 1	I6
S III	1343.25	50		3s3p ² - 3s ² 3p4p	³ P° - ³ P	2 - 2	I6
S III	1343.53	50		3s3p ² - 3s ² 3p4p	³ P° - ³ P	1 - 2	I6
S III	1390.67	50		3s3p ² - 3s ² 3p4p	³ P° - ³ D	2 - 3	I6

SULFUR IV (S⁴⁺), Z = 16
 Ground State 1s²2s²2p⁶3s²3p² (13 electrons)
 Ionization Potential 381.5414 eV; 47.304 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S IV	519.30	200	5	3s ² 3p ² - 3s ² 3p(2p°)4s	g ² p° - s ²	1/2 - 1/2	B19
S IV	522.54	200	5	3s ² 3p ² - 3s ² 3p(2p°)4s	g ² p° - s ²	3/2 - 1/2	B19
S IV	521.03	300	8	3s ² 3p ² - 3s ² 3p(2p°)4s	g ² p° - s ²	1/2 - 1/2	B19
S IV	520.83	300	8	3s ² 3p ² - 3s ² 3p(2p°)4s	g ² p° - s ²	3/2 - 1/2	B19
S IV	521.99	200	8	3s ² 3p ² - 3s ² 3p(2p°)4s	g ² p° - s ²	1/2 - 1/2	B19
S IV	522.54	200	8	3s ² 3p ² - 3s ² 3p(2p°)4s	g ² p° - s ²	3/2 - 1/2	B19
S IV	521.17	200	8	3s ² 3p ² - 3s ² 3p(2p°)4s	g ² p° - s ²	1/2 - 1/2	B19
S IV	551.77	300	8	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	1/2 - 1/2	B19
S IV	552.52	300	8	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	3/2 - 1/2	B19
S IV	553.56	400	8	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	1/2 - 1/2	B19
S IV	553.98	300	8	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	3/2 - 1/2	B19
S IV	554.37	100	8	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	1/2 - 1/2	B19
S IV	555.55	400	8	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	3/2 - 1/2	B19
S IV	555.89	200	8	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	1/2 - 1/2	B19
S IV	556.30	100	8	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	3/2 - 1/2	B19
S IV	557.34	500	4	3p - 3d	g ² p° - s ²	1/2 - 1/2	B19
S IV	560.94	300	7	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	1/2 - 1/2	M13, M23
S IV	561.42	600	4	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	3/2 - 1/2	B19
S IV	563.70	300	7	3p - 3d	g ² p° - s ²	1/2 - 1/2	B19
S IV	564.82	300	7	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	3/2 - 1/2	B19
S IV	566.11	400	7	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	1/2 - 1/2	B19
S IV	574.92	500	3	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	1/2 - 1/2	B19
S IV	578.40	500	3	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	3/2 - 1/2	M13, M23
S IV	579.23	500	3	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	1/2 - 1/2	M13, M23
S IV	579.76	500	3	3s ² 3p ² - 3s ² 3p(2p°)3d	g ² p° - s ²	3/2 - 1/2	M13, M23
S IV	579.82	300	6	3s ² 3p ² - 3p ²	g ² p° - s ²	1/2 - 1/2	M13, M23
S IV	580.47	400	6	3s ² 3p ² - 3p ²	g ² p° - s ²	3/2 - 1/2	B19
S IV	580.99	400	6	3s ² 3p ² - 3p ²	g ² p° - s ²	1/2 - 1/2	B19
S IV	589.69	400	2	3s ² 3p ² - 3s ² 3p ²	g ² p° - s ²	1/2 - 1/2	B19
S IV	595.97	500	2	3s ² 3p ² - 3s ² 3p ²	g ² p° - s ²	3/2 - 1/2	M13, M23
S IV	603.34	400	400	3s ² 3p ² - 3s ² 4p	g ² p° - s ²	1/2 - 1/2	M13, M23
S IV	603.48	400	400	3s ² 3p ² - 3s ² 4p	g ² p° - s ²	3/2 - 1/2	B17
S IV	603.76	300	300	3s ² 3p ² - 3s ² 4p	g ² p° - s ²	1/2 - 1/2	B17
S IV	604.10	300	300	3s ² 3p ² - 3s ² 4p	g ² p° - s ²	3/2 - 1/2	B17
S IV	606.67	600	1	3s ² 3p ² - 3s ² 3p ²	g ² p° - s ²	1/2 - 1/2	B17
S IV	607.99	600	1	3s ² 3p ² - 3s ² 3p ²	g ² p° - s ²	3/2 - 1/2	B17, M23
S IV	608.52	400	400	3s ² 3p ² - 3s ² 3p ²	g ² p° - s ²	1/2 - 1/2	B17, M23
S IV	608.48	200	200	3s ² 3p ² - 3s ² 4p	g ² p° - s ²	3/2 - 1/2	B17, M23
S IV	611.08	200	200	3s ² 3p ² - 3s ² 4p	g ² p° - s ²	1/2 - 1/2	M13, K8
S IV	611.82	100	100	3s ² 3p ² - 3s ² 4p	g ² p° - s ²	3/2 - 1/2	M13, K8
S IV	612.86	100	100	3s ² 3p ² - 3p ²	g ² p° - s ²	1/2 - 1/2	B17
S IV	613.13	200	200	3s ² 3p ² - 3p ²	g ² p° - s ²	3/2 - 1/2	B17
S IV	614.77	70	70	3s ² 3p ² - 3s ² 3p ²	g ² p° - s ²	1/2 - 1/2	K8
S IV	616.00	30	30	3s ² 3p ² - 3s ² 3p ²	g ² p° - s ²	3/2 - 1/2	E27
S IV	616.94	10	10	3s ² 3p ² - 3s ² 3p ²	g ² p° - s ²	1/2 - 1/2	E27
S IV	623.62	50	50	3d - 4p	g ² p° - s ²	1/2 - 1/2	M13
S IV	624.00	200	200	3d - 4p	g ² p° - s ²	3/2 - 1/2	M13
S IV	629.20	200	200	3d - 4p	g ² p° - s ²	1/2 - 1/2	M13
S IV	629.03	50	50	3d - 4p	g ² p° - s ²	3/2 - 1/2	M13
S IV	645.42	100	100	4p - 5s	g ² p° - s ²	1/2 - 1/2	M13

SULFUR V (S^{4+}), $Z = 16$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential [586 200] cm^{-1} ; [72.68] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S V	437.37	100	4	$3s 3p - 3s 4s$	$^2P^{\circ} - ^2S$	0 - 1	B19
S V	438.19	100	4	$3s 3p - 3s 4s$	$^2P^{\circ} - ^2S$	1 - 1	B19
S V	439.65	100	4	$3s 3p - 3s 4s$	$^2P^{\circ} - ^2S$	2 - 1	B19
S V	658.26	300	3	$3s 3p - 3s 3d$	$^2P^{\circ} - ^2D$	0 - 1	B19
S V	659.85	400	3	$3s 3p - 3s 3d$	$^2P^{\circ} - ^2D$	1 - 2	B19
S V	663.16	500	3	$3s 3p - 3s 3d$	$^2P^{\circ} - ^2D$	2 - 3	B19
S V	676.21	100		$3p^2 - 3p 3d$	$^3P - ^3D^{\circ}$	0 - 1	B19
S V	677.34	100		$3p^2 - 3p 3d$	$^3P - ^3D^{\circ}$	1 - 2	B19
S V	678.08	200		$3p^2 - 3p 3d$	$^3P - ^3D^{\circ}$	1 - 1	B19
S V	680.33	300		$3p^2 - 3p 3d$	$^3P - ^3D^{\circ}$	2 - 3	B19
S V	680.94	500b		$3p^2 - 3p 3d$	$^3P - ^3D^{\circ}$	2 - 2	B19
S V	681.68	300b		$3p^2 - 3p 3d$	$^3P - ^3D^{\circ}$	2 - 1	B19
S V	686.15	100		$3p^2 - 3p 3d$	$^3P - ^3P^{\circ}$	0 - 1	B19
S V	686.93	100		$3p^2 - 3p 3d$	$^3P - ^3P^{\circ}$	1 - 0	B19
S V	688.04	50		$3p^2 - 3p 3d$	$^3P - ^3P^{\circ}$	1 - 1	B19
S V	689.84	100		$3p^2 - 3p 3d$	$^3P - ^3P^{\circ}$	1 - 2	B19
S V	691.74	100		$3p^2 - 3p 3d$	$^3P - ^3P^{\circ}$	2 - 1	B19
S V	693.52	200		$3p^2 - 3p 3d$	$^3P - ^3P^{\circ}$	2 - 2	B19
S V	766.48	830	1	$3s^2 - 3s 3p$	$g^1S - ^1P^{\circ}$	0 - 1	B19
S V	849.24	600	2	$3s 3p - 3p^2$	$^2P^{\circ} - ^2P$	1 - 2	B19
S V	852.18	500	2	$3s 3p - 3p^2$	$^2P^{\circ} - ^2P$	0 - 1	B19
S V	854.80	700	2	$3s 3p - 3p^2$	$^2P^{\circ} - ^2P$	2 - 2	B19
S V	857.87	500	2	$3s 3p - 3p^2$	$^2P^{\circ} - ^2P$	1 - 0	B19
S V	860.46	500	2	$3s 3p - 3p^2$	$^2P^{\circ} - ^2P$	2 - 1	B19
S V	883.59	200		$3s 3d - 3p 3d$	$^2D - ^2D^{\circ}$	3 - 3	B19
S V	884.46	200		$3s 3d - 3p 3d$	$^2D - ^2D^{\circ}$	2 - 2	B19
S V	885.77	100		$3s 3d - 3p 3d$	$^2D - ^2D^{\circ}$	1 - 1	B19
S V	900.93	200		$3s 3d - 3p 3d$	$^2D - ^2P^{\circ}$	1 - 0	B19
S V	902.80	100		$3s 3d - 3p 3d$	$^2D - ^2P^{\circ}$	2 - 1	B19
S V	905.92	200		$3s 3d - 3p 3d$	$^2D - ^2P^{\circ}$	3 - 2	B19
S V	1210.71 ?			$3s^2 - 3s 3p$	$g^1S - ^2P^{\circ}$	0 - 1	K8

SULFUR VI (S^{5+}), $Z = 16$
 Ground State $1s^2 2s^2 2p^6 3s \ ^3S_{1/2}$ (11 electrons)
 Ionization Potential 710 184 cm^{-1} ; 88.049 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S VI	171.33	20		$3s - 6p$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R20
S VI	191.48	20		$3s - 5p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R20
S VI	191.56	50		$3s - 5p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	R20
S VI	192.27	20		$3p - 7d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R20
S VI	204.19	50		$3p - 6d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R20
S VI	214.28	20		$3p - 6s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R20
S VI	227.20	200		$3p - 5d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	R20
S VI	227.84	200		$3p - 5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R20
S VI	248.99	400	2	$3s - 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	R20
S VI	249.17	400	2	$3s - 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	R20

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S VI	251.91	200		3p - 5s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	R20
S VI	261.81	50		3d - 7f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	R20
S VI	283.50	300		3d - 6f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	R20
S VI	289.09	200		3p - 4d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	R20
S VI	290.13	300		3p - 4d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R20
S VI	328.51	600		3d - 5f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	R20
S VI	388.94	600	4	3p - 4s	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	R20
S VI	390.86	800	4	3p - 4s	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	R20
S VI	464.68	1000	5	3d - 4f	$^3D - ^3F^o$	$\frac{3}{2} - \frac{3}{2}$	R20
S VI	648.6 ²	100		3d - 4p	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	R20
S VI	650.43	100		3d - 4p	$^3D - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	R20
S VI	706.48	600	3	3p - 3d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	R20
S VI	712.68	400	3	3p - 3d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R20
S VI	712.84	300	3	3p - 3d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{1}{2}$	R20
S VI	933.38	400	1	3s - 3p	$g^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	R20
S VI	944.52	500	1	3s - 3p	$g^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	R20
S VI	1117.91	100		4f - 5g	$^3F^o - ^3G$	$\frac{3}{2} - \frac{3}{2}$	B28, K8

SULFUR VII (S^{6+}), $Z = 16$ Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)Ionization Potential $2\ 265\ 900\ \text{cm}^{-1}$; 280.93 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S VII	46.212	10		$2p^3 - 2p^3(^3P^o)7d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	47.098	50		$2p^6 - 2p^6(^4P^o)6d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	47.307	50		$2p^6 - 2p^6(^4P^o)6d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	48.647	50		$2p^6 - 2p^6(^4P^o)5d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	48.874	100		$2p^6 - 2p^6(^4P^o)5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	49.990	120		$2s^3 2p^6 - 2s 2p^6 3p$	$g^1S - ^1P^o$? 0 - 1	F35, K8
S VII	50.027	70		$2p^6 - 2p^6(^4P^o)5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	51.807	350		$2p^6 - 2p^6(^4P^o)4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	52.097	200		$2p^6 - 2p^6(^4P^o)4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	54.652	100		$2p^6 - 2p^6(^4P^o)4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	54.938	100		$2p^6 - 2p^6(^4P^o)4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	60.161	1000		$2p^6 - 2p^6(^4P^o)3d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	60.804	750		$2p^6 - 2p^6(^4P^o)3d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F35
S VII	61.547	200		$2p^6 - 2p^6(^4P^o)3d$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	F35
S VII	72.029	1000		$2p^6 - 2p^6(^4P^o)3s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	F35
S VII	72.663	1000		$2p^6 - 2p^6(^4P^o)3s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	F35

SULFUR VIII (S^{7+}), $Z = 16$
 Ground State $1s^2 2s^2 2p^5 \ ^3P_{3/2}$ (9 electrons)
 Ionization Potential $2\ 547\ 400\ \text{cm}^{-1}$; $328.23\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	Reference
S VIII	44.350	20		$2p^5 - 2p^4(^1D)4d$	$g^2P^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	44.374	100b		$2p^5 - 2p^4(^1D)4d$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F35
S VIII	44.547	50		$2p^5 - 2p^4(^1D)4d$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F35
S VIII	45.279	50		$2p^5 - 2p^4(^3P)4d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	45.290	50		$2p^5 - 2p^4(^3P)4d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	45.370	20		$2p^5 - 2p^4(^3F)4d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	45.458	20		$2p^5 - 2p^4(^3P)4d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	45.508	20		$2p^5 - 2p^4(^3P)4d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	47.566	10		$2p^5 - 2p^4(^3P)4s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	47.594	10		$2p^5 - 2p^4(^3P)4s$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F35
S VIII	47.793	10b		$2p^5 - 2p^4(^3P)4s$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	51.227	100		$2p^5 - 2p^4(^1S)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	51.470	70		$2p^5 - 2p^4(^1S)3d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	52.681	20		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	52.702	20		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	52.756	300		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	52.789	300		$2p^5 - 2p^4(^1D)3d$	$g^2F^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F35
S VIII	52.854	100		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	52.958	350		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F35
S VIII	52.985	70		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	53.073	50		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F35
S VIII	53.239	30		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F35
S VIII	54.118	500		$2p^5 - 2p^4(^3P)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	54.266	100		$2p^5 - 2p^4(^3P)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	54.370	20		$2p^5 - 2p^4(^3P)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F35
S VIII	54.385	100		$2p^5 - 2p^4(^3P)3d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	54.424	150		$2p^5 - 2p^4(^3P)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	54.501	20		$2p^5 - 2p^4(^3P)3d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	54.566	50		$2p^5 - 2p^4(^3P)3d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	54.604	50		$2p^5 - 2p^4(^3P)3d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	59.236	70		$2p^5 - 2p^4(^1S)3s$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F35
S VIII	59.593	20		$2p^5 - 2p^4(^1S)3s$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F35
S VIII	61.600	500		$2p^5 - 2p^4(^1D)3s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	61.978	250		$2p^5 - 2p^4(^1D)3s$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	63.026	50		$2p^5 - 2p^4(^3P)3s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F35
S VIII	63.304	500		$2p^5 - 2p^4(^3P)3s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	63.431	100		$2p^5 - 2p^4(^3P)3s$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F35
S VIII	63.711	50		$2p^5 - 2p^4(^3P)3s$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	63.886	250		$2p^5 - 2p^4(^3P)3s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	64.120	50		$2p^5 - 2p^4(^3P)3s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F35
S VIII	64.137	100		$2p^5 - 2p^4(^3P)3s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$	F35
S VIII	64.305	20		$2p^5 - 2p^4(^3P)3s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	64.874	20		$2s\ 2p^6 - 2s\ 2p^5(^2P^{\circ})3s$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	F35
S VIII	65.149	50		$2s\ 2p^6 - 2s\ 2p^5(^2P^{\circ})3s$	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F35
S VIII	198.550	50		$2s^2\ 2p^6 - 2s\ 2p^6$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R20
S VIII	202.605	50		$2s^2\ 2p^5 - 2s\ 2p^6$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	R20

SULFUR IX (S^{8+}), $Z = 16$
 Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
 Ionization Potential $3\ 057\ 700\ \text{cm}^{-1}$; 379.10 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S IX	46.573	50		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-3	F35
S IX	46.413	50		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^1P^o$	1-1	F35
S IX	46.585	10d		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-2	F35
S IX	46.624	10		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-1	F35
S IX	46.713	50		$2p^4 - 2p^3(^3P^o)4s$	$^1D - ^3P^o$? 2-1	F35, K8
S IX	46.765	50		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$? 1-2	F35, K8
S IX	47.052	50		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3S^o$	2-1	F35
S IX	47.188	10		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-1	F35
S IX	47.249	50		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-2	F35
S IX	47.433	200		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$	2-3	F35
S IX	47.518	30		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^1P^o$	2-1	F35
S IX	47.616	10		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$	1-2	F35
S IX	48.160	100b		$2p^4 - 2p^3(^3P^o)3d$	$^1S - ^1P^o$	0-1	F35, K8
S IX	48.362	20		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^3S^o$? 2-1	F35, K8
S IX	48.564	20		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1D^o$	2-2	F35
S IX	49.119	100		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2-3	F35
S IX	49.328	50		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	1-2	F35
S IX	52.854	100		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2-2	G15, F35
S IX	54.178	100		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2-3	F35
S IX	54.396	50		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	1-2	F35
S IX	55.540	100		$2p^4 - 2p^3(^3D^o)3s$	$^1D - ^1D^o$	2-2	F35
S IX	56.081	50		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2-1	F35
S IX	56.125	20		$2p^4 - 2p^3(^3P^o)3s$	$^1S - ^1P^o$	0-1	F35
S IX	56.332	20d		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	1-1	F35
S IX	179.32	450		$2s^2 2p^4 - 2s 2p^5$	$^1D - ^1P^o$	2-1	D1, K15
S IX	202.62	250b		$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^o$	0-1	D1, K15
S IX	221.26	100		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2-1	D1, K15
S IX	223.27	100		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1-0	D1, K15
S IX	224.75	450		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2-2	D1, K15
S IX	225.23	50		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1-1	D1, K15
S IX	226.59	100		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	0-1	D1, K15
S IX	228.84	100		$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1-2	D1, K15

SULFUR X (S^{9+}), $Z = 16$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential $3\ 006\ 100\ \text{cm}^{-1}$; 447.09 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S X	42.16	100b		$2s^2 2p^3 - 2s 2p^3(^4S^o)3p$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F18
S X	42.51 P	15		$2p^3 - 2p^2 3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T10
S X	42.54 P	35		$2p^3 - 2p^2 3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T10
S X	42.58 P	50		$2p^3 - 2p^2 3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T10
S X	43.5			$2p^3 - 2p^2(^3P)3d$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F18
S X	44.374	100b		$2p^3 - 2p^2(^3P)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
S X	44.387	20		$2p^3 - 2p^2(^3P)3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F35
S X?	44.5	350					F18
S X	45.99	100		$2s 2p^4 - 2s 2p^3(^4S^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F18
S X	46.24	100		$2s 2p^4 - 2s 2p^3(^4S^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S X	46.41	100b		$2s2p^4 - 2s2p^3(^4S^o)3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	F18
S X	47.654	20		$2p^3 - 2p^3(^3P)3s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	F35
S X	47.793	10b		$2p^3 - 2p^3(^oP)3s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	F35
S X	177.55	250		$2s^22p^3 - 2s2p^4$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	D2, F18
S X	180.36	150		$2s^22p^3 - 2s2p^4$	$^3P - ^3P$	$\frac{3}{2} - \frac{3}{2}$	D2, F18
S X	180.72	350		$2s^22p^3 - 2s2p^4$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	D2, F18
S X	189.99	150		$2s^22p^3 - 2s2p^4$	$^3D^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F18
S X	192.88	50		$2s^22p^3 - 2s2p^4$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	F18
S X	193.49	150		$2s^22p^3 - 2s2p^4$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	D2, F18
S X	196.14	100		$2s^22p^3 - 2s2p^4$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F18
S X	196.83	200		$2s^22p^3 - 2s2p^4$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	D2, F18
S X	207.53	200		$2s^22p^3 - 2s2p^4$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	D2, F18
S X	208.33	200		$2s^22p^3 - 2s2p^4$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	D2, F18
S X	212.60			$2s2p^4 - 2p^5$	$^1D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	F16
S X	228.18	250		$2s^22p^3 - 2s2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	D2, F18
S X	228.70	350		$2s^22p^3 - 2s2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	D2, F18
S X	254.00			$2s^22p^3 - 2s2p^4$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	D2
S X	255.08	20		$2s^22p^3 - 2s2p^4$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	D2, K15
S X	257.16	100		$2s^22p^3 - 2s2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	D2, F18
S X	259.52	150		$2s^22p^3 - 2s2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	D2, F18
S X	264.24	200		$2s^22p^3 - 2s2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	D2, F18

SULFUR XI (S^{10+}), $Z = 16$ Ground State $1s^22s^22p^2\ ^3P_0$ (6 electrons)Ionization Potential $4\ 071\ 400\ \text{cm}^{-1}$; $504.78\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S XI	31.02	150b		$2p^2 - 2p4d$	$g^3P - ^3D^o$	2-3	F18
S XI	38.99	450		$2p^2 - 2p3d$	$g^3P - ^3P^o$	0-1	F18
S XI	39.26	350		$2p^2 - 2p3d$	$g^3P - ^3D^o$	2-3	F18
S XI	39.65	350		$2p^2 - 2p3d$	$^1D - ^1F^o$	2-3	F18
S XI	43.56	150		$2p^2 - 2p3s$	$g^3P - ^3P^o$	2-2	F18
S XI	43.75	150		$2p^2 - 2p3s$	$^1D - ^1P^o$	2-1	F18
S XI	186.85	200		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	0-1	P19
S XI	188.68	225		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	1-1	P19
S XI	190.37	250		$2s^22p^2 - 2s2p^3$	$^1D - ^1P^o$	2-1	P19
S XI	191.26	250		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$	2-1	P19
S XI	213.55	125		$2s2p^3 - 2p^4$	$^3D^o - ^3P$	1-0	P19
S XI	214.85	125		$2s2p^3 - 2p^4$	$^3D^o - ^3P$	2-1	P19
S XI	214.98	100		$2s2p^3 - 2p^4$	$^3D^o - ^3D$	1-1	P19
S XI	215.95	250		$2s^22p^2 - 2s2p^3$	$^1D - ^1D^o$	2-2	P19
S XI	217.63	200		$2s^22p^2 - 2s2p^3$	$^1S - ^1P^o$	0-1	P19
S XI	218.99	125		$2s2p^3 - 2p^4$	$^3D^o - ^3P$	2-2	P19
S XI	219.13	200		$2s2p^3 - 2p^4$	$^3D^o - ^3P$	3-2	P19
S XI	239.81	150		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	0-1	P19
S XI	242.57	125		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	1-2	P19
S XI	242.82	175		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	1-1	P19
S XI	245.94	75		$2s2p^3 - 2p^4$	$^3P^o - ^3P$	1-0	P19
S XI	245.90	200		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	2-2	P19
S XI	247.12	250		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$	2-1	P19
S XI	247.83	75		$2s2p^3 - 2p^4$	$^3P^o - ^3P$	1-1	P19
S XI	248.09	75		$2s2p^3 - 2p^4$	$^3P^o - ^3P$	2-1	P19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S XI	252.93	25		$2s^2 2p^3 - 2p^4$	$1P^\circ - 1S$	1-0	P19
S XI	253.36	50		$2s^2 2p^3 - 2p^4$	$3P^\circ - 3F$	1-2	P19
S XI	253.62	150		$2s^2 2p^3 - 2p^4$	$3P^\circ - 3P$	2-2	P19
S XI	281.40	175		$2s^2 2p^2 - 2s^2 2p^3$	$g^3P - 3D^\circ$	0-1	P19
S XI	285.58	250		$2s^2 2p^2 - 2s^2 2p^3$	$g^3P - 3D^\circ$	1-1	P19
S XI	285.83	200		$2s^2 2p^2 - 2s^2 2p^3$	$g^3P - 3D^\circ$	1-2	P19
S XI	291.59	200		$2s^2 2p^2 - 2s^2 2p^3$	$g^3P - 3D^\circ$	2-3	P19
S XI	291.83	0		$2s^2 2p^2 - 2s^2 2p^3$	$g^3P - 3D^\circ$	2-2	P19
S XI	295.63	200		$2s^2 2p^2 - 2p^4$	$1D^\circ - 1D$	2-2	P19
S XI	346.52			$2s^2 2p^3 - 2p^4$	$3S^\circ - 3P$	1-0	F3
S XI	350.40			$2s^2 2p^3 - 2p^4$	$3S^\circ - 3P$	1-1	F3
S XI	361.57			$2s^2 2p^3 - 2p^4$	$3S^\circ - 3P$	1-2	F3
S XI	362.34	0		$2s^2 2p^3 - 2p^4$	$1P^\circ - 1S$	1-2	P19

SULFUR XII (S^{11+}), $Z = 16$
 Ground State $1s^2 2s^2 2p^3 P_{1/2}^\circ$ (5 electrons)
 Ionization Potential $4\ 554\ 300\ \text{cm}^{-1}$; $564.65\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S XII	25.55	50		$2p - 5d$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	28.29	50		$2s^2 2p^2 - 2s^2 2p^3 (3P^\circ) 4d$	$4P - 4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	28.41	100		$2p - 4d$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	29.23	50		$2s^2 2p^2 - 2s^2 2p^3 (3P^\circ) 4d$	$2D - 3F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	35.94	200		$2s^2 2p^2 - 2s^2 2p^3 (1P^\circ) 3d$	$2D - 2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	36.33	300		$2s^2 2p^2 - 2s^2 2p^3 (3P^\circ) 3d$	$4P - 4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	36.54	150		$2p - 3d$	$g^2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	F18
S XII	36.71	150		$2p - 3d$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	37.59	100		$2s^2 2p^2 - 2s^2 2p^3 (1P^\circ) 3d$	$2P - 2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	37.74	150		$2s^2 2p^2 - 2s^2 2p^3 (3P^\circ) 3d$	$2D - 3F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	38.34	100		$2s^2 2p^2 - 2s^2 2p^3 (3P^\circ) 3d$	$2D - 2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	F18
S XII	212.14	150		$2s^2 2p - 2s^2 2p^2$	$g^2P^\circ - 2P$	$\frac{1}{2} - \frac{3}{2}$	P19
S XII	215.18	150		$2s^2 2p - 2s^2 2p^2$	$g^2P^\circ - 3P$	$\frac{1}{2} - \frac{1}{2}$	P19
S XII	218.20	250		$2s^2 2p - 2s^2 2p^2$	$g^2P^\circ - 3P$	$\frac{3}{2} - \frac{3}{2}$	P19
S XII	221.44	175		$2s^2 2p - 2s^2 2p^2$	$g^2P^\circ - 3P$	$\frac{3}{2} - \frac{1}{2}$	P19
S XII	227.50	150		$2s^2 2p - 2s^2 2p^2$	$g^2P^\circ - 2S$	$\frac{1}{2} - \frac{1}{2}$	P19
S XII	234.48	75		$2s^2 2p - 2s^2 2p^2$	$g^2P^\circ - 2S$	$\frac{3}{2} - \frac{1}{2}$	P19
S XII	240.26	175		$2s^2 2p^2 - 2p^3$	$4P - 4S^\circ$	$\frac{1}{2} - \frac{3}{2}$	P19
S XII	243.00	200		$2s^2 2p^2 - 2p^3$	$4P - 4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	P19
S XII	247.12	250		$2s^2 2p^2 - 2p^3$	$4P - 4S^\circ$	$\frac{5}{2} - \frac{3}{2}$	P19
S XII	288.45	175		$2s^2 2p - 2s^2 2p^2$	$g^2P^\circ - 2D$	$\frac{1}{2} - \frac{3}{2}$	P19
S XII	299.50	175		$2s^2 2p - 2s^2 2p^3$	$g^2P^\circ - 2D$	$\frac{3}{2} - \frac{5}{2}$	P19
S XII	309.6	P		$2s^2 2p^2 - 2p^3$	$3S - 2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	K8
S XII	323.18			$2s^2 2p^2 - 2p^3$	$3P - 2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F3
S XII	328.39			$2s^2 2p^2 - 2p^3$	$2P - 3P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F3
S XII	444.16			$2s^2 2p^2 - 2p^3$	$2P - 3D^\circ$	$\frac{1}{2} - \frac{3}{2}$	F3
S XII	456.35			$2s^2 2p^2 - 2p^3$	$3P - 2D^\circ$	$\frac{3}{2} - \frac{5}{2}$	F3
S XII	535.1	P		$2s^2 2p - 2s^2 2p^2$	$g^2P^\circ - 4P$	$\frac{3}{2} - \frac{5}{2}$	K8

SULFUR XIII (S^{12+}), $Z = 16$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential $5\ 255\ 900\ \text{cm}^{-1}$; $651.63\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S XIII	23.25	150		$2s\ 2p - 2s\ 5d$	$^2P^\circ - ^2D$	2-3	F18
S XIII	23.70	250		$2p^2 - 2p\ 5d$	$^1P^\circ - ^3D^\circ$	2-3	F18
S XIII	25.80	100		$2s\ ^3p - 2s\ 4d$	$^2P^\circ - ^2D$	2-3	F18
S XIII	26.35	150		$2p^2 - 2p\ 4d$	$^3P^\circ - ^2D^\circ$	2-3	F18
S XIII	30.2	P		$2s^2 - 2p\ 3s$	$g^1S - ^1P^\circ$	0-1	K8
S XIII	31.6	150		$2s\ 2p - 2p\ 3p$	$^2P^\circ - ^2P$? 2-2	F18
S XIII	31.94	350		$2s\ 2p - 2p\ 3p$	$^2P^\circ - ^2D$	2-3	F18
S XIII	32.41	250b		$2s^2 - 2s\ 3p$	$g^1S - ^1P^\circ$	0-1	F18
S XIII	33.2	P		$2s\ 2p - 2p\ 3p$	$^1P^\circ - ^1D$	1-2	K8
S XIII	33.89	P		$2s\ 2p - 2s\ 3d$	$^2P^\circ - ^2D$	1-2	F9
S XIII	33.99			$2s\ 2p - 2s\ 3d$	$^3P^\circ - ^3D$	2-3	F9
S XIII	34.67	400		$2p^2 - 2p\ 3d$	$^2P^\circ - ^2D^\circ$	2-3	F18
S XIII	35.7	P		$2s\ 2p - 2s\ 3s$	$^2P^\circ - ^2S$	2-1	K8
S XIII	36.2	P		$2s\ 2p - 2s\ 3d$	$^1P^\circ - ^2D$	1-2	K8
S XIII	36.7	P		$2p^2 - 2p\ 3s$	$^1D - ^1P^\circ$	2-1	K8
S XIII	37.6	P		$2s\ 2p - 2s\ 3s$	$^1P^\circ - ^1S$	1-0	K8
S XIII	38.2	P		$2s\ 2p - 2s\ 3s$	$^1P^\circ - ^3S$	1-1	K8
S XIII	39.7	P		$2p^2 - 2s\ 3p$	$^1D - ^1P^\circ$	2-1	K8
S XIII	256.66	250		$2s^2 - 2s\ 2p$	$g^1S - ^1P^\circ$	0-1	P19
S XIII	299.89	75		$2s\ 2p - 2p^2$	$^2P^\circ - ^2P$	1-2	P19
S XIII	303.27	50		$2s\ 2p - 2p^2$	$^2P^\circ - ^2P$	0-1	P19
S XIII	307.36	50		$2s\ 2p - 2p^2$	$^2P^\circ - ^3P$	1-1	P19
S XIII	308.91	125		$2s\ 2p - 2p^2$	$^2P^\circ - ^3P$	2-2	P19
S XIII	312.68	25		$2s\ 2p - 2p^2$	$^2P^\circ - ^3P$	1-0	P19
S XIII	316.84	50		$2s\ 2p - 2p^2$	$^2P^\circ - ^3P$	2-1	P19
S XIII	495.0	P		$2s^2 - 2s\ 2p$	$g^1S - ^2P^\circ$	0-1	K8
S XIII	500.42	P		$2s\ 2p - 2p^2$	$^1P^\circ - ^1D$	1-2	F3

SULFUR XIV (S^{13+}), $Z = 16$
 Ground State $1s^2 2s\ ^2S_{1/2}$ (3 electrons)
 Ionization Potential $5\ 703\ 600\ \text{cm}^{-1}$; $707.14\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S XIV	4.394			$1s^2 2s - 1s\ 2s\ 3p$	$g^2S - ^2P^\circ$? $\frac{1}{2} - \frac{3}{2}$	D6
S XIV	5.083			$1s^2 2s - 1s\ 2s\ 2p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	D6
S XIV	5.137			$1s^2 2s - 1s\ 2s\ 2p$	$g^2S - ^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$	D6
S XIV	21.79	50		$2p - 5d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F18
S XIV	23.04	150		$2s - 4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F18
S XIV	24.26	100		$2p - 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F18
S XIV	24.43	150		$2p - 4s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F18
S XIV	30.43	250		$2s - ^3p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F18
S XIV	32.40	200		$2p - ^1d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F18
S XIV	32.55	300		$2p - 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F18
S XIV	33.28	150		$2p - 3s$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F18
S XIV	33.3°	50		$2p - 3s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F18
S XIV	37.0			$2s - 2p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F3
S XIV	35.78			$2s - 2p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F3

SULFUR XV (S^{14+}), $Z = 16$
 Ground State $1s^2\ ^1S_0$ (2 electrons)
 Ionization Potential 26 002 663 cm^{-1} ; 3323.836 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S XV	4.00 P			$1s^2 - 1s5p$	$g^1S - ^1P^o$	0 - 1	K8
S XV	4.104			$1s^2 - 1s4p$	$g^1S - ^1P^o$	0 - 1	D6
S XV	4.299			$1s^2 - 1s3p$	$g^1S - ^1P^o$	0 - 1	D6
S XV	5.039			$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	D6
S XV	5.067			$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	D6
S XV	5.099	f		$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	D6

SULFUR XVI (S^{15+}), $Z = 16$
 Ground State $1s\ ^2S_{1/2}$ (1 electron)
 Ionization Potential 28 182 535 cm^{-1} ; 3494.10 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
S XVI	3.640 P			$1s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
S XVI	3.690 P			$1s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
S XVI	3.730 P	10		$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
S XVI	3.991 P	30		$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
S XVI	4.729 P	100		$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
S XVI	15.46 P			2 - 7			G2
S XVI	15.97 P			2 - 6			G2
S XVI	16.90 P			2 - 5			G2
S XVI	18.93 P			2 - 4			G2
S XVI	75.54 P			2 - 3			G2
S XVI	39.18 P			3 - 7			G2
S XVI	42.65 P			3 - 6			G2
S XVI	49.97 P			3 - 5			G2
S XVI	73.1 P			3 - 4			G2
S XVI	84.48 P			4 - 7			G2
S XVI	102.4 P			4 - 6			G2
S XVI	158.0 P			4 - 5			G2
S XVI	181.5 P			5 - 7			G2
S XVI	291.0 P			5 - 6			G2
S XVI	482.7 P			6 - 7			G2

CHLORINE I (Cl⁰⁺), Z = 17
Ground State 1s²2s²2p⁶3s²3p⁵ ²P_{3/2} (17 electrons)
Ionization Potential 104 591.0 cm⁻¹; 12.967 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl I	969.917	10		3p ⁵ - 3p ⁴ (¹ D)5s	g ² P ^o - ² D	3/2 - 3/2	R3
Cl I	976.452	1		3p ⁵ - 3p ⁴ (² P)8s	g ² P ^o - 0[0]	3/2 - 1/2	R3
Cl I	978.2844	13		3p ⁵ - 3p ⁴ (¹ D)5s	g ² P ^o - ² D	1/2 - 3/2	R3
Cl I	979.963	1		3p ⁵ - 3p ⁴ (² P)7d	g ² P ^o - 2[2]	3/2 - 3/2	R3
Cl I	980.5061	3		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 0[2]	3/2 - 3/2	R3
Cl I	980.9191	4		3p ⁵ - 3p ⁴ (¹ D)3d	g ² P ^o - ² P	3/2 - 3/2	R3
Cl I	981.879	2		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 1[2]	3/2 - 3/2	R3
Cl I	982.285	2		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 1[3]	3/2 - 3/2	R3
Cl I	984.2864	7		3p ⁵ - 3p ⁴ (¹ S)4s	g ² P ^o - ² S	3/2 - 1/2	R3
Cl I	984.3230	8		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 1[1]	3/2 - 1/2	R3
Cl I	984.939	2		3p ⁵ - 3p ⁴ (² P)8s	g ² P ^o - 0[0]	1/2 - 1/2	R3
Cl I	987.599	1		3p ⁵ - 3p ⁴ (² P)8s	g ² P ^o - 1[1]	1/2 - 1/2	R3
Cl I	987.885	2		3p ⁵ - 3p ⁴ (² P)8s	g ² P ^o - 1[1]	1/2 - 3/2	R3
Cl I	987.916	1		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 2[3]	3/2 - 3/2	R3
Cl I	988.410	2		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 2[1]	3/2 - 3/2	R3
Cl I	988.9436	5		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 0[2]	1/2 - 3/2	R3
Cl I	989.484	2		3p ⁵ - 3p ⁴ (¹ D)3d	g ² P ^o - ² P	1/2 - 1/2	R3
Cl I	989.6543	4		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 2[2]	3/2 - 3/2	R3
Cl I	989.713	1		3p ⁵ - 3p ⁴ (² P)7s	g ² P ^o - 0[0]	3/2 - 1/2	R3
Cl I	990.4591	5		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 1[2]	1/2 - 3/2	R3
Cl I	990.629	2		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 2[1]	3/2 - 1/2	R3
Cl I	991.640	2		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 1[1]	1/2 - 3/2	R3
Cl I	992.679	1		3p ⁵ - 3p ⁴ (² P)7s	g ² P ^o - 1[1]	3/2 - 1/2	R3
Cl I	992.9098	8		3p ⁵ - 3p ⁴ (¹ S)4s	g ² P ^o - ² S	1/2 - 1/2	R3
Cl I	992.9470	5		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 1[1]	1/2 - 1/2	R3
Cl I	993.007	2		3p ⁵ - 3p ⁴ (² P)7s	g ² P ^o - 1[1]	3/2 - 3/2	P3
Cl I	994.1414	3		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 0[2]	3/2 - 3/2	R3
Cl I	994.9965	4		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 0[2]	3/2 - 3/2	R3
Cl I	996.5402	3		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 1[2]	3/2 - 3/2	R3
Cl I	996.5591	3		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 2[0]	1/2 - 1/2	R3
Cl I	997.1064	4		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 2[1]	1/2 - 3/2	R3
Cl I	997.5099	4		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 1[3]	3/2 - 3/2	R3
Cl I	997.5375	4		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 1[2]	3/2 - 3/2	R3
Cl I	998.294	2		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 1[1]	3/2 - 3/2	R3
Cl I	998.3723	9		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 2[2]	1/2 - 3/2	R3
Cl I	998.4319	9		3p ⁵ - 3p ⁴ (² P)7s	g ² P ^o - 0[0]	1/2 - 1/2	R3
Cl I	999.3638	8		3p ⁵ - 3p ⁴ (² P)6d	g ² P ^o - 2[1]	1/2 - 1/2	R3
Cl I	999.4929	5		3p ⁵ - 3p ⁴ (² P)7s	g ² P ^o - 2[2]	3/2 - 3/2	R3
Cl I	1000.113	2		3p ⁵ - 3p ⁴ (² P)7s	g ² P ^o - 2[2]	3/2 - 3/2	R3
Cl I	1000.278	2		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 1[1]	3/2 - 1/2	R3
Cl I	1001.4491	3		3p ⁵ - 3p ⁴ (² P)7s	g ² P ^o - 1[1]	1/2 - 1/2	R3
Cl I	1002.3464	20		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[3]	3/2 - 3/2	R3
Cl I	1002.8952	3		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[0]	3/2 - 1/2	R3
Cl I	1003.191	2		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[1]	3/2 - 3/2	R3
Cl I	1003.8093	5		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 0[2]	1/2 - 3/2	R3
Cl I	1004.6776	8		3p ⁵ - 3p ⁴ (¹ D)3d	g ² P ^o - ² S	3/2 - 1/2	R3
Cl I	1005.956	1		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[1]	3/2 - 1/2	R3
Cl I	1006.3957	3		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 1[2]	1/2 - 3/2	R3
Cl I	1006.495	1		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[2]	3/2 - 3/2	R3
Cl I	1007.1647	8		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 1[1]	1/2 - 3/2	R3
Cl I	1007.3626	3		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[2]	3/2 - 3/2	R3
Cl I	1008.3859	5		3p ⁵ - 3p ⁴ (² P)7s	g ² P ^o - 2[2]	1/2 - 3/2	R3
Cl I	1009.1857	4		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 1[1]	1/2 - 1/2	R3
Cl I	1011.8492	10		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[0]	1/2 - 1/2	R3
Cl I	1012.1505	6		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[1]	1/2 - 3/2	R3
Cl I	1013.6635	30		3p ⁵ - 3p ⁴ (¹ D)3d	g ² P ^o - ² S	1/2 - 1/2	R3
Cl I	1015.5139	6		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2[2]	1/2 - 3/2	R3
Cl I	1016.3558	3		3p ⁵ - 3p ⁴ (² P)6s	g ² P ^o - 0[0]	3/2 - 1/2	R3
Cl I	1019.3644	4		3p ⁵ - 3p ⁴ (² P)6s	g ² P ^o - 1[1]	3/2 - 1/2	R3
Cl I	1019.9400	9		3p ⁵ - 3p ⁴ (² P)6s	g ² P ^o - 1[1]	3/2 - 3/2	R3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J J	References
Cl I	1022.0478	3		$3p^5 - 3p^4(^2P)4d$	$g^3P^o - 0[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1022.4143	15		$3p^5 - 3p^4(^2P)4d$	$g^3P^o - 0[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1025.2821	7		$3p^5 - 3p^4(^2P)4d$	$g^3P^o - 1[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1025.5528	22		$3p^5 - 3p^4(^2P)6s$	$g^3P^o - 0[0]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1025.8444	8		$3p^5 - 3p^4(^2P)6s$	$g^3P^o - 2[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1027.1785	10		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 1[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1027.3386	15		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 1[3]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1028.1739	6		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 1[1]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1028.4075	8		$3p^5 - 3p^4(^2P)6s$	$g^2P^o - 2[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1028.6162	15		$3p^5 - 3p^4(^2P)6s$	$g^2P^o - i[1]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1029.2023	3		$3p^5 - 3p^4(^2P)6s$	$g^2P^o - 1[1]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1029.3432	7		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 1[1]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1030.8845	10		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[1]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1031.3486	20		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 0[2]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1031.5070	15		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[3]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1031.6704	6		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[0]$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1035.2148	30		$3p^5 - 3p^4(^2P)6s$	$g^2P^o - 2[2]$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1036.5734	5		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 1[2]$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1037.5871	27		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 1[1]$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1038.7779	25		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 1[1]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1040.3475	30		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[1]$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1041.1480	15		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[0]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1041.7148	4		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[1]$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1042.7793	8		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1043.9857	7		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1051.3787	9		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[1]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1052.4631	4		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - 2[2]$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1079.8821	30		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 0[0]$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1084.6671	40		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1085.1709	40		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 1[1]$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1085.3035	45		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 1[1]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1088.062	60		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^3F$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1090.2706	55		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 0[0]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1090.7386	40		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 2[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1090.9815	45		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1092.1287	40		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1092.4366	45		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1094.7686	60		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 2[2]$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1095.1483	55		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1095.6619	55		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 1[1]$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1095.7971	60		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 1[1]$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1096.8098	45		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1097.3692	50		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1098.0682	40		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1099.5230	40		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1101.3381	50		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - 2[2]$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1101.9362	40		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1102.755	40		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1103.069	50		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1107.5282	70		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1108.8113	15		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1110.2948	60		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1132.8528	45		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1133.9341	50		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1135.3310	50		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1144.2909	60		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1145.3941	30		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1167.1479	100		$3s^2 3p^5 - 3s 3p^6$	$g^2P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1179.2927	250		$3s^2 3p^5 - 3s 3p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1188.7515	50		$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1188.7743	130		$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1201.3527	100		$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1335.7257	250	2	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1347.2397	550	2	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1351.6568	350	2	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	R3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl I	1363.4471	600	2	$3p^3 - 3p^4(^3P)4s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	R3
Cl I	1373.1163	200	1	$3p^3 - 3p^4(^3P)4s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	R3
Cl I	1379.5278	900	1	$3p^3 - 3p^4(^3P)4s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1389.6928	1000	1	$3p^3 - 3p^4(^3P)4s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	R3
Cl I	1389.9569	900	1	$3p^3 - 3p^4(^3P)4s$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	R3
Cl I	1396.5267	600	1	$3p^3 - 3p^4(^3P)4s$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	R3

CHLORINE II (Cl^{II}), $Z = 17$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
 Ionization Potential $192\,070\text{ cm}^{-1}$; 23.81 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl II	558.14	100		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^1P^o$	1 - 1	K13
Cl II	562.28	30J		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^1D^o$	1 - 2	K13
Cl II	562.54	10		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3P^o$	2 - 1	K13
Cl II	563.58	13		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3S^o$	2 - 1	K13
Cl II	565.75	10		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3P^o$	0 - 1	K13
Cl II	566.77	10		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3S^o$	0 - 1	K13
Cl II	571.95	100		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3D^o$	2 - 3	K13
Cl II	574.37	300		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3D^o$	1 - 2	K13
Cl II	575.30	10		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3D^o$	0 - 1	K13
Cl II	584.10	100		$3p^4 - 3p^3(^2D^o)5s$	$g^3P - ^1D^o$	2 - 2	K13
Cl II	586.25	10		$3p^4 - 3p^3(^2D^o)5s$	$g^3P - ^3D^o$	2 - 3	K13
Cl II	588.77	10		$3p^4 - 3p^3(^2D^o)5s$	$g^3P - ^3D^o$	1 - 2	K13
Cl II	589.82	10		$3p^4 - 3p^3(^2D^o)5s$	$g^3P - ^3D^o$	0 - 1	K13
Cl II	594.49	10		$3p^4 - 3p^3(^2D^o)4d$	$^1D - ^1P^o$	2 - 1	K13
Cl II	599.19	10		$3p^4 - 3p^3(^2D^o)4d$	$^1D - ^1D^o$	2 - 2	K13
Cl II	612.73	10		$3p^4 - 3p^3(^2D^o)4d$	$^1D - ^3D^o$	2 - 3	K13
Cl II	617.27	10		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 1	K13
Cl II	617.61	100		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 2	K13
Cl II	618.02	200		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3	K13
Cl II	619.95	10		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 1	K13
Cl II	620.28	100		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2	K13
Cl II	621.12	400		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	0 - 1	K13
Cl II	626.70	100		$3p^4 - 3p^3(^2D^o)5s$	$^1D - ^1D^o$	2 - 2	K13
Cl II	634.24	100		$3s^2 3p^4 - 3p^5 4s$	$g^3P - ^3P^o$	2 - 1	K13
Cl II	635.87	200		$3s^2 3p^4 - 3p^5 4s$	$g^3P - ^3P^o$	1 - 0	K13
Cl II	636.62	200		$3s^2 3p^4 - 3p^5 4s$	$g^3P - ^3P^o$	2 - 2	K13
Cl II	637.06	100		$3s^2 3p^4 - 3p^5 4s$	$g^3P - ^3P^o$	1 - 1	K13
Cl II	638.23	200		$3s^2 3p^4 - 3p^5 4s$	$g^3P - ^3P^o$	0 - 1	K13
Cl II	639.42	200		$3s^2 3p^4 - 3p^5 4s$	$g^3P - ^3P^o$	1 - 2	K13
Cl II	650.88	100		$3p^4 - 3p^3(^4S^o)5s$	$g^3P - ^3S^o$	2 - 1	K13
Cl II	651.13	100		$3p^4 - 3p^3(^2D^o)3d$	$g^3P - ^3S^o$	2 - 1	K13
Cl II	653.80	100		$3p^4 - 3p^3(^4S^o)5s$	$g^3P - ^3S^o$	1 - 1	K13
Cl II	655.09	100		$3p^4 - 3p^3(^4S^o)5s$	$g^3P - ^3S^o$	0 - 1	K13
Cl II	661.62	10		$3p^4 - 3p^3(^2D^o)3d$	$g^3P - ^3D^o$	2 - 1	K13
Cl II	661.82	200		$3p^4 - 3p^3(^2D^o)3d$	$g^3P - ^3D^o$	2 - 3	K13
Cl II	662.15	100		$3p^4 - 3p^3(^2D^o)3d$	$g^3P - ^3D^o$	2 - 2	K13
Cl II	663.08	200		$3p^4 - 3p^3(^2D^o)3d$	$g^3P - ^3P^o$	2 - 1	K13
Cl II	663.67	200		$3p^4 - 3p^3(^2D^o)3d$	$g^3P - ^3P^o$	2 - 2	K13
Cl II	664.67	200		$3p^4 - 3p^3(^2D^o)3d$	$g^3P - ^3D^o$	1 - 1	K13
Cl II	665.21	100		$3p^4 - 3p^3(^2D^o)3d$	$g^3P - ^3D^o$	1 - 2	K13

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl II	666.08	300		$3p^4 - 3p^2(^2D^{\circ})3d$	$g^3P - ^3D^{\circ}$	0-1	K13
Cl II	666.17	200		$3p^4 - 3p^2(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	1-1	K13
Cl II	667.49	100		$3p^4 - 3p^2(^2D^{\circ})3d$	$g^3P - ^3P^{\circ}$	0-1	K13
Cl II	684.83	10		$3s^2 3p^4 - 3p^4 4s$	$^1D - ^3P^{\circ}$	2-1	K13
Cl II	687.55	100		$3s^2 3p^4 - 3p^4 4s$	$^1D - ^3P^{\circ}$	2-2	K13
Cl II	693.55	10					
Cl II	696.11	10		$3p^4 - 3p^2(^2P^{\circ})3d$	$g^3P - ^3F^{\circ}$	2-3	K13
Cl II	707.43	400		$3p^4 - 3p^2(^2P^{\circ})3d$	$g^3P - ^3F^{\circ}$	1-2	K13
Cl II	709.16	200		$3p^4 - 3p^2(^2P^{\circ})3d$	$g^3P - ^3D^{\circ}$	2-3	K13
Cl II	710.53	10		$3p^4 - 3p^2(^2P^{\circ})3d$	$g^3P - ^3D^{\circ}$	2-2	K13
Cl II	712.65	300		$3p^4 - 3p^2(^2P^{\circ})3d$	$g^3P - ^3D^{\circ}$	2-1	K13
Cl II	714.03	200					
Cl II	715.58	300		$3p^4 - 3p^2(^2P^{\circ})3d$	$g^3P - ^3D^{\circ}$	1-2	K13
Cl II	717.15	200		$3p^4 - 3p^2(^2P^{\circ})3d$	$g^3P - ^3D^{\circ}$	1-1	K13
Cl II	719.26	100		$3p^4 - 3p^2(^2D^{\circ})3d$	$^1D - ^3D^{\circ}$	0-1	K13
Cl II	725.27	300		$3p^4 - 3p^2(^2D^{\circ})3d$	$^1D - ^3P^{\circ}$	2-3	K13
Cl II	725.64	200				2-2	K13
Cl II	726.94	300		$3p^4 - 3p^2(^2P^{\circ})4s$	$g^3P - ^3P^{\circ}$	2-1	K13
Cl II	729.39	300		$3p^4 - 3p^2(^2P^{\circ})4s$	$g^3P - ^3P^{\circ}$	1-2	K13
Cl II	729.52	200		$3p^4 - 3p^2(^2P^{\circ})4s$	$g^3P - ^3P^{\circ}$	1-1	K13
Cl II	730.92	300		$3p^4 - 3p^2(^2P^{\circ})4s$	$g^3P - ^3P^{\circ}$	1-0	K13
Cl II	753.66	10		$3p^4 - 3p^2(^2P^{\circ})4s$	$g^3P - ^3P^{\circ}$		
Cl II	754.55	10		$3p^4 - 3p^2(^2P^{\circ})3d$	$^1D - ^3F^{\circ}$	0-1	K13
Cl II	771.00	10		$3p^4 - 3p^2(^2P^{\circ})3d$	$^1D - ^3F^{\circ}$	2-2	K13
Cl II	774.76	10		$3p^4 - 3p^2(^2P^{\circ})3d$	$^1D - ^3D^{\circ}$	2-3	K13
Cl II	777.55	300		$3p^4 - 3p^2(^2P^{\circ})3d$	$^1D - ^3D^{\circ}$	2-1	K13
Cl II	787.15	100		$3p^4 - 3p^2(^2P^{\circ})3d$	$^1D - ^3D^{\circ}$		
Cl II	787.62	300		$3p^4 - 3p^2(^2D^{\circ})3d$	$^1D - ^3D^{\circ}$	2-2	K13
Cl II	788.75	400	5	$3p^4 - 3p^2(^2P^{\circ})4s$	$g^3P - ^3P^{\circ}$	1-1	K13
Cl II	789.01	700	5	$3p^4 - 3p^2(^2D^{\circ})4s$	$^1D - ^3P^{\circ}$	2-1	K13
Cl II	792.19	200		$3p^4 - 3p^2(^2D^{\circ})4s$	$g^3P - ^3D^{\circ}$	2-3	K13
Cl II	793.34	300	5	$3p^4 - 3p^2(^2P^{\circ})4s$	$g^3P - ^3D^{\circ}$	2-2	K13
Cl II	793.47	300	5	$3p^4 - 3p^2(^2D^{\circ})4s$	$g^3P - ^3D^{\circ}$	1-2	K13
Cl II	795.36	200	5	$3p^4 - 3p^2(^2D^{\circ})4s$	$g^3P - ^3D^{\circ}$	1-1	K13
Cl II	797.81	10		$3p^4 - 3p^2(^2D^{\circ})3d$	$g^3P - ^3D^{\circ}$	0-1	K13
Cl II	827.75	100				1-2	K13
Cl II	834.67	1000	4	$3p^4 - 3p^2(^2D^{\circ})3d$	$g^3P - ^3D^{\circ}$	1-2	K13
Cl II	839.30	200	4	$3p^4 - 3p^2(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2-3	K13
Cl II	839.63	200	4	$3p^4 - 3p^2(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	1-1	K13
Cl II	841.41	400	4	$3p^4 - 3p^2(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	1-2	K13
Cl II	851.70	700		$3p^4 - 3p^2(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	0-1	K13
Cl II	864.67	500	3	$3p^4 - 3p^2(^2D^{\circ})4s$	$^1D - ^3D^{\circ}$	2-2	K13
Cl II	872.20	10	3	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^{\circ}$	2-1	K13
Cl II	888.07	400	2	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^{\circ}$	6-1	K13
Cl II	893.56	300	2	$3p^4 - 3p^2(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	2-1	K13
Cl II	895.95	300	2	$3p^4 - 3p^2(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	1-1	K13
Cl II	906.60	10		$3p^4 - 3p^2(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	0-1	K13
Cl II	910.25	10		$3p^4 - 3p^2(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	2-3	K13
Cl II	912.34	10		$3p^4 - 3p^2(^2D^{\circ})3d$	$^1D - ^3D^{\circ}$	2-2	K13
Cl II	914.90	100		$3p^4 - 3p^2(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	1-2	K13
Cl II	926.96	10		$3p^4 - 3p^2(^4S^{\circ})3d$	$g^3P - ^3D^{\circ}$	0-1	K13
Cl II	961.49	500		$3p^4 - 3p^2(^4S^{\circ})4s$	$g^3P - ^3S^{\circ}$	2-2	K13
Cl II	1053.83	500	1	$3s^2 3p^4 - 3s 3p^5$	$^1D - ^3P^{\circ}$	2-1	K13
Cl II	1067.94	200	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^{\circ}$	2-1	K13
Cl II	1071.05	1000	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^{\circ}$	1-0	K13
Cl II	1071.76	500	1			2-2	K13
Cl II	1075.24	350	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^{\circ}$	1-1	K13
Cl II	1079.08	750	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^{\circ}$	0-1	K13
Cl II	1223.71	100		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^{\circ}$	1-2	K13
Cl II	1401.16	10		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^3P^{\circ}$	2-2	K13
Cl II	1471.06	200		$3s 3p^5 - 3s^2 3p^3(^2P^{\circ})4p$	$^3P^{\circ} - ^3S$	1-0	K13
Cl II	1484.76	10					
Cl II	1528.51	100		$3s 3p^5 - 3s^2 3p^3(^2P^{\circ})4p$	$^3P^{\circ} - ^3P$	2-1	K13
Cl II	1542.94	10		$3s 3p^5 - 3s^2 3p^3(^2P^{\circ})4p$	$^3P^{\circ} - ^3D$	1-1	K13
Cl II	1558.15	100		$3s 3p^5 - 3s^2 3p^3(^2P^{\circ})4p$	$^3P^{\circ} - ^3S$	2-2	K13
Cl II				$3s 3p^5 - 3s^2 3p^3(^2P^{\circ})4p$	$^3P^{\circ} - ^3S$	2-1	K13
Cl II						1-1	K13

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl II	1767.24	100		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2P$	2-1	K13
Cl II	1772.01	300		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2P$	2-2	K13
Cl II	1785.06	100		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2P$	1-0	K13
Cl II	1787.20	300		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2P$	1-1	K13
Cl II	1792.10	400		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2P$	1-2	K13
Cl II	1797.91	10		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2P$	0-1	K13
Cl II	1813.75	10		$3p^2(^4S^{\circ})4p - 3p^2(^2D^{\circ})6s$	$^2P - ^2D^{\circ}$	2-3	K13
Cl II	1814.43	10		$3p^2(^4S^{\circ})4p - 3p^2(^2D^{\circ})6s$	$^2P - ^2D^{\circ}$	1-2	K13
Cl II	1815.16	10		$3p^2(^4S^{\circ})4p - 3p^2(^2D^{\circ})6s$	$^2P - ^2D^{\circ}$	0-1	K13
Cl II	1815.61	10		$3p^2(^4S^{\circ})4p - 3p^2(^2D^{\circ})6s$	$^2P - ^2D^{\circ}$	1-1	K13
Cl II	1885.14	300		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2D$	2-3	K13
Cl II	1887.90	10		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2D$	2-2	K13
Cl II	1910.76	10		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2D$	1-2	K13
Cl II	1923.35	400		$3s\ 3p^5 - 3s^2\ 3p^4(^2D^{\circ})4p$	$^2P^{\circ} - ^2D$	0-1	K13

CHLORINE III (Cl²⁺), Z = 17
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3\ ^4S_{3/2}$ (15 electrons)
 Ionization Potential $319\ 500\ \text{cm}^{-1}$; 39.61 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl III	406.27	100		$3p^2 - 3p^2(^2P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	407.51	10		$3p^2 - 3p^2(^2P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	411.16	300		$3p^2 - 3p^2(^2P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	411.37	400		$3p^2 - 3p^2(^2P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	411.81	400		$3p^2 - 3p^2(^2P)4d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	415.20	100		$3p^2 - 3p^2(^1D)5s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	415.33	100		$3p^2 - 3p^2(^1D)5s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	421.77	300		$3p^2 - 3p^2(^1D)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	421.99	300		$3p^2 - 3p^2(^1D)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	422.71	100		$3p^2 - 3p^2(^1D)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	433.66	10		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	433.77	10		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	441.40	300		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	442.95	200		$3p^2 - 3p^2(^2P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	457.17	300		$3p^2 - 3p^2(^2P)4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	457.24	200		$3p^2 - 3p^2(^2P)4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	457.44	10		$3p^2 - 3p^2(^2P)4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	552.91	200b		$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	556.23	600	3	$3p^2 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	556.61	700	3	$3p^2 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	557.12	700	3	$3p^2 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	558.39	100		$3p^2 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	560.64	100		$3p^2 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	561.53	700	5	$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	561.68	700	5	$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	561.74	700	5	$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	564.29	400		$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	564.51	200		$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	565.27	300		$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	565.48	400b		$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	572.69	400	2	$3p^2 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	574.41	300	2	$3p^2 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	575.58	300	2	$3p^2 - 3p^2(^2P)4s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	586.87	400		$3p^2 - 3p^2(^1D)4s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	587.08	300		$3p^2 - 3p^2(^1D)4s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21

Element	Wavelength	Intensity	λ, multiplet	Configuration	Term	J - J	References
Cl III	587.30	400		$3p^2 - 3p^2(^1D)4s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	591.12	300	6	$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl III	591.43	400	6	$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	591.65	400	6	$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B21
Cl II	591.96	200	6	$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl II	594.64	400		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl III	595.99	300		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	596.24	400		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	605.86	100		$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	606.10	200	4	$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	606.35	500	4	$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	609.67	400	4	$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	609.90	10	4	$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	619.03	100		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	621.03	300		$3p^2 - 3p^2(^2P)4s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	621.28	400		$3p^2 - 3p^2(^2P)4s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	623.77	300		$3p^2 - 3p^2(^2P)4s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl III	630.38	100		$3p^2 - 3p^2(^1D)4s$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl III	630.75	100		$3p^2 - 3p^2(^1D)4s$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl III	631.01	100		$3p^2 - 3p^2(^1D)4s$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	639.76	100		$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl III	640.93	100		$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl III	641.30	100		$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	653.01	200		$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	656.77	200		$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl III	657.17	200		$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	669.95	200		$3p^2 - 3p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl III	670.38	300		$3p^2 - 3p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	673.13	300		$3p^2 - 3p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B21
Cl III	673.60	100		$3p^2 - 3p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl III	746.86	100		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl III	747.42	100		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	747.55	100		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	930.94	100		$3s3p^4 - 3s^23p^2(^2P)4p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	936.28	100		$3s3p^4 - 3s^23p^2(^2P)4p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	939.31	10		$3s3p^4 - 3s^23p^2(^2P)4p$	$^4P - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	B17
Cl III	943.22	100		$3s3p^4 - 3s^23p^2(^2P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	946.97	100		$3s3p^4 - 3s^23p^2(^2P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	948.72	100		$3s3p^4 - 3s^23p^2(^2P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	953.40	200		$3s3p^4 - 3s^23p^2(^2P)4p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	B17
Cl III	1005.28	500	1	$3s^23p^3 - 3s3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	B17
Cl III	1008.78	600	1	$3s^23p^3 - 3s3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	1015.02	700	1	$3s^23p^3 - 3s3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B17
Cl III	1663.18	10		$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1689.50	100		$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1797.98	200	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1808.51	400	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1810.26	100	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1817.73	400	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1822.50	600	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1824.59	300	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1828.40	500	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1832.08	400	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1833.31	400	7	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl III	1848.74	10		$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1849.64	10		$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1852.11	200		$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl III	1880.10	300		$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1889.06	10		$3p^2(^2P)4p - 3p^2(^1D)5s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl II	1897.85	300	8	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1901.61	500	8	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1912.90	400	8	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1914.09	300	8	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1916.53	400	8	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl III	1917.87	400	8	$3p^2(^2P)3d - 3p^2(^2P)4p$	$^4D - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	B21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl III	1920.32	400	8	$3p^3(^3P)3d - 3p^3(^3P)4p$	$^4D - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	B21
Cl III	1979.46	300		$3p^3(^3P)3d - 3p^3(^3P)4p$	$^4D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B21
Cl III	1983.61	500		$3p^3(^3P)3d - 3p^3(^3P)4p$	$^4D - ^4D^o$	$\frac{5}{2} - \frac{5}{2}$	B21

CHLORINE IV (Cl^{3+}), $Z = 17$
 Ground State $1s^2 2s^2 2p^3 3s^2 \rho^2 \ ^3P_0$ (14 electrons)
 Ionization Potential $431\,226\text{ cm}^{-1}$; 53.46 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl IV	318.75	100		$3p^3 - 3p\ 5s$	$g^3P - ^3P^o$	1 - 2	B21
Cl IV	319.51	100		$3p^3 - 3p\ 5s$	$g^3P - ^3P^o$	0 - 1	B21
Cl IV	319.62	300		$3p^3 - 3p\ 5s$	$g^3P - ^3P^o$	2 - 2	B21
Cl IV	319.99	10		$3p^3 - 3p\ 5s$	$g^3P - ^3P^o$	1 - 1	B21
Cl IV	320.25	100		$3p^3 - 3p\ 5s$	$g^3P - ^3P^o$	1 - 0	B21
Cl IV	320.88	100		$3p^3 - 3p\ 5s$	$g^3P - ^3P^o$	2 - 1	B21
Cl IV	331.84	200		$3p^3 - 3p\ 5s$	$^1D - ^1P^o$	2 - 1	B22
Cl IV	437.83	400		$3s\ 3p^3 - 3s\ 3p^3(^4P)4s$	$^4S^o - ^4P$	2 - 3	B21
Cl IV	439.26	300		$3s\ 3p^3 - 3s\ 3p^3(^4P)4s$	$^4S^o - ^4P$	2 - 2	B21
Cl IV	440.25	200		$3s\ 3p^3 - 3s\ 3p^3(^4P)4s$	$^4S^o - ^4P$	2 - 1	B21
Cl IV	463.01	300		$3p^3 - 3p\ 4s$	$g^3P - ^3P^o$	1 - 2	B17
Cl IV	464.29	300		$3p^3 - 3p\ 4s$	$g^3P - ^3P^o$	0 - 1	B17
Cl IV	464.86	400		$3p^3 - 3p\ 4s$	$g^3P - ^3P^o$	2 - 2	B17
Cl IV	465.35	300		$3p^3 - 3p\ 4s$	$g^3P - ^3P^o$	1 - 1	B17
Cl IV	466.13	300		$3p^3 - 3p\ 4s$	$g^3P - ^3P^o$	1 - 0	B17
Cl IV	467.19	300		$3p^3 - 3p\ 4s$	$g^3P - ^3P^o$	2 - 1	B17
Cl IV	486.17	800		$3p^3 - 3p\ 4s$	$^1D - ^1P^o$	2 - 1	B22
Cl IV	534.73	800		$3p^3 - 3p\ 3d$	$g^3P - ^3D^o$	0 - 1	B21
Cl IV	535.04	400		$3p^3 - 3p\ 4s$	$^1S - ^1P^o$	0 - 1	B22
Cl IV	535.67	700		$?^3 - 3p\ 3d$	$g^3P - ^3D^o$	1 - 2	B21
Cl IV	536.15	600		$3p^3 - 3p\ 3d$	$g^3P - ^3D^o$	1 - 1	B21
Cl IV	537.61	900		$3p^3 - 3p\ 3d$	$g^3P - ^3D^o$	2 - 3	B21
Cl IV	538.12	600		$3p^3 - 3p\ 3d$	$g^3P - ^3D^o$	2 - 2	B21
Cl IV	538.60	400		$3p^3 - 3p\ 3d$	$g^3P - ^3D^o$	2 - 1	B21
Cl IV	549.22	500		$3p^3 - 3p\ 3d$	$g^3P - ^3P^o$	0 - 1	B21
Cl IV	550.02	400		$3p^3 - 3p\ 3d$	$g^3P - ^3P^o$	1 - 0	B21
Cl IV	550.71	300		$3p^3 - 3p\ 3d$	$g^3P - ^3P^o$	1 - 1	B21
Cl IV	551.12	200		$3p\ 3d - 3p\ 5p$	$^3D^o - ^3D$? 2 - 2	B21, K8
Cl IV	551.64	100		$3p\ 3d - 3p\ 5p$	$^3D^o - ^3D$? 1 - 1	B21, K8
Cl IV	552.02	700		$3p^3 - 3p\ 3d$	$g^3P - ^3P^o$	1 - 2	B21
Cl IV	553.30	600		$3p^3 - 3p\ 3d$	$g^3P - ^3P^o$	2 - 1	B21
Cl IV	554.21	100		$3p\ 3d - 3p\ 5p$	$^3P^o - ^3P$? 2 - 2	B21, K8
Cl IV	554.62	700		$5p^3 - 3p\ 3d$	$g^3P - ^3P^o$	2 - 2	B21
Cl IV	555.49	100b		$3p\ 3d - 3p\ 5p$	$^3P^o - ^3P$? 1 - 2	B21, K8
Cl IV	599.73	200		$3s^2\ 3p^3 - 3s\ 3p^3$	$g^3P - ^1P^o$	0 - 1	B22
Cl IV	601.50	500		$3s^2\ 3p^3 - 3s\ 3p^3$	$g^3P - ^1P^o$	1 - 1	B22
Cl IV	604.59	500		$3s^2\ 3p^3 - 3s\ 3p^3$	$g^3P - ^1P^o$	2 - 1	B22
Cl IV	607.09	300		$3s^2\ 3p^3 - 3s\ 3p^3$	$g^3P - ^3S^o$	0 - 1	B17
Cl IV	608.90	400		$3s^2\ 3p^3 - 3s\ 5p^3$	$g^3P - ^3S^o$	1 - 1	B17
Cl IV	612.07	400		$3s^2\ 3p^3 - 3s\ 3p^3$	$g^3P - ^3S^o$	2 - 1	B17
Cl IV	653.70	400		$3s^2\ 3p^3 - 3s\ 3p^3$	$^1D - ^1P^o$	2 - 1	B22
Cl IV	662.45	300		$3s^2\ 3p^3 - 3s\ 3p^3$	$^1D - ^3S^o$	2 - 1	B22
Cl IV	668.77	200		$3s\ 3p^3 - 3s^2\ 3p\ 4p$	$^3D^o - ^3P$	3 - 2	B21
Cl IV	672.43	10		$3s\ 3p^3 - 3s^2\ 3p\ 4p$	$^3D^o - ^3P$	1 - 0	B21
Cl IV	684.49	10		$3s\ 3p^3 - 3s^2\ 3p\ 4p$	$^3D^o - ^3D$	3 - 3	B21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl IV	745.21	400					
Cl IV	756.56	100		$3s^2 3p^2 - 3s 3p^3$	$^1S - ^1P^o$	0 - 1	B27
Cl IV	776.91	10		$3s^2 3p^2 - 3s 3p^3$	$^1S - ^3S^o$	0 - 1	B22
Cl IV	831.43	400		$3s 3p^2 - 3s^2 3p^4 p$	$^3P^o - ^3D$	2 - 3	B21
Cl IV	834.66	300		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2P^o$	0 - 1	B17
Cl IV	834.84	500		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2P^o$	1 - 0	B17
Cl IV	844.97	500		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2P^o$	1 - 1	B17
Cl IV	840.81	400		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2P^o$	1 - 2	B17
Cl IV	840.93	600		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2P^o$	2 - 1	B17
Cl IV	865.3	600		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2P^o$	2 - 2	B17
Cl IV	973.21	500		$3s^2 3p^2 - 3s 3p^3$	$^1D - ^1D^o$	2 - 2	B2
Cl IV	977.56	600		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2D^o$	0 - 1	B17
Cl IV	977.90	400		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2D^o$	1 - 2	B17
Cl IV	984.95	700		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2D^o$	1 - 1	B17
Cl IV	985.75	400		$3s^2 3p^2 - 3s 3p^3$	$g^2P^o - ^2D^o$	2 - 3	B17
Cl IV	1413.39	100		$3p 3d - 3p 4p$	$g^2P^o - ^2D^o$	2 - 2	B17
Cl IV	1421.97	100		$3p 3d - 3p 4p$	$^3P^o - ^3P$	2 - 2	B21
Cl IV	1426.89	100		$3p 3d - 3p 4p$	$^3P^o - ^3P$	1 - 2	B21
Cl IV	1440.95	10		$3p 3d - 3p 4p$	$^3P^o - ^3P$	2 - 1	B21
Cl IV	1529.28	10		$3p 3d - 3p 4p$	$^3P^o - ^3P$	1 - 0	B21
Cl IV	1532.19	100		$3p 3d - 3p 4p$	$^3D^o - ^3P$	1 - 2	B21
Cl IV	1533.25	100		$3p 4p - 3p 5s$	$^3D - ^3P^o$	3 - 2	B21
Cl IV	1537.21	300		$3p 3d - 3p 4p$	$^3D^o - ^3P$	2 - 2	B21
Cl IV	1539.30	200		$3p 3d - 3p 4p$	$^3D^o - ^3P$	2 - 2	B21
Cl IV	1545.19	200		$3p 4p - 3p 5s$	$^3D^o - ^3P$	3 - 2	B21
Cl IV	1549.15	200		$3p 3d - 3p 4p$	$^3D^o - ^3P$	2 - 1	B21
Cl IV	1551.27	100		$3p 3d - 3p 4p$	$^3D^o - ^3P$	1 - 1	B21
Cl IV	1617.43	100		$3p 3d - 3p 4p$	$^3D^o - ^3P$	2 - 1	B21
Cl IV	1622.86	200		$3p 4p - 3p 5s$	$^3D^o - ^3P$	1 - 0	B21
Cl IV	1638.95	10		$3p 3d - 3p 4p$	$^3P - ^3P^o$	2 - 2	B21
Cl IV	1643.40	100		$3p 3d - 3p 4p$	$^3D^o - ^3D$	3 - 3	B21
Cl IV	1648.04	10		$3p 3d - 3p 4p$	$^3D^o - ^3D$	1 - 2	B21
Cl IV	1651.21	100		$3p 3d - 3p 4p$	$^3D^o - ^3D$	2 - 2	B21
Cl IV				$3p 3d - 3p 4p$	$^3D^o - ^3D$	3 - 2	B21
Cl IV				$3p 3d - 3p 4p$	$^3D^o - ^3D$	1 - 1	B21

CHLORINE V (Cl⁴⁺), Z = 17
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 P_{1/2}$ (13 electrons)
 Ionization Potential 547 000 cm⁻¹; 67.8 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl V	236.44	100					
Cl V	237.23	200		$3p - 5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Cl V	286.13	200		$3p - 5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P18
Cl V	287.33	300		$3p - 4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl V	372.59	200		$3p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	B21
Cl V	373.17	200		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	B21
Cl V	373.78	300		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl V	373.91	10		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	B21
Cl V	374.66	100		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	B21
Cl V	375.10	200		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl V	390.15	400		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	B21
Cl V	392.43	500		$3p - 4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B21
Cl V	535.46	200		$3p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl V	535.92	200		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B21
Cl V	536.53	300		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$	B21
Cl V				$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	B21
Cl V				$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{1}{2}$	B21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl V	537.01	400		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4D ^o	3/2 - 3/2	B21
Cl V	537.46	300		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4D ^o	3/2 - 1/2	P18
Cl V	538.03	500		3p - 3d	g ² P ^o - 2D	1/2 - 3/2	B17
Cl V	538.68	400		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4D ^o	3/2 - 3/2	B21
Cl V	538.98	300		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4D ^o	3/2 - 1/2	B21
Cl V	539.44	10		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4F ^o	3/2 - 3/2	B21
Cl V	541.28	300		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4P ^o	1/2 - 1/2	P18
Cl V	542.23	800		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4P ^o	1/2 - 3/2	P18
Cl V	542.30	600		3p - 3d	g ² P ^o - 2D	1/2 - 3/2	B17
Cl V	542.40	300		3p - 3d	g ² P ^o - 2D	3/2 - 3/2	B17
Cl V	542.87	400		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4P ^o	3/2 - 1/2	P18
Cl V	543.82	100		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4P ^o	3/2 - 3/2	P18
Cl V	545.11	1000		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4P ^o	3/2 - 3/2	P18
Cl V	546.33	600		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4P ^o	3/2 - 3/2	P18
Cl V	547.63	1000		3s 3p ² - 3s 3p(2P ^o) 3d	4P - 4P ^o	3/2 - 3/2	P18
Cl V	629.35	300		3s ² 3p - 3s 3p ²	g ² P ^o - 2P	1/2 - 3/2	B17
Cl V	633.19	400		3s ² 3p - 3s 3p ²	g ² P ^o - 2P	1/2 - 1/2	B17
Cl V	635.32	400		3s ² 3p - 3s 3p ²	g ² P ^o - 2P	3/2 - 3/2	B17
Cl V	639.23	300		3s ² 3p - 3s 3p ²	g ² P ^o - 2P	3/2 - 1/2	B17
Cl V	676.79	300		3s 3p ² - 3p ²	4P - 4S ^o	1/2 - 3/2	B17
Cl V	679.26	300		3s 3p ² - 3p ²	4P - 4S ^o	3/2 - 3/2	B17
Cl V	681.92	400		3s ² 3p - 3s 3p ²	g ² P ^o - 2S	1/2 - 1/2	B17
Cl V	683.17	400		3s 3p ² - 3p ²	4P - 4S ^o	3/2 - 3/2	B17
Cl V	688.93	400		3s ² 3p - 3s 3p ²	g ² P ^o - 2S	3/2 - 1/2	B17
Cl V	715.55			3s 3p ² - 3p ²	2D - 2P ^o	? 3/2 - 1/2	F4
Cl V	716.19			3s 3p ² - 3p ²	2D - 2P ^o	? 3/2 - 3/2	F4
Cl V	883.13	400		3s ² 3p - 3s 3p ²	g ² P ^o - 2D	1/2 - 3/2	B17
Cl V	894.34	400		3s ² 3p - 3s 3p ²	g ² P ^o - 2D	3/2 - 3/2	B17
Cl V	894.91	100		3s ² 3p - 3s 3p ²	g ² P ^o - 2D	3/2 - 3/2	B17
Cl V	914.5			3s 3p ² - 3p ²	2D - 2D ^o	? 3/2 - 3/2	B2

CHLORINE VI (Cl⁵⁺), Z = 17
 Ground State 1s²2s²2p⁶3s² 4S₀ (12 electrons)
 Ionization Potential [782 600] cm⁻¹; [97.03] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl VI	194.80	100		3s 3p - 3s 5d	2P ^o - 2D	1 - 2	P6
Cl VI	195.23	150		3s 3p - 3s 5d	2P ^o - 2D	2 - 3	P6
Cl VI	242.89	250		3s 3p - 3s 4d	2P ^o - 2D	0 - 1	P6
Cl VI	243.19	400		3s 3p - 3s 4d	2P ^o - 2D	1 - 2	P6
Cl VI	243.21	100		3s 3p - 3s 4d	2P ^o - 2D	1 - 1	P6
Cl VI	243.85	600		3s 3p - 3s 4d	2P ^o - 2D	2 - 3	P6
Cl VI	243.88	150		3s 3p - 3s 4d	2P ^o - 2D	2 - 2	P6
Cl VI	323.36	600		3s 3p - 3s 4s	2P ^o - 2S	0 - 1	P6
Cl VI	323.94	800		3s 3p - 3s 4s	2P ^o - 2S	1 - 1	P6
Cl VI	325.16	1000		3s 3p - 3s 4s	2P ^o - 2S	2 - 1	P6
Cl VI	399.94	250		3s 3d - 3s 4f	2D - 2F ^o	1 - 2	P6
Cl VI	399.96	350		3s 3d - 3s 4f	2D - 2F ^o	2 - 3	P6
Cl VI	400.00	400		3s 3d - 3s 4f	2D - 2F ^o	3 - 4	P6
Cl VI	550.36	250		3s 3p - 3s 3d	2P ^o - 2D	0 - 1	P6
Cl VI	551.99	500		3s 3p - 3s 3d	2P ^o - 2D	1 - 2	F6
Cl VI	552.05	100		3s 3p - 3s 3d	2P ^o - 2D	1 - 1	P6
Cl VI	555.49	1000b		3s 3p - 3s 3d	2P ^o - 2D	2 - 3	P6
Cl VI	555.58	150		3s 3p - 3s 3d	2P ^o - 2D	2 - 2	P6
Cl VI	565.48	400b		3p ² - 3p 3d	2P - 2D ^o	0 - 1	P18
Cl VI	566.63	200		3p ² - 3p 3d	2P - 2D ^o	1 - 2	P18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl VI	567.48	100					
Cl VI	570.33	400		$3p^2 - 3p3d$	$^2P - ^2D$	1 - 1	P18
Cl VI	570	200		$3p^2 - 3p3d$	$^2P - ^2D$	2 - 3	P18
Cl VI	570.86	10		$3p^2 - 3p3d$	$^2P - ^2D$	2 - 2	P18
Cl VI	571.38	100		$3p^2 - 3p3d$	$^2P - ^2P$	1 - 0	P18
					$^2P - ^2P$	0 - 1	P18
Cl VI	571.44	10					
Cl VI	576.42	200		$3p^2 - 3p3d$	$^2P - ^2D$	2 - 1	P18
Cl VI	577.44	100		$3p^2 - 3p3d$	$^2P - ^2P$	1 - 2	P18
Cl VI	580.44	200		$3p^2 - 3p3d$	$^2P - ^2P$	2 - 1	P18
Cl VI	624.11			$3p^2 - 3p3d$	$^2P - ^2P$	2 - 2	P18
					$^1D - ^1D$	2 - 2	F2
Cl VI	668.30						
Cl VI	671.37	400		$3p^2 - 3p3d$	$^1S - ^1P$	0 - 1	F2
Cl VI	724.13	150		$3s^2 - 3s3p$	$^4S - ^1P$	0 - 1	B27
Cl VI	727.54	150		$3s3p - 3p^2$	$^2P - ^2P$	1 - 2	P6
Cl VI	730.31	200		$3s3p - 3p^2$	$^2P - ^2P$	0 - 1	P6
					$^2P - ^2P$	2 - 2	P6
Cl VI	733.89	150					
Cl VI	736.76	150		$3s3p - 3p^2$	$^2P - ^2P$	1 - 0	P6
Cl VI	755.55			$3s3p - 3p^2$	$^2P - ^2P$	2 - 1	P6
Cl VI	756.37			$3s3d - 3p3d$	$^1D - ^1D$	3 - 3	F2
Cl VI	757.68			$3s3d - 3p3d$	$^1D - ^1D$	2 - 2	F2
					$^1D - ^1D$	1 - 1	F2
Cl VI	773.82						
Cl VI	786.44			$3s3d - 3p3d$	$^2D - ^2P$	3 - 2	F2
Cl VI	1021.94			$3s3p - 3p^2$	$^1P - ^1S$	1 - 0	F2
Cl VI	1245.77			$3s^2 - 3s3p$	$^4S - ^2P$	0 - 1	K8
Cl VI	1767.7			$3s3p - 3s3d$	$^1P - ^1D$	1 - 2	F2
				$3s4p - 3s4d$	$^2P - ^2D$	0 - 1	B2
Cl VI	1772.0						
Cl VI	1783.3			$3s4p - 3s4d$	$^2P - ^2D$?	B2
					$^2P - ^2D$?	B2

CHLORINE VII (Cl^{6+}), $Z = 17$
 Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)
 Ionization Potential $921\,051\text{ cm}^{-1}$; 114.193 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl VII	133.11						
Cl VII	149.37			$3s - 6p$	$g^2S - ^2P$	$\frac{1}{2} - \frac{3}{2}$	D1
Cl VII	149.43			$3s - 5p$	$g^2S - ^2P$	$\frac{1}{2} - \frac{3}{2}$	D1
Cl VII	155.32			$3p - 6d$	$g^2S - ^2P$	$\frac{1}{2} - \frac{3}{2}$	D1
Cl VII	155.78			$3p - 6d$	$^2P - ^2D$	$\frac{1}{2} - \frac{3}{2}$	D1
					$^2P - ^2D$	$\frac{3}{2} - \frac{5}{2}$	D1
Cl VII	174.04	150					
Cl VII	174.60	200		$3p - 5d$	$^2P - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P15
Cl VII	190.59	100		$3p - 5d$	$^2P - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P15
Cl VII	191.28	200		$3p - 5s$	$^2P - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P15
Cl VII	196.12	500		$3p - 5s$	$^2P - ^2S$	$\frac{3}{2} - \frac{3}{2}$	P15
				$3s - 4p$	$g^2S - ^2P$	$\frac{1}{2} - \frac{3}{2}$	P15
Cl VII	196.39	400					
Cl VII	207.76	200		$3s - 4p$	$g^2S - ^2P$	$\frac{1}{2} - \frac{1}{2}$	P15
Cl VII	224.14	300		$3d - 6f$	$^2D - ^2F$	$\frac{1}{2} - \frac{3}{2}$	P15
Cl VII	225.08	500		$3p - 4d$	$^2P - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P15
Cl VII	240.83	300		$3p - 4d$	$^2P - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P15
				$3d - 5f$	$^2D - ^2F$	$\frac{3}{2} - \frac{5}{2}$	P15
					$^2D - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P15
Cl VII	240.87	200					
Cl VII	293.25	400		$3d - 5f$	$^2D - ^2F$	$\frac{1}{2} - \frac{3}{2}$	P15
Cl VII	294.90	500		$3p - 4s$	$^2P - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P15
Cl VII	340.23	750		$3p - 4s$	$^2P - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P15
Cl VII	340.30	900		$3d - 4f$	$^2D - ^2F$	$\frac{1}{2} - \frac{3}{2}$	P15
				$3d - 4f$	$^2D - ^2F$	$\frac{3}{2} - \frac{3}{2}$	P15
					$^2D - ^2F$	$\frac{5}{2} - \frac{3}{2}$	P15

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl VII	455.27	100		3d - 4p	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	P15
Cl VII	456.56	50		3d - 4p	$^3D - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	P15
Cl VII	532.7			4p - 5d	$^3P^o - ^3D$?	B2
Cl VII	598.21	600		3p - 3d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	P15
Cl VII	604.79	1000		3p - 3d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P15
Cl VII	605.05	50		3p - 3d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	P15
Cl VII	800.70	150		3s - 3p	$g^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	B28, P15
Cl VII	813.00	100		3s - 3p	$g^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	B28, P15
Cl VII	820.7			4f - 5g	$^3F^o - ^3G$?	B2
Cl VII	943.8			5f - 7g	$^3F^o - ^3G$?	B2
Cl VII	949.2			5g - 7h	$^3G - ^3H^o$?	B2
Cl VII	1356.3			5d - 6f	$^3D - ^3F^o$?	B2
Cl VII	1509.2			5f - 6g	$^3F^o - ^3G$?	B2
Cl VII	1521.0			5g - 6h	$^3G - ^3H^o$?	B2
Cl VII	1531.0			6h - 8i	$^3H^o - ^3I$?	B2
Cl VII	1668.8			4p - 4d	$^3P^o - ^3D$?	B2
Cl VII	1686.5			4p - 4d	$^3P^o - ^3D$?	B2

CHLORINE VIII (Cl⁷⁺), Z = 17Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)Ionization Potential $2\ 809\ 100\ \text{cm}^{-1}$; 348.28 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl VIII	39.462	100		$2p^6 - 2p^5 5d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E17
Cl VIII	39.655	10		$2p^6 - 2p^5 5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E17
Cl VIII	41.636	1		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^1P^o$	0 - 1	E:7
Cl VIII	42.166	10		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^3P^o$	0 - 1	E17
Cl VIII	42.220	200		$2p^6 - 2p^5 4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E17
Cl VIII	42.430	100		$2p^6 - 2p^5 4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E17
Cl VIII	44.361	200b		$2p^6 - 2p^5 4s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E17
Cl VIII	44.603	200		$2p^6 - 2p^5 4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E17
Cl VIII	49.487	700		$2p^6 - 2p^5 3d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E17
Cl VIII	50.074	500		$2p^6 - 2p^5 3d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E17
Cl VIII	50.700	200		$2p^6 - 2p^5 3d$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	E17
Cl VIII	58.673	1000		$2p^6 - 2p^5 3s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E17
Cl VIII	59.191	900		$2p^6 - 2p^5 3s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E17

CHLORINE IX (Cl^{9+}), $Z = 17$
 Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
 Ionization Potential $3\ 225\ 700\ \text{cm}^{-1}$; $400.05\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl IX	42.940	100		$2p^5 - 2p^4 3d$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	43.168	120		$2p^5 - 2p^4 3d$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	44.003	200		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - X_1$	$\frac{3}{2} - \frac{1}{2}$	E17
Cl IX	44.088	400		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - X_2$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	44.183	230		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - X_4$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	44.267	300b		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - X_1$	$\frac{1}{2} - \frac{1}{2}$	E17
Cl IX	44.361	200b		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - X_2$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	44.530	100		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - X_5$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	45.112	400		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_1$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	45.261	200		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_3$	$\frac{3}{2} - \frac{1}{2}$	E17
Cl IX	45.332	100		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_2$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	45.378	300		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_4$	$\frac{3}{2} - \frac{1}{2}$	E17
Cl IX	45.396	300b		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_1$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	45.465	10		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_5$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	45.519	200		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_6$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	45.539	200		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_2$	$\frac{1}{2} - \frac{1}{2}$	E17
Cl IX	45.657	100		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_4$	$\frac{1}{2} - \frac{1}{2}$	E17
Cl IX	45.745	10		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - X_5$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	46.098	100		$2s 2p^6 - 2s 2p^5(^2P^o)3d$	$^3S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	46.242	10		$2s 2p^6 - 2s 2p^5(^2P^o)3d$	$^3S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E17
Cl IX	49.234	100		$2p^5 - 2p^4 3s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E17
Cl IX	49.568	100		$2p^5 - 2p^4 3s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E17
Cl IX	51.026	400		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^1D$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	51.378	300		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	52.055	200		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E17
Cl IX	52.303	400		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	52.426	300		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E17
Cl IX	52.677	200		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	52.726	300		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl IX	52.939	10		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E17
Cl IX	52.959	1		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	E17
Cl IX	53.108	1		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	53.448	10		$2s 2p^6 - 2s 2p^5(^2P^o)3s$	$^3S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E17
Cl IX	53.696	100		$2s 2p^6 - 2s 2p^5(^2P^o)3s$	$^3S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E17
Cl IX	180.71			$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	D1
Cl IX	185.26			$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	D1

CHLORINE X (Cl^{8+}), $Z = 17$
 Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
 Ionization Potential $3\ 674\ 900\ \text{cm}^{-1}$; $455.62\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl X	39.01	250		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3D^o$? 2 - 3	F3, K8
Cl X	39.253	10		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^3D^o$? 2 - 3	E17
Cl X	39.77	250		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3S^o$? 2 - 1	F3, K8
Cl X	39.956	100		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3P^o$? 2 - 2	E17
Cl X	40.085	200		$2p^4 - 2p^3(^2D^o)3d$	$g^3P - ^3D^o$? 2 - 3	E17

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl X	40.136	1		$2p^4 - 2p^3(^2D^{\circ})3d$	$g^2P - ^3P^{\circ}$	1 - 2	E17
Cl X	40.49	250		$2p^4 - 2p^3(^2P^{\circ})3d$	$^1D - ^3P^{\circ}$	2 - 1	F3, K8
Cl X	40.660	100		$2p^4 - 2p^3(^2D^{\circ})3d$	$^1D - ^1F^{\circ}$	2 - 3	E17
Cl X	40.994	10		$2p^4 - 2p^3(^2D^{\circ})3d$	$^1D - ^1D^{\circ}$	2 - 2	E17
Cl X	41.390	100		$2p^4 - 2p^3(^4S^{\circ})3d$	$g^2P - ^3D^{\circ}$	2 - 3	E17
Cl X	41.582	10		$2p^4 - 2p^3(^4S^{\circ})3d$	$g^2P - ^3D^{\circ}$	1 - 2	E17
Cl X	44.361	200b		$2p^4 - 2p^3(^2P^{\circ})3s$	$g^2P - ^3P^{\circ}$	2 - 2	E17, G13
Cl X	45.396	300b		$2p^4 - 2p^3(^2D^{\circ})3s$	$g^2P - ^3D^{\circ}$	2 - 3	E17
Cl X	45.431	10		$2p^4 - 2p^3(^2P^{\circ})3s$	$^1D - ^1P^{\circ}$	2 - 1	E17
Cl X	45.626	15		$2p^4 - 2p^3(^2D^{\circ})3s$	$g^2P - ^3D^{\circ}$	1 - 2	E17
Cl X	46.476	200		$2p^4 - 2p^3(^2D^{\circ})3s$	$^1D - ^1D^{\circ}$	2 - 2	E17
Cl X	46.845	100		$2p^4 - 2p^3(^4S^{\circ})3s$	$g^2P - ^3S^{\circ}$	2 - 1	E17
Cl X	46.908	10		$2p^4 - 2p^3(^2P^{\circ})3s$	$^1S - ^1P^{\circ}$	0 - 1	E17
Cl X	47.085	15		$2p^4 - 2p^3(^4S^{\circ})3s$	$g^2P - ^3S^{\circ}$	1 - 1	E17
Cl X	164.5			$2s^2 2p^4 - 2s 2p^5$	$^1D - ^1P^{\circ}$	2 - 1	D1
Cl X	186.06			$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^{\circ}$	0 - 1	F16
Cl X	201.50			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^3P^{\circ}$	2 - 1	D1
Cl X	203.80			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^3P^{\circ}$	1 - 0	D1
Cl X	205.40			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^3P^{\circ}$	2 - 2	D1
Cl X	206.02			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^3P^{\circ}$	1 - 1	D1
Cl X	207.41			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^3P^{\circ}$	0 - 1	D1
Cl X	210.08			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^3P^{\circ}$	1 - 2	D1

CHLORINE XI (Cl^{10+}), Z = 17
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}^{\circ}$ (7 electrons)
 Ionization Potential 4 268 900 cm^{-1} ; 529.26 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
Cl XI	36.29			$2p^3 - 2p^2(^3P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F16
Cl XI	36.67			$2p^3 - 2p^2(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F16
Cl XI	37.05			$2p^3 - 2p^2(^3P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F:6
Cl XI	41.392	10		$2p^3 - 2p^2(^3P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl XI	40.787	10		$2p^3 - 2p^2(^1D)3s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E17
Cl XI	162.83			$2s^2 2p^3 - 2s 2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	166.07			$2s^2 2p^3 - 2s 2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	166.63			$2s^2 2p^3 - 2s 2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	177.00			$2s^2 2p^3 - 2s 2p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	D2
Cl XI	177.96			$2s^2 2p^3 - 2s 2p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	180.85			$2s^2 2p^3 - 2s 2p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F16
Cl XI	181.84			$2s^2 2p^3 - 2s 2p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	190.03			$2s 2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	F:6
Cl XI	190.94			$2s^2 2p^3 - 2s 2p^4$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	D2
Cl XI	192.06			$2s^2 2p^3 - 2s 2p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	D2
Cl XI	195.68			$2s 2p^4 - 2p^5$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F16
Cl XI	209.18			$2s^2 2p^3 - 2s 2p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	209.93			$2s^2 2p^3 - 2s 2p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	233.17			$2s^2 2p^3 - 2s 2p^4$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	D2
Cl XI	234.67			$2s^2 2p^3 - 2s 2p^4$	$^2P^{\circ} - ^2E$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	234.84			$2s^2 2p^3 - 2s 2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	D2
Cl XI	237.42			$2s^2 2p^3 - 2s 2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	D2
Cl XI	242.76			$2s^2 2p^3 - 2s 2p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	D2

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

CHLORINE XII (Cl¹¹⁺), Z = 17
 Ground State 1s²2s²2p³ 3P₀ (6 electrons)
 Ionization Potential 4 774 700 cm⁻¹; 591.97 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl XII	33.54	250		2s ² 2p ³ - 2s ² 2p3d	g ³ P - ³ P°	? 0-1	F3
Cl XII	33.58	350		2s ² 2p ³ - 2s ² 2p3d	g ³ P - ³ P°	? 1-0	F3
Cl XII	33.74	350		2s ² 2p ³ - 2s ² 2p3d	g ³ P - ³ P°	? 2-2	F3
Cl XII	33.81	450		2s ² 2p ³ - 2s ² 2p3d	g ³ P - ³ D°	? 2-3	F3
Cl XII	34.00	300		2s ² 2p ³ - 2s ² 2p ³ (³ D) ³ d	³ D° - ³ F	? 3-4	F3
Cl XII	34.03	350		2s ² 2p ³ - 2s ² 2p3d	¹ D - ¹ F°	? 2-3	F3
Cl XII	34.66	300		2s ² 2p ³ - 2s ² 2p3d	¹ D - ³ D°	? 2-3	F3
Cl XII	34.79	350		2s ² 2p ³ - 2s ² 2p3d	¹ D - ¹ D°	? 2-2	F3
Cl XII	36.68	350		2s ² 2p ³ - 2s ² 2p3s	g ³ P - ¹ P°	? 2-1	F3
Cl XII	36.86	300		2s ² 2p ³ - 2s ² 2p3s	g ³ P - ³ P°	? 2-2	F3
Cl XII	37.05	300		2s ² 2p ³ - 2s ² 2p3s	g ³ P - ³ P°	? 2-1	F3
Cl XII	37.67	200		2p ³ - 2p3s	¹ D - ¹ P°	? 2-1	F3, K8
Cl XII	37.88	200		2p ³ - 2p3s	¹ D - ³ P°	? 2-2	F3, K8
Cl XII	39.15	250		2p ³ - 2p3s	¹ S - ³ P°	? 0-1	F3, K8
Cl XII	172.06			2s ² 2p ³ - 2s2p ²	g ³ P - ³ S°	? 0-1	D2
Cl XII	174.21			2s ² 2p ³ - 2s2p ²	g ³ P - ³ S°	1-1	D2
Cl XII	175.71			2s ² 2p ³ - 2s2p ²	¹ D - ¹ P°	2-1	D2
Cl XII	177.11			2s ² 2p ³ - 2s2p ²	g ³ P - ³ S°	2-1	D2
Cl XII	196.33			2s2p ³ - 2p ⁴	³ D° - ³ P	1-0	F16
Cl XII	197.55			2s2p ³ - 2p ⁴	³ D° - ³ P	2-1	F16
Cl XII	199.37			2s ² 2p ³ - 2s2p ²	¹ D - ¹ D°	2-2	D2
Cl XII	200.96			2s ² 2p ³ - 2s2p ²	¹ S - ¹ P°	0-1	F16
Cl XII	202.54			2s2p ³ - 2p ⁴	³ D° - ³ P	3-2	F16
Cl XII	219.53			2s ² 2p ³ - 2s2p ²	g ³ P - ³ P°	0-1	D2
Cl XII	222.72			2s ² 2p ³ - 2s2p ²	g ³ P - ³ P°	1-2	D2
Cl XII	223.10			2s ² 2p ³ - 2s2p ²	g ³ P - ³ P°	1-1	F3
Cl XII	223.14			2s ² 2p ³ - 2s2p ²	g ³ P - ³ P°	1-0	F16
Cl XII	227.47			2s ² 2p ³ - 2s2p ²	g ³ P - ³ P°	2-2	D2
Cl XII	227.83			2s ² 2p ³ - 2s2p ²	g ³ P - ³ P°	2-1	D2
Cl XII	228.29			2s ² 2p ³ - 2s2p ²	³ P° - ³ P	1-2	F16
Cl XII	234.64			2s2p ³ - 2p ⁴	³ P° - ³ P	2-2	F16
Cl XII	257.43			2s ² 2p ³ - 2s2p ²	g ³ P - ³ D°	0-1	F16
Cl XII	262.32			2s ² 2p ³ - 2s2p ²	g ³ P - ³ D°	1-1	F16
Cl XII	262.60			2s ² 2p ³ - 2s2p ²	g ³ P - ³ D°	1-2	F16
Cl XII	268.77			2s ² 2p ³ - 2s2p ²	g ³ P - ³ D°	2-3	F16
Cl XII	269.21			2s ² 2p ³ - 2s2p ²	g ³ P - ³ P°	2-2	F16
Cl XII	331.94			2s2p ³ - 2p ⁴	³ S° - ³ P	1-2	F3

CHLORINE XIII (Cl¹²⁺), Z = 17
 Ground State 1s²2s²2p² 3P_{1/2} (5 electrons)
 Ionization Potential 5 296 700 cm⁻¹; 656.69 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl XIII	24.09	50		2s2p ² - 2s2p(¹ P°)4d	³ D - ³ F°	½ - ½	F3
Cl XIII	24.29	200		2s2p ² - 2s2p(¹ P°)4d	³ P - ³ D°	½ - ½	F3
Cl XIII?	24.40	50		2s2p ² - 2s2p(³ P°)4d	³ P - ³ D°	½ - ½	F3
Cl XIII	24.79	50		2s ² 2p - 2s ² 4s	g ² P° - ³ S	½ - ½	K8
Cl XIII	24.83	?					

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl XIII	24.86	50		2s 2p ² - 2s 2p (² P°) 4d	² P - ² D°	½ - ½	F3
Cl XIII	24.97	50		2s 2p ² - 2s 2p (² P°) 4d	² D - ² F°	½ - ½	F3
Cl XIII	31.12	250		2s 2p ² - 2s 2p (¹ P°) 3d	³ D - ³ F°	½ - ½	F3
Cl XIII	31.24	150		2s 2p ² - 2s 2p (¹ P°) 3d	¹ P - ¹ D°	½ - ½	F3
Cl XIII	31.35	300		2s ² 2p - 2s ² 3d	² P° - ² D	½ - ½	F3
Cl XIII	31.44	450		2s ² 2p - 2s ² 3d	² P° - ² D	½ - ½	F3
Cl XIII	31.47			2s 2p ² - 2s 2p (² P°) 3d	⁴ P - ⁴ D°	½ - ½	F9
Cl XIII?	31.60	250					F3
Cl XIII?	32.05	150					F3
Cl XIII	32.32	150		2s 2p ² - 2s 2p (² P°) 3d	² P - ² D°	½ - ½	F3
Cl XIII	32.43	200		2s 2p ² - 2s 2p (² P°) 3d	² P - ² D°	½ - ½	F3
Cl XIII	32.55	200		2s 2p ² - 2s 2p (² P°) 3d	² D - ² F°	½ - ½	F3
Cl XIII	33.04	150		2s 2p ² - 2s 2p (² P°) 3d	² D - ² D°	½ - ½	F3
Cl XIII	33.87	?		2s ² 2p - 2s ² 3s	² S - ² S	½ - ½	K8
Cl XIII	34.31	200		2s 2p ² - 2s 2p (² P°) 3d	² P - ² D°	?	F3, K8
Cl XIII	34.44	250		2s 2p ² - 2s 2p (² P°) 3d	² P - ² D°	?	F3, K8
Cl XIII	195.22			2s ² 2p - 2s 2p ²	² P° - ² P	½ - ½	F16
Cl XIII	198.40			2s ² 2p - 2s 2p ²	² P° - ² P	½ - ½	F16
Cl XIII	202.10			2s ² 2p - 2s 2p ²	² P° - ² P	½ - ½	F16
Cl XIII	205.47			2s ² 2p - 2s 2p ²	² P° - ² P	½ - ½	F16
Cl XIII	209.81			2s ² 2p - 2s 2p ²	² P° - ² S	½ - ½	F16
Cl XIII	217.77			2s ² 2p - 2s 2p ²	² P° - ² S	½ - ½	F16
Cl XIII	221.38			2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ½	F16
Cl XIII	224.60			2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ½	F16
Cl XIII	229.15			2s 2p ² - 2p ³	⁴ P - ⁴ S°	½ - ½	F16
Cl XIII	264.78			2s ² 2p - 2s 2p ²	² P° - ² D	½ - ½	F16
Cl XIII	277.17			2s ² 2p - 2s 2p ²	² P° - ² D	½ - ½	F16
Cl XIII	277.59			2s ² 2p - 2s 2p ²	² P° - ² D	½ - ½	F16
Cl XIII	290.7	?		2s 2p ² - 2p ³	² S - ² P°	½ - ½	K8
Cl XIII	302.24			2s 2p ² - 2p ³	² P - ² P°	½ - ½	F3
Cl XIII	407.48			2s 2p ² - 2p ³	² P - ² D°	½ - ½	F3
Cl XIII	419.46			2s 2p ² - 2p ³	² P - ² D°	½ - ½	F3

CHLORINE XIV (Cl¹³⁺), Z = 17
 Ground state 1s²2s² 1S₀ (4 electrons)
 Ionization Potential 6 047 200 cm⁻¹; 749.74 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl XIV	18.63	50		2s 2p - 2s 7d	³ P° - ³ D		F3
Cl XIV	19.58	50		2s 2p - 2s 6d	³ P° - ³ D		F3
Cl XIV	20.55	50		2s 2p - 2s 5d	³ P° - ³ D		F3
Cl XIV	20.84	50		2p ² - 2p 5d	³ P - ³ D°		F3
Cl XIV	22.00	50		2s 2p - 2p 4p	³ P° - ³ P		F3
Cl XIV	22.11	50		2s 2p - 2p 4p	³ P° - ³ D		F3
Cl XIV	22.37	50		2s 2p - 2s 4d	³ P° - ³ D	1 - 2	F3
Cl XIV	22.42	100		2s 2p - 2s 4d	³ P° - ³ D	2 - 3	F3
Cl XIV	22.86	100		2p ² - 2p 4d	³ P - ³ D°		F3
Cl XIV	27.65	250		2s 2p - 2p 3p	³ P° - ³ P	2 - 2	F3
Cl XIV	27.88	250		2s 2p - 2p 3p	³ P° - ³ D	2 - 3	F3
Cl XIV	28.12	250		2s ² - 2s 3p	¹ S - ¹ P°	0 - 1	F3
Cl XIV	28.9	?		2s 2p - 2p 3p	¹ P° - ¹ D	1 - 2	K8
Cl XIV	29.40	350		2s 2p - 2s 3d	³ P° - ³ D	1 - 2	F3
Cl XIV	29.52	450		2s 2p - 2s 3d	³ P° - ³ D	2 - 3	F3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl XIV	30.00	200		$2p^2 - 2p\ 3d$	$^3P - ^3P^o$		F3
Cl XIV	30.07	250		$2p^2 - 2p\ 3d$	$^3P - ^3P^o$		F3
Cl XIV	30.10	150		$2p^2 - 2p\ 3d$	$^3P - ^3D^o$	1-2	F3
Cl XIV	30.13	350		$2p^2 - 2p\ 3d$	$^3P - ^3D^o$	2-3	F3
Cl XIV	30.25	300		$2p^2 - 2p\ 3d$	$^1D - ^1F^o$	2-3	F3
Cl XIV	30.90	200		$2s\ 2p - 2s\ 3d$	$^1P^o - ^1D$	1-2	F3
Cl XIV	30.98	200		$2p^2 - 2p\ 3d$	$^1D - ^1D^o$	2-2	F3
Cl XIV	31.0	?		$2s\ 2p - 2s\ 3s$	$^3P^o - ^3S$	2-1	K8
Cl XIV	237.70			$2s^2 - 2s\ 2p$	$g^4S - ^1P^o$	0-1	F3
Cl XIV	276.13			$2s\ 2p - 2p^2$	$^3P^o - ^3P$	1-2	F16
Cl XIV	284.31			$2s\ 2p - 2p^2$	$^3P^o - ^3P$	1-1	F16
Cl XIV	286.26			$2s\ 2p - 2p^2$	$^3P^o - ^3P$	2-2	F16
Cl XIV	296.51			$2s\ 2p - 2p^2$	$^3P^o - ^3P$	1-0	F16
Cl XIV	295.05			$2s\ 2p - 2p^2$	$^3P^o - ^3P$	2-1	F16
Cl XIV	458.39			$2s\ 2p - 2p^2$	$^1P^o - ^1D$	1-2	F3
Cl XIV	460.8	?		$2s^2 - 2s\ 2p$	$g^4S - ^3P^o$	0-1	K8

CHLORINE XV (Cl^{14+}), $Z = 17$
 Ground State $1s^2 2s\ ^2S_{1/2}$ (3 electrons)
 Ionization Potential $6\ 528\ 300\ cm^{-1}$; 809.39 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl XV	17.10	50		$2p - 8d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F3
Cl XV	17.25	50		$2s - 6p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Cl XV	17.46	50		$2p - 7d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F3
Cl XV	17.96	50		$2p - 6d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F3
Cl XV	18.13	50		$2s - 5p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Cl XV	18.99	100		$2p - 5d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F3
Cl XV	20.13	150		$2s - 4p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Cl XV	21.10	100		$2p - 4d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F3
Cl XV	21.18	150		$2p - 4d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F3
Cl XV	21.41	50		$2p - 4s$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F3
Cl XV	26.66	350		$2s - 3p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Cl XV	26.67	350		$2s - 3p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	F3
Cl XV	28.27	300		$2p - 3d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F3
Cl XV	28.42	450		$2p - 3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F3
Cl XV	28.93	200		$2p - 3s$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F3
Cl XV	29.09	200		$2p - 3s$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F3
Cl XV	383.96			$2s - 2p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F3
Cl XV	415.50			$2s - 2p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	F3

CHLORINE XVI (Cl^{15+}), $Z = 17$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $29\ 507\ 950\ \text{cm}^{-1}$; $3658.425\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl XVI	3.53	P		$1s^2 - 1s5p$	$g^1S - ^1P^o$	0-1	K8
Cl XVI	3.60	P		$1s^2 - 1s4p$	$g^1S - ^1P^o$	0-1	K8
Cl XVI	3.80	P		$1s^2 - 1s3p$	$g^1S - ^1P^o$	0-1	K8
Cl XVI	4.44	P		$1s^2 - 1s2p$	$g^1S - ^1P^o$	0-1	K8
Cl XVI	4.46	P		$1s^2 - 1s2p$	$g^1S - ^1P^o$	0-1	K8
Cl XVI	4.51	?	I	$1s^2 - 1s2s$	$g^1S - ^2S$	0-1	K8

CHLORINE XVII (Cl^{16+}), $Z = 17$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential $31\ 829\ 006\ \text{cm}^{-1}$; $3946.19\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cl XVII	3.231	P		$1s - 6f$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Cl XVII	3.272	P		$1s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Cl XVII	3.351	P	10	$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Cl XVII	3.534	P	30	$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Cl XVII	4.187	P	100	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Cl XVII	13.69	P		2-7			G2
Cl XVII	14.15	P		2-6			G2
Cl XVII	14.97	P		2-5			G2
Cl XVII	16.76	P		2-4			G2
Cl XVII	22.61	P		2-3			G2
Cl XVII	34.70	P		3-7			G2
Cl XVII	37.77	P		3-6			G2
Cl XVII	44.26	P		3-5			G2
Cl XVII	64.72	P		3-4			G2
Cl XVII	74.82	P		4-7			G2
Cl XVII	90.7	P		4-6			G2
Cl XVII	140.0	P		4-5			G2
Cl XVII	160.8	P		5-7			G2
Cl XVII	257.8	P		5-6			G2
Cl XVII	427.6	P		6-7			G2

ARGON, Z = 18

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar	26.30	100					F16
Ar	27.79	50					F16
Ar	27.90	50					F16
Ar	40.42	50					F16
Ar	40.64	100					F16
Ar	41.08	50					F16
Ar	41.38	150					F16
Ar	43.42	150					F16
Ar	44.19	100					F16
Ar	44.79	150					F16
Ar	45.67	150					F16
Ar	46.26	50					F16
Ar	46.39	100					F16
Ar	46.53	150					F16
Ar	450.44	80					S6
Ar	465.02	150					S6
Ar	468.38	80					S6
Ar	470.57	80					S6
Ar	485.79	60					S6
Ar	486.60	300					S6
Ar	505.45	60					S6
Ar	539.79	50					S6
Ar	618.63	200					S6
Ar	631.68	60					S6
Ar	649.03	50					S6
Ar	664.93	50					S6
Ar	684.81	100					S6
Ar	701.11	150					S6
Ar	716.42	10					S6
Ar	720.94	10					S6
Ar	783.14	250					S6
Ar	783.65	120					S6
Ar	804.59	60					S6
Ar	820.96	50					S6
Ar	845.68	150					S6
Ar	893.50	50					S6
Ar	904.89	80					S6

ARGON I (Ar⁰⁺), Z = 18Ground State 1s²2s²2p⁶3s²3p⁶ 1S₀ (18 electrons)Ionization Potential 127 109.9 cm⁻¹; 15.759 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar I	806.88	80		3p ⁶ - 3p ⁵ (² P ^o)8s	g ¹ S - ½ [½] ^o	0 - 1	B31
Ar I	807.22	80		3p ⁶ - 3p ⁵ (² P ^o)7s	g ¹ S - ½ [½] ^o	0 - 1	B31
Ar I	807.70	80		3p ⁶ - 3p ⁵ (² P ^o)6d	g ¹ S - ½ [½] ^o	0 - 1	B31
Ar I	809.93	80		3p ⁶ - 3p ⁵ (² P ^o)6d	g ¹ S - ½ [½] ^o	0 - 1	B31
Ar I	816.23	160		3p ⁶ - 3p ⁵ (² P ^o)5d	g ¹ S - ½ [½] ^o	0 - 1	B31

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar I	816.47	160		$3p^6 - 3p^5(^2P^o)7s$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	B31
Ar I	820.13	10		$3p^6 - 3p^5(^2P^o)5d$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	B31
Ar I	825.346	40		$3p^6 - 3p^5(^2P^o)6s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E6, B31
Ar I	826.364	80		$3p^6 - 3p^5(^2P^o)4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E6, B31
Ar I	834.392	240		$3p^6 - 3p^5(^2P^o)4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E6, B31
Ar I	835.00	240		$3p^6 - 3p^5(^2P^o)6s$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	B31
Ar I	842.81	80		$3p^6 - 3p^5(^2P^o)4d$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E31
Ar I	866.80	200		$3p^6 - 3p^5(^2P^o)3d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	B31
Ar I	369.75	100		$3p^6 - 3p^5(^2P^o)5s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	B31
Ar I	876.06	200	4	$3p^6 - 3p^5(^2P^o)3d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	B31
Ar I	879.95	120		$3p^6 - 3p^5(^2P^o)5s$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	B31
Ar I	894.31	200	3	$3p^6 - 3p^5(^2P^o)3d$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	B31
Ar I	1048.22	1000	2	$3p^6 - 3p^5(^2P^o)4s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	B31
Ar I	1066.66	750	1	$3p^6 - 3p^5(^2P^o)4s$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	B31

ARGON II (Ar^{1+}), $Z = 18$
 Ground State $1s^22s^22p^63s^23p^5\ ^2P_{3/2}$ (17 electrons)
 Ionization Potential $222\ 848.2\ cm^{-1}$; $27.629\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar II	465.8365 st	15		$3p^5 - 3p^4(^1D)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	469.6301 st	30		$3p^5 - 3p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	472.8114 st	30		$3p^5 - 3p^4(^1D)6s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	475.9054 st	180		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	477.1048 st	120		$3p^5 - 3p^4(^2P)6d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	477.6068 st	30		$3p^5 - 3p^4(^2P)6d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	479.1678 st	30		$3p^5 - 3p^4(^2P)6d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	479.2177 st	60		$3p^5 - 3p^4(^2P)6d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	480.8108 st	30		$3p^5 - 3p^4(^2P)6d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	482.4451 st	15		$3p^5 - 3p^4(^2P)7s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	487.2272 st	300		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	488.7926 st	270		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	488.9615 st	120		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	489.1953 st	240		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	490.6495 st	290		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	490.7012 st	70		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	492.4083 st	150		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	492.6454 st	30		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	494.6676 st	15		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	496.6592 st	15		$3p^5 - 3p^4(^2P)5d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	499.9192 st	0		$3p^5 - 3p^4(^2P)6s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	500.8016 st	30		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	501.1897 st	60		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	501.3872 st	15		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	502.0276 st	15		$3p^5 - 3p^4(^2P)6s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	502.1629 st	60		$3p^5 - 3p^4(^2P)6s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	503.6503 st	60		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	504.8117 st			$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	505.0121 st	30		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	510.5509 st	30		$3p^5 - 3p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	510.5564 st	200		$3p^5 - 3p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	514.3100 st	210		$3p^5 - 3p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	518.9088 st	150	12	$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	519.3269 st	300	12	$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	M16
Ar II	522.7924 st	450	12	$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar II	524.6803 st	450		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	526.4969 st	210		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	528.6511 st	30		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	530.4954 st	450		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	533.0794 st	30		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	535.0711 st	15		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	537.1396 st	150		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	537.4193 st	30		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	540.8066 st	30		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	541.3019 st	60		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	542.9123 st	300		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	543.2032 st	450		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	543.508 st	20		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M14, M15
Ar II	543.7305 st	270		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	546.1768 st	240		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	547.1650 st	270		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	547.4605 st	360		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	547.9960 st	120		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	548.7808 st	210		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	550.4810 st	120		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	550.9045 st	30		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	553.1263 st	60		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	555.7659 st	90		$3p^5 - 3p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	556.8169 st	360		$3p^5 - 3p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	560.2232 st	270		$3p^5 - 3p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	572.0136 st	270	11	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	573.3619 st	360	11	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	576.7364 st	300	11	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	578.1071 st	270	11	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	578.6943 st	270	10	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	580.2631 st	360	10	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	583.4371 st	300	10	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	597.7000 st	360	9	$3p^5 - 3p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	602.8584 st	300	9	$3p^5 - 3p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	612.3715 st	300		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	661.8689 st	540	8	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	664.5622 st	300	8	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	666.0108 st	450	7	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	670.9455 st	600	8	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	671.8513 st	900	6	$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	672.8562 st	240	6	$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	676.2424 st	360		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	677.9518 st	300		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	679.2183 st	300		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	679.4005 st	450	6	$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	686.4883 st	180		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	691.0373 st	150		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	693.3018 st	180		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	697.4890 st	150	5	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	697.9418 st	180		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	698.7745 st	270	5	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	704.5237 st	270	5	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	718.0898 st	450	4	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	723.3605 st	900	4	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	725.5485 st	540	4	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	730.9297 st	360	4	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	737.4537 st	60	3	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	740.2691 st	450	3	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	744.9247 st	450	3	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	745.3222 st	360	3	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	748.1982 st	210	3	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M16
Ar II	753.3654 st	15	2	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	M16
Ar II	754.8239 st	210	2	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M16
Ar II	761.5791 st	60	2	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	M16
Ar II	762.2000 st	180	2	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	M16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar II	919.7810 st	1000	1	$3s^2 3p^6 - 3s 3p^6$	$g^3 P^o - ^3 S$	$\frac{3}{2} - \frac{1}{2}$	M16, M14
Ar II	932.0537 st	1000	1	$3s^2 3p^6 - 3s 3p^6$	$g^3 P^o - ^3 S$	$\frac{1}{2} - \frac{1}{2}$	M16, M14
Ar II	1001.29	1		$3s^2 3p^6 - 3s^2 3p^4 (^1D) 4f$	$^3 S - 2[1]^o$?	S23
Ar II	1268.483	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 D - 1[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1280.225	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 D - 2[4]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1282.620	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 D - 2[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1284.793	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 D - 2[3]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1324.51	30		$3p^4 (^2P) 4s - 3p^4 (^2P) 6f$	$^4 P - 2[1]^o$?	S23
Ar II	1348.751	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 0[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1351.353	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 0[3]^o$	$\frac{3}{2} - \frac{1}{2}$	M14, M15
Ar II	1354.915	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 1[4]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1357.435	20		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 1[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1360.735	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 1[2]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1363.032	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 1[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1376.106	50		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[3]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1376.956	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[4]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1377.211	400		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1377.442	20		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[2]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1379.378	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1379.884	300		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1380.728	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[2]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1382.228	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1382.770	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 D - 2[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1396.231	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 7f$	$^4 F - 2[5]^o$	$\frac{9}{2} - \frac{1}{2}$	M14, M15
Ar II	1451.879	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 F - 1[4]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1455.484	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 F - 0[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1459.878	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 F - 1[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1463.155	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 F - 2[5]^o$	$\frac{5}{2} - \frac{1}{2}$	M14, M15
Ar II	1464.176	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 F - 1[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1465.153	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 F - 2[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1474.537	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 6f$	$^4 F - 2[5]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1544.177	200		$3p^4 (^1D) 3d - 3p^4 (^1D) 5f$	$^2 G - 2[5]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1544.711	200		$3p^4 (^1D) 3d - 3p^4 (^1D) 5f$	$^2 G - 2[5]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1547.356	100		$3s 3p^6 - 3s^2 3p^4 (^1D) 4p$	$^3 S - ^3 D^o$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1557.305	100		$3p^4 (^2P) 3d - 3p^4 (^1D) 4f$	$^3 P - 2[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1559.072	300		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 0[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1560.191	400	14	$3s 3p^6 - 3s^2 3p^4 (^1D) 4p$	$^3 S - ^3 P^o$	$\frac{1}{2} - \frac{1}{2}$	M14, M15
Ar II	1562.442	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 0[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1563.043	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 1[3]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1565.377	100		$3p^4 (^2P) 3d - 3p^4 (^1D) 4f$	$^3 P - 2[1]^o$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1566.811	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 1[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1567.987	400		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 1[4]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1571.391	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 1[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1574.401	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 F - 0[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1574.993	600	14	$3s 3p^6 - 3s^2 3p^4 (^1D) 4p$	$^3 S - ^3 P^o$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1575.815	300		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 1[2]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1576.898	300		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 F - 1[4]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1578.812	300		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 1[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1580.770	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 F - 0[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1580.960	100		$3p^4 (^2P) 3d - 3p^4 (^1D) 4f$	$^3 P - 2[2]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1583.833	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 F - 1[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1586.261	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 F - 1[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1589.465	500		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 F - 2[5]^o$	$\frac{9}{2} - \frac{1}{2}$	M14, M15
Ar II	1590.233	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 F - 1[3]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1591.939	1		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[1]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1593.587	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 5f$	$^4 F - 2[4]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1594.799	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[2]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1595.737	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[1]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1596.151	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[1]^o$	$\frac{3}{2} - \frac{1}{2}$	M14, M15
Ar II	1598.575	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[3]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1598.722	200		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[2]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1598.880	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[1]^o$	$\frac{1}{2} - \frac{1}{2}$	M14, M15
Ar II	1599.130	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[3]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15
Ar II	1599.607	100		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[2]^o$	$\frac{5}{2} - \frac{3}{2}$	M14, M15
Ar II	1600.133	400		$3p^4 (^2P) 3d - 3p^4 (^2P) 4f$	$^4 D - 2[4]^o$	$\frac{7}{2} - \frac{5}{2}$	M14, M15

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar II	1600.694	600		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ D - 2[4] ^o	½ - ½	M14, M15
Ar II	1602.554	200		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ D - 2[2] ^o	½ - ½	M14, M15
Ar II	1602.891	200		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ F - 2[5] ^o	½ - ½	M14, M15
Ar II	1603.075	400		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ D - 2[3] ^o	½ - ½	M14, M15
Ar II	1603.442	400		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ D - 2[2] ^o	½ - ½	M14, M15
Ar II	1604.082	500		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ D - 2[4] ^o	½ - ½	M14, M15
Ar II	1606.197	300		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ D - 2[2] ^o	½ - ½	M14, M15
Ar II	1606.926	400		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ D - 2[3] ^o	½ - ½	M14, M15
Ar II	1607.180	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ F - 2[4] ^o	½ - ½	M14, M15
Ar II	1615.807	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ F - 2[3] ^o	½ - ½	M14, M15
Ar II	1616.972	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ F - 2[4] ^o	½ - ½	M14, M15
Ar II	1627.085	20		3p ⁴ (² P)3d - 3p ⁴ (² P)6f	² F - 1[4] ^o	½ - ½	M14, M15
Ar II	1628.825	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² P - 1[2] ^o	½ - ½	M14, M15
Ar II	1629.834	100		3p ⁴ (² P)3d - 3p ⁴ (² P)6f	² F - 2[5] ^o	½ - ½	M14, M15
Ar II	1640.345	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² P - 0[3] ^o	½ - ½	M14, M15
Ar II	1650.535	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² P - 1[3] ^o	½ - ½	M14, M15
Ar II	1653.322	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² P - 2[1] ^o	½ - ½	M14, M15
Ar II	1662.253	100		3p ⁴ (² P)3d - 3p ⁴ (¹ D)4f	² F - 2[4] ^o	½ - ½	M14, M15
Ar II	1686.076	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² P - 2[3] ^o	½ - ½	M14, M15
Ar II	1689.470	50		3p ⁴ (² P)3d - 3p ⁴ (¹ D)4f	² F - 2[4] ^o	½ - ½	M14, M15
Ar II	1701.358	100		3p ⁴ (² P)3d - 3p ⁴ (¹ D)4f	² F - 2[2] ^o	½ - ½	M14, M15
Ar II	1702.188	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 0[3] ^o	½ - ½	M14, M15
Ar II	1705.980	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 1[2] ^o	½ - ½	M14, M15
Ar II	1710.909	50		3p ⁴ (² P)3d - 3p ⁴ (¹ D)4f	² D - 2[2] ^o	½ - ½	M14, M15
Ar II	1713.218	200		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 1[3] ^o	½ - ½	M14, M15
Ar II	1718.680	100		3p ⁴ (² P)4p - 3p ⁴ (² P)7g	⁴ P ^o - 2[2]	½ - ½	M14, M15
Ar II	1719.346	200		3p ⁴ (² P)3d - 3p ⁴ (¹ D)4f	² D - 2[3] ^o	½ - ½	M14, M15
Ar II	1725.147	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 2[1] ^o	½ - ½	M14, M15
Ar II	1725.549	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 2[1] ^o	½ - ½	M14, M15
Ar II	1729.075	100		3p ⁴ (² P)3d - 3p ⁴ (¹ D)4f	² D - 2[2] ^o	½ - ½	M14, M15
Ar II	1729.259	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 2[2] ^o	½ - ½	M14, M15
Ar II	1733.372	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 2[1] ^o	½ - ½	M14, M15
Ar II	1735.378	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5p	⁴ D - ⁴ D ^o	½ - ½	M14, M15
Ar II	1736.834	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 2[2] ^o	½ - ½	M14, M15
Ar II	1750.694	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	⁴ P - 2[3] ^o	½ - ½	M14, M15
Ar II	1751.679	200		3p ⁴ (² P)3d - 3p ⁴ (² P)5p	⁴ D - ⁴ D ^o	½ - ½	M14, M15
Ar II	1755.819	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² F - 1[4] ^o	½ - ½	M14, M15
Ar II	1763.669	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5p	⁴ D - ⁴ P ^o	½ - ½	M14, M15
Ar II	1768.043	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5p	⁴ D - ⁴ P ^o	½ - ½	M14, M15
Ar II	1770.658	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² F - 0[3] ^o	½ - ½	M14, M15
Ar II	1771.829	200		3p ⁴ (² P)3d - 3p ⁴ (² P)5p	⁴ D - ⁴ P ^o	½ - ½	M14, M15
Ar II	1776.672	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5p	⁴ D - ⁴ P ^o	½ - ½	M14, M15
Ar II	1782.596	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² F - 1[3] ^o	½ - ½	M14, M15
Ar II	1785.672	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² F - 1[4] ^o	½ - ½	M14, M15
Ar II	1788.104	300		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² F - 2[5] ^o	½ - ½	M14, M15
Ar II	1791.561	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² F - 2[3] ^o	½ - ½	M14, M15
Ar II	1793.435	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² F - 2[4] ^o	½ - ½	M14, M15
Ar II	1795.10	30		3p ⁴ (² P)4p - 3p ⁴ (² P)7g	¹ D ^o - 2[3]	?	S23
Ar II	1812.475	50		3p ⁴ (² P)4s - 3p ⁴ (² P)5p	⁴ P - ⁴ D ^o	½ - ½	M14, M15
Ar II	1813.014	100		3p ⁴ (¹ D)3d - 3p ⁴ (¹ D)4f	² G - 2[4] ^o	½ - ½	M14, M15
Ar II	1813.766	100		3p ⁴ (¹ D)3d - 3p ⁴ (¹ D)4f	² G - 2[4] ^o	½ - ½	M14, M15
Ar II	1815.98	15		3p ⁴ (¹ D)3d - 3p ⁴ (¹ D)4f	² G - 2[3] ^o	?	S23
Ar II	1816.14	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² D - 1[4] ^o	½ - ½	M14, M15
Ar II	1822.205	100		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² F - 2[3] ^o	½ - ½	M14, M15
Ar II	1824.842	50		3p ⁴ (² P)4s - 3p ⁴ (² P)5p	⁴ P - ⁴ P ^o	½ - ½	M14, M15
Ar II	1830.770	500		3p ⁴ (¹ D)3d - 3p ⁴ (¹ D)4f	² G - 2[5] ^o	½ - ½	M14, M15
Ar II	1831.527	500		3p ⁴ (¹ D)3d - 3p ⁴ (¹ D)4f	² G - 2[5] ^o	½ - ½	M14, M15
Ar II	1834.038	200		3p ⁴ (² P)4s - 3p ⁴ (² P)5p	⁴ P - ⁴ P ^o	½ - ½	M14, M15
Ar II	1854.986	50		3p ⁴ (² P)3d - 3p ⁴ (² P)5f	² D - 2[3] ^o	½ - ½	M14, M15
Ar II	1866.089	100		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ F - 1[3] ^o	½ - ½	M14, M15
Ar II	1868.660	300		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ F - 0[3] ^o	½ - ½	M14, M15
Ar II	1872.589	100		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ F - 1[4] ^o	½ - ½	M14, M15
Ar II	1873.140	600		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ F - 1[4] ^o	½ - ½	M14, M15
Ar II	1877.523	400		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	² F - 0[3] ^o	½ - ½	M14, M15
Ar II	1879.420	100		3p ⁴ (² P)3d - 3p ⁴ (² P)4f	⁴ F - 1[3] ^o	½ - ½	M14, M15

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar II	1879.790	200		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 1[3]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1886.386	400		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 1[4]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1887.42	30		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 1[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S23
Ar II	1888.782	400		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 1[3]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1889.029	600		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[5]^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M14, M15
Ar II	1897.352	50		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 1[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1898.36	15		$3p^4(^2P)3d - 3p^4(^1D)5p$	$^3D - ^3F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S23
Ar II	1899.287	100		$3p^4(^2P)4p - 3p^4(^2P)6d$	$^4P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1899.847	100		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[4]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1900.638	400		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[4]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1907.988	400		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[5]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1909.5689 ST	50		$3s3p^6 - 3s^23p^4(^2P)4p$	$^2S - ^2S^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	H4, M14, M15
Ar II	1911.053	50		$3s3p^6 - 3s^23p^4(^2P)4p$	$^2S - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1917.79	30		$3p^4(^2P)4p - 3p^4(^2P)6d$	$^4D^{\circ} - ^3F$	$\frac{1}{2} - \frac{3}{2}$	S23
Ar II	1919.199	300		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[4]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1920.007	200		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[4]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1927.19	10		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S23
Ar II	1931.419	100		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[3]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1932.230	200		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[3]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1933.694	200		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[4]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1937.041	100		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1941.0724 ST	300	13	$3s3p^6 - 3s^23p^4(^2P)4p$	$^2S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H4, M14, M15
Ar II	1942.13	30		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^4F - 2[3]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S23
Ar II	1946.795	200		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^3P - 1[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1961.3610 ST	400	13	$3s3p^6 - 3s^23p^4(^2P)4p$	$^2S - ^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H4, M14, M15
Ar II	1962.161	300		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^3P - 0[3]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1966.953	100		$3p^4(^2P)4p - 3p^4(^2P)6d$	$^4D^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1972.274	200		$3p^4(^2P)4p - 3p^4(^2P)6d$	$^4D^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1973.4837 ST	200		$3s3p^6 - 3s^23p^4(^2P)4p$	$^2S - ^3D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	H4, M14, M15
Ar II	1974.462	300		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^3P - 1[3]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1976.765	300		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^3P - 2[1]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1977.200	20		$3p^4(^2P)4p - 3p^4(^2P)7s$	$^4D^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1981.74	100		$3p^4(^2P)4p - 3p^4(^2P)6d$	$^4D^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1983.299	100		$3p^4(^2P)3d - 3p^4(^3F)4f$	$^3P - 1[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1983.829	100		$3p^4(^2P)3d - 3p^4(^2P)4f$	$^3P - 1[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1988.620	300		$3p^4(^2P)4p - 3p^4(^2P)6d$	$^3D^{\circ} - ^3F$	$\frac{1}{2} - \frac{3}{2}$	M14, M15
Ar II	1993.555	20		$3p^4(^2P)4p - 3p^4(^2P)7s$	$^4D^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$	M14, M15

ARGON III (Ar^{2+}), $Z = 18$
 Ground State $1s^22s^22p^63s^23p^4\ ^3P_2$ (16 electrons)
 Ionization Potential $328\ 600\ cm^{-1}$; 40.74 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar III	382.61	125		$3p^4 - 3p^3(^2D^{\circ})4d$	$^1D - ^1F^{\circ}$	2 - 3	F23
Ar III	387.45	100		$3p^4 - 3p^3(^2D^{\circ})4d$	$^1D - ^1D^{\circ}$	2 - 2	F23
Ar III	389.49	25		$3p^4 - 3p^3(^2D^{\circ})4d$	$^1D - ^1P^{\circ}$	2 - 1	F23
Ar III	395.92	50		$3p^4 - 3p^3(^4S^{\circ})5s$	$g^3P - ^3S^{\circ}$	2 - 1	B31
Ar III	396.37	200		$3p^4 - 3p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	2 - 3	F23
Ar III	397.67	50		$3p^4 - 3p^3(^4S^{\circ})5s$	$g^3P - ^3S^{\circ}$	1 - 1	B31
Ar III	398.17	125		$3p^4 - 3p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	1 - 2	F23
Ar III	398.91	50		$3p^4 - 3p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	0 - 1	F23
Ar III	466.53	250		$3p^4 - 3p^3(^2P^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 1	B31
Ar III	467.39	300		$3p^4 - 3p^3(^2P^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 2	B31

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar III	468.47	200		$3p^4 - 3p^3(^3P^o) 5d$	$g^3P - ^3P^o$	1-0	B31
Ar III	468.96	150		$3p^4 - 3p^3(^3P^o) 3d$	$g^3P - ^3P^o$	1-1	B31
Ar III	469.83	200		$3p^4 - 3p^3(^3P^o) 3d$	$g^3P - ^3P^o$	1-2	E31
Ar III	469.97	200		$3p^4 - 3p^3(^3P^o) 3d$	$g^3P - ^3P^o$	0-1	B31
Ar III	473.03	300		$3p^4 - 3p^3(^3P^o) 3d$	$g^3P - ^3D^o$	2-1	B31
Ar III	473.92	300		$3p^4 - 3p^3(^3P^o) 3d$	$g^3P - ^3D^o$	2-2	B31
Ar III	476.43	350		$3p^4 - 3p^3(^3P^o) 3d$	$g^3P - ^3D^o$	1-2	B31
Ar III	481.85	300		$3p^4 - 3p^3(^3P^o) 4s$	$g^3P - ^3P^o$	2-1	B31
Ar III	482.55	400		$3p^4 - 3p^3(^3P^o) 4s$	$g^3P - ^3P^o$	2-2	B31
Ar III	484.12	250		$3p^4 - 3p^3(^3P^o) 4s$	$g^3P - ^3P^o$	1-0	B31
Ar III	484.45	250		$3p^4 - 3p^3(^3P^o) 4s$	$g^3P - ^3P^o$	1-1	B31
Ar III	485.15	300		$3p^4 - 3p^3(^3P^o) 4s$	$g^3P - ^3P^o$	1-2	B31
Ar III	485.52	200		$3p^4 - 3p^3(^3P^o) 4s$	$g^3P - ^3P^o$	0-1	B31
Ar III?	487.99	350					B31
Ar III	488.45	350		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3S^o$	2-1	B31
Ar III	491.12	200		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3S^o$	1-1	B31
Ar III	492.23	150		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3S^o$	0-1	B31
Ar III	508.44	450		$3p^4 - 3p^3(^3D^o) 4s$	$g^3P - ^3D^o$	2-3	K9
Ar III	508.61	300		$3p^4 - 3p^3(^3D^o) 4s$	$g^3P - ^3D^o$	2-2	K9
Ar III	508.68	180		$3p^4 - 3p^3(^3D^o) 4s$	$g^3P - ^3D^o$	2-1	K9
Ar III	511.51	300		$3p^4 - 3p^3(^3D^o) 4s$	$g^3P - ^3D^o$	1-2	K9
Ar III	511.57	180		$3p^4 - 3p^3(^3D^o) 4s$	$g^3P - ^3D^o$	1-1	K9
Ar III	512.77	180		$3p^4 - 3p^3(^3D^o) 4s$	$g^3P - ^3D^o$	0-1	K9
Ar III	529.90	450		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3D^o$	2-3	B31
Ar III	532.41	350		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3D^o$	2-2	B31
Ar III	534.26	50		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3D^o$	2-1	B31
Ar III	535.58	350		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3D^o$	1-2	B31
Ar III	537.46	300		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3D^o$	1-1	B31
Ar III	538.79	300		$3p^4 - 3p^3(^3D^o) 3d$	$g^3P - ^3D^o$	0-1	B31
Ar III	553.47	450	4	$3p^4 - 3p^3(^4S^o) 4s$	$g^3P - ^3S^o$	2-1	B31
Ar III	556.89	300	4	$3p^4 - 3p^3(^4S^o) 4s$	$g^3P - ^3S^o$	1-1	B31
Ar III	558.32	250	4	$3p^4 - 3p^3(^4S^o) 4s$	$g^3P - ^3S^o$	0-1	B31
Ar III	573.47	200		$3p^4 - 3p^3(^4S^o) 4s$	$g^3P - ^3S^o$	2-2	B31
Ar III	577.15	150		$3p^4 - 3p^3(^4S^o) 4s$	$g^3P - ^3S^o$	1-2	B31
Ar III	578.39	200		$3p^4 - 3p^3(^3D^o) 3d$	$^1D - ^3F^o$	2-2	B32
Ar III	579.21	150		$3p^4 - 3p^3(^3D^o) 3d$	$^1D - ^3F^o$	2-3	B32
Ar III?	604.15	500					B31
Ar III	636.82	150	3	$3p^4 - 3p^3(^4S^o) 3d$	$g^3P - ^3D^o$	2-1	B31
Ar III	637.28	1060	3	$3p^4 - 3p^3(^4S^o) 3d$	$g^3P - ^3D^o$	2-3	B31
Ar III	641.36	250	3	$3p^4 - 3p^3(^4S^o) 3d$	$g^3P - ^3D^o$	1-1	B31
Ar III	641.81	600	3	$3p^4 - 3p^3(^4S^o) 3d$	$g^3P - ^3D^o$	1-2	B31
Ar III	643.26	450	3	$3p^4 - 3p^3(^4S^o) 3d$	$g^3P - ^3D^o$	0-1	B31
Ar III	690.17	400d	2	$3p^4 - 3p^3(^4S^o) 3d$	$g^3P - ^3D^o$	2-3	B31
Ar III	695.54	300	2	$3p^4 - 3p^3(^4S^o) 3d$	$g^3P - ^3D^o$	1-2	B31
Ar III	697.74	100	2	$3p^4 - 3p^3(^4S^o) 3d$	$g^3P - ^3D^o$	0-1	B31
Ar III	699.72	50		$3p^4 - 3p^3(^4S^o) 3d$	$^1D - ^3D^o$	2-2	B32
Ar III	769.15	600	5	$3s^2 3p^4 - 3s 3p^5$	$^1D - ^1P^o$	2-1	B31
Ar III	871.10	300	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	2-1	B31
Ar III	875.53	450	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1-0	B31
Ar III	878.73	600	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	2-2	B31
Ar III	879.62	400	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1-1	E31
Ar III	883.18	450	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	0-1	B31
Ar III	887.40	500	1	$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1-2	E31
Ar III	1002.10	150		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^3P^o$	2-2	B32
Ar III	1460.08	200		$3p^3(^4S^o) 3d - 3p^3(^3D^o) 4p$	$^3D^o - ^3D$	3-?	B31
Ar III	1460.23	100		$3p^3(^4S^o) 3d - 3p^3(^3D^o) 4p$	$^3D^o - ^3D$	2-3	B31
Ar III	1465.53	100		$3p^3(^4S^o) 3d - 3p^3(^3D^o) 4p$	$^3D^o - ^3D$	2-1	B31
Ar III	1465.71	150		$3p^3(^4S^o) 3d - 3p^3(^3D^o) 4p$	$^3D^o - ^3D$	2-2	B31
Ar III	1467.84	150		$3p^3(^4S^o) 3d - 3p^3(^3D^o) 4p$	$^3D^o - ^3D$	1-1	B31
Ar III	1468.01	100		$3p^3(^4S^o) 3d - 3p^3(^3D^o) 4p$	$^3D^o - ^3D$	1-2	B31
Ar III	1669.10	50	6	$3p^3(^4S^o) 3d - 3p^3(^4S^o) 4p$	$^5D^o - ^5P$	2-3	B31
Ar III	1669.30	250	6	$3p^3(^4S^o) 3d - 3p^3(^4S^o) 4p$	$^5D^o - ^5P$	3-3	B31
Ar III	1669.67	350	6	$3p^3(^4S^o) 3d - 3p^3(^4S^o) 4p$	$^5D^o - ^5P$	4-3	B31
Ar III	1673.14	50	6	$3p^3(^4S^o) 3d - 3p^3(^4S^o) 4p$	$^5D^o - ^5P$	1-2	B31
Ar III	1673.24	150	6	$3p^3(^4S^o) 3d - 3p^3(^4S^o) 4p$	$^5D^o - ^5P$	2-2	B31

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar III	1673.43	350	6	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^4P$	3 - 2	B31
Ar III	1675.58	350	6	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^4P$	1 - 1	B31
Ar III	1675.64	200	6	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^4P$	2 - 1	B31
Ar III	1914.40	450	7	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^3P$	3 - 2	B31
Ar III	1914.65	150	7	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^3P$	2 - 2	B31
Ar III	1915.56	350	7	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^3P$	2 - 1	B31
Ar III	1918.06	50	7	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^3P$	1 - 0	B31
Ar III	1918.67	200	7	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^3P$	1 - 2	B31
Ar III	1919.52	200	7	$3p^2(^4S^o)3d - 3p^2(^4S^o)4p$	$^3D^o - ^3P$	1 - 1	B31
Ar III	1957.83	50		$3p^2(^4S^o)4s - 3p^2(^2D^o)4p$	$^3S^o - ^3P$	1 - 0	B31
Ar III	1962.74	100		$3p^2(^4S^o)4s - 3p^2(^2D^o)4p$	$^3S^o - ^4P$	1 - 1	B31
Ar III	1973.78	200		$3p^2(^4S^o)4s - 3p^2(^2D^o)4p$	$^3S^o - ^3P$	1 - 2	B31

ARGON IV (Ar^{3+}), $Z = 18$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential $482\ 400\ cm^{-1}$; $59.81\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar IV	396.87	160		$3p^3 - 3p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	398.55	160		$3p^3 - 3p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	399.63	120		$3p^3 - 3p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	B31
Ar IV	423.48	10		$3p^3 - 3p^2(^2P)4s$	$^2D^o - ^3P$?	S6, K8
Ar IV	443.40	80		$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{7}{2}$	G1, S6
Ar IV	451.20	15		$3p^3 - 3p^2(^2P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F2, S6
Ar IV	451.87	45		$3p^3 - 3p^2(^2P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F2, S6
Ar IV	452.91	80		$3p^3 - 3p^2(^2P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F2, S6
Ar IV	458.1			$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F2
Ar IV	471.09	60		$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S6, E27
Ar IV	471.97	60		$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	S6, E27
Ar IV	492.64	50		$3p^3 - 3p^2(^2P)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S6, E27
Ar IV	495.55	80		$3p^3 - 3p^2(^2P)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S6, E27
Ar IV	501.01	120		$3p^3 - 3p^2(^2P)3d$	$^2D^o - ^4P$?	S6, K8
Ar IV	553.41	40		$3p^3 - 3p^2(^2P)3d$	$^2P^o - ^4P$?	S6, K8
Ar IV	561.06	20		$3s^2 3p^4 - 3s^2 3p^2(^2P)4p$	$^4P - ^3P^o$?	S6, K8
Ar IV	623.77	250		$3s^2 3p^4 - 3s^2 3p^2(^1D)4p$	$^2D - ^2D^o$?	S6, K8
Ar IV	683.28	400	3	$3s^2 3p^3 - 3s^2 3p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B31
Ar IV	688.39	300	3	$3s^2 3p^3 - 3s^2 3p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	689.01	500	3	$3s^2 3p^3 - 3s^2 3p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	694.85	100		$3s^2 3p^4 - 3s^2 3p^2(^2P)4p$	$^2D - ^4P^o$?	S6, K3
Ar IV	698.04	20		$3s^2 3p^4 - 3s^2 3p^2(^2P)4p$	$^2D - ^4P^o$?	S6, K8
Ar IV	699.41	240		$3s^2 3p^3 - 3s^2 3p^4$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B31
Ar IV	700.28	320		$3s^2 3p^3 - 3s^2 3p^4$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B31
Ar IV	754.21	160		$3s^2 3p^3 - 3s^2 3p^4$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B31
Ar IV	755.21	120		$3s^2 3p^3 - 3s^2 3p^4$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B31
Ar IV	760.44	120		$3s^2 3p^3 - 3s^2 3p^4$	$^2P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	B31
Ar IV	761.47	200		$3s^2 3p^3 - 3s^2 3p^4$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	772.49	10		$3s^2 3p^4 - 3s^2 3p^2(^2P)4p$	$^2P - ^4P^o$?	S6, K8
Ar IV	800.57	200	2	$3s^2 3p^3 - 3s^2 3p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	801.09	400	2	$3s^2 3p^3 - 3s^2 3p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	801.41	400	2	$3s^2 3p^3 - 3s^2 3p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	801.91	200	2	$3s^2 3p^3 - 3s^2 3p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B31
Ar IV	840.03	600	1	$3s^2 3p^3 - 3s^2 3p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	B31
Ar IV	843.77	800	1	$3s^2 3p^3 - 3s^2 3p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B31

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar IV	850.60	1000	1	$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	B31
Ar IV	900.36	200		$3s^2 3p^2 - 3s 3p^4$	$3P^{\circ} - 3D$	$\frac{1}{2} - \frac{3}{2}$	B31
Ar IV	901.17	400		$3s^2 3p^2 - 3s 3p^4$	$3P^{\circ} - 3D$	$\frac{3}{2} - \frac{5}{2}$	B31
Ar IV	901.80	80		$3s^2 3p^2 - 3s 3p^4$	$3P^{\circ} - 3D$	$\frac{3}{2} - \frac{5}{2}$	B31
Ar IV	1037.93	40		$3s^2 3p^2 - 3s 3p^4$	$3D^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	B31
Ar IV	1187.80	40		$3s^2 3p^2 - 3s 3p^4$	$3P^{\circ} - 4P$	$\frac{1}{2} - \frac{3}{2}$	B31
Ar IV	1190.35	80		$3s^2 3p^2 - 3s 3p^4$	$3P^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	B31
Ar IV	1197.84	40		$3s^2 3p^2 - 3s 3p^4$	$3P^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	B31

ARGON V (Ar^{4+}), $Z = 18$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential $605\ 100\ cm^{-1}$; $75.02\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar V	326.56	150	6	$3p^2 - 3p 4s$	$g^3P - 3P^{\circ}$	1 - 2	P18
Ar V	337.56	150	6	$3p^2 - 3p 4s$	$g^3P - 3P^{\circ}$	0 - 1	P18
Ar V	338.00	300	6	$3p^2 - 3p 4s$	$g^3P - 3P^{\circ}$	2 - 2	P18
Ar V	338.43	100	6	$3p^2 - 3p 4s$	$g^3P - 3P^{\circ}$	1 - 1	P18
Ar V	339.01	150	6	$3p^2 - 3p 4s$	$g^3P - 3P^{\circ}$	1 - 0	P18
Ar V	339.89	150	6	$3p^2 - 3p 4s$	$g^3P - 3P^{\circ}$	2 - 1	P18
Ar V	350.88	150	8	$3p^2 - 3p 4s$	$1D - 1P^{\circ}$	2 - 1	P18
Ar V	436.67	120		$3p^2 - 3p 3d$	$1D - 1F^{\circ}$	2 - 3	S6,E27
Ar V	445.997	250	5	$3p^2 - 3p 3d$	$g^3P - 3D^{\circ}$	0 - 1	E6,P18
Ar V	446.949	400	5	$3p^2 - 3p 3d$	$g^3P - 3D^{\circ}$	1 - 2	E6,P18
Ar V	447.53	200	5	$3p^2 - 3p 3d$	$g^3P - 3D^{\circ}$	1 - 1	P18
Ar V	449.065	900	5	$3p^2 - 3p 3d$	$g^3P - 3D^{\circ}$	2 - 3	E6,P18
Ar V	449.49	200	5	$3p^2 - 3p 3d$	$g^3P - 3D^{\circ}$	2 - 2	P18
Ar V	450.08	50	5	$3p^2 - 3p 3d$	$g^3P - 3D^{\circ}$	2 - 1	P18
Ar V	458.12	150	4	$3p^2 - 3p 3d$	$g^3P - 3P^{\circ}$	0 - 1	P18
Ar V	458.98	100	4	$3p^2 - 3p 3d$	$g^3P - 3P^{\circ}$	1 - 0	P18
Ar V	459.73	50	4	$3p^2 - 3p 3d$	$g^3P - 3P^{\circ}$	1 - 1	P18
Ar V	461.23	300b	4	$3p^2 - 3p 3d$	$g^3P - 3P^{\circ}$	1 - 2	P18
Ar V	462.42	150	4	$3p^2 - 3p 3d$	$g^3P - 3P^{\circ}$	2 - 1	P18
Ar V	463.958	350	4	$3p^2 - 3p 3d$	$g^3P - 3P^{\circ}$	2 - 2	E6,P18
Ar V	466.82	60		$3p^2 - 3p 3d$	$1S - 1P^{\circ}$	0 - 1	S6,E27
Ar V	496.91	40		$3p^2 - 3p 3d$	$1D - 3P^{\circ}$? 2 - 2	S6,K8
Ar V	511.89	25		$3s^2 3p^2 - 3s 3p^3$	$g^3P - 1P^{\circ}$	0 - 1	P18
Ar V	513.91	50		$3s^2 3p^2 - 3s 3p^3$	$g^3P - 1P^{\circ}$	1 - 1	P18
Ar V	517.25	25		$3s^2 3p^2 - 3s 3p^3$	$g^3P - 1P^{\circ}$	2 - 1	P18
Ar V	522.09	150	3	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3S^{\circ}$	0 - 1	P18
Ar V	524.19	250	3	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3S^{\circ}$	1 - 1	P18
Ar V	527.69	300	3	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3S^{\circ}$	2 - 1	P18
Ar V	554.50	120		$3p^2 - 3p 3d$	$1S - 3P^{\circ}$? 0 - 1	S6,K8
Ar V	558.48	250	7	$3s^2 3p^2 - 3s 3p^3$	$1D - 1P^{\circ}$	2 - 1	P18
Ar V	570.61	80		$3s^2 3p^2 - 3s 3p^3$	$1D - 3S^{\circ}$	2 - 1	S6,E27
Ar V	635.17	150		$3s^2 3p^2 - 3s 3p^3$	$1S - 1P^{\circ}$	0 - 1	S6,E27
Ar V	651.02	10		$3s^2 3p^2 - 3s 3p^3$	$1S - 3S^{\circ}$? 0 - 1	S6,E27
Ar V	705.35	150	2	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3P^{\circ}$	0 - 1	P18
Ar V	709.20	250	2	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3P^{\circ}$	1 - 2	P18
Ar V	715.60	200	2	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3P^{\circ}$	2 - 1	P18
Ar V	715.65	150	2	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3P^{\circ}$	2 - 2	P18
Ar V	725.11	100		$3s^2 3p^2 - 3s 3p^3$	$1D - 1D^{\circ}$	2 - 2	S6,E27
Ar V	822.161	200	1	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3D^{\circ}$	0 - 1	E6,P18
Ar V	827.052	250	1	$3s^2 3p^2 - 3s 3p^3$	$g^3P - 3D^{\circ}$	1 - 2	E6,P18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar V	827.35	150	1	$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^o$	1 - 1	P18
Ar V	834.88	200	1	$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^o$	2 - 3	P18
Ar V	835.79	50	1	$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^o$	2 - 2	P18
Ar V	836.13	100	1	$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^o$	2 - 1	P18

ARGON VI (Ar⁵⁺), Z = 18
Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 P_{1/2}^o$ (13 electrons)
Ionization Potential 734 040 cm⁻¹; 91.007 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar VI	180.07	80		3p - 5d	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	180.72	120		3p - 5d	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	219.90	120		3p - 4d	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	220.95	200		3p - 4d	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	281.43	120		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	281.92	160		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	282.42	240		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	282.56	40		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	293.16	120		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	292.15	200		3p - 4s	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P18
Ar VI	294.05	240		3p - 4s	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P18
Ar VI	455.81	80		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	456.38	120		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	457.01	200		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	457.48	800b		3p - 3d	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	458.04	40		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	459.32	400		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	459.60	100		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	460.06	40		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	460.20	40		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	P18
Ar VI	461.23	300b		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	461.90	40		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	462.007	1000d		3p - 3d	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E6, P18
Ar VI	462.15	160		3p - 3d	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	464.26	160		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	465.59	80		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	466.93	160		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	544.73	160		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	548.91	200		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	P18
Ar VI	551.37	320		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	555.64	160		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	P18
Ar VI	587.01	40		$3s 3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	588.92	200		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P18
Ar VI	589.78	80		$3s 3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VI	594.10	100		$3s 3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VI	596.69	160		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P18
Ar VI	754.93	100		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F21
Ar VI	767.06	200		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F21
Ar VI	767.71	100		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F21
Ar VI	998.43	30		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	E27
Ar VI	1000.16	40		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	E27
Ar VI	1012.67	10		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	E27

ARGON VII (Ar^{6+}), $Z = 18$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential $1\ 002\ 730\ \text{cm}^{-1}$; $124.319\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar VII	151.70	50		$3s3p - 3s5d$	$^2P^\circ - ^2D$	0 - 1	P18
Ar VII	151.82	100		$3s3p - 3s5d$	$^2P^\circ - ^2D$	1 - 2	P18
Ar VII	152.26	150		$3s3p - 3s5d$	$^2P^\circ - ^2D$	2 - 3	P18
Ar VII	176.57	500		$3s^2 - 3s4p$	$g^1S - ^1P^\circ$	0 - 1	P18
Ar VII	191.76	150		$3s3p - 3s4d$	$^2P^\circ - ^2D$	0 - 1	P18
Ar VII	192.04	250		$3s3p - 3s4d$	$^2P^\circ - ^2D$	1 - 2	P18
Ar VII	192.64	350		$3s3p - 3s4d$	$^2P^\circ - ^2D$	2 - 3	P18
Ar VII	249.38	100		$3s3p - 3s4s$	$^2P^\circ - ^2S$	0 - 1	P18
Ar VII	249.886	250		$3s3p - 3s4s$	$^2P^\circ - ^2S$	1 - 1	E6,P18
Ar VII	250.940	350		$3s3p - 3s4s$	$^2P^\circ - ^2S$	2 - 1	E6,P18
Ar VII	297.62	150		$3s3d - 3s4f$	$^2D - ^2F^\circ$	1 - 2	P18
Ar VII	297.66	200		$3s3d - 3s4f$	$^2D - ^2F^\circ$	2 - 3	P18
Ar VII	297.70	300		$3s3d - 3s4f$	$^2D - ^2F^\circ$	3 - 4	P18
Ar VII	473.938	200		$3s3p - 3s3d$	$^2P^\circ - ^2D$	0 - 1	E6,P18
Ar VII	475.656	400		$3s3p - 3s3d$	$^2P^\circ - ^2D$	1 - 2	E6,P18
Ar VII	475.73	100		$3s3p - 3s3d$	$^2P^\circ - ^2D$	1 - 1	P18
Ar VII	479.379	600		$3s3p - 3s3d$	$^2P^\circ - ^2D$	2 - 3	E6,P18
Ar VII	479.49	100		$3s3p - 3s3d$	$^2P^\circ - ^2D$	2 - 2	P18
Ar VII	585.75	750		$3s^2 - 3s3p$	$g^1S - ^1P^\circ$	0 - 1	P18
Ar VII	630.31	100		$3s3p - 3p^2$	$^2P^\circ - ^2P$	1 - 2	P18
Ar VII	634.21	100		$3s3p - 3p^2$	$^2P^\circ - ^2P$	0 - 1	P18
Ar VII	637.05	200		$3s3p - 3p^2$	$^2P^\circ - ^2P$	2 - 2	P18
Ar VII	637.47	50		$3s3p - 3p^2$	$^2P^\circ - ^2P$	1 - 1	P18
Ar VII	641.32	100		$3s3p - 3p^2$	$^2P^\circ - ^2P$	1 - 0	P18
Ar VII	644.39	100		$3s3p - 3p^2$	$^2P^\circ - ^2P$	2 - 1	P18
Ar VII	883.17	?		$3s^2 - 3s3p$	$g^1S - ^2P^\circ$	0 - 1	K8

ARGON VIII (Ar^{7+}), $Z = 18$
 Ground State $1s^2 2s^2 2p^6 3s \ ^2S_{1/2}$ (11 electrons)
 Ionization Potential $1\ 157\ 080\ \text{cm}^{-1}$; $143.406\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar VIII	120.09	100		$3s - 5p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VIII	120.16	50		$3s - 5p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P18
Ar VIII	122.62	10		$3p - 6d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VIII	123.03	50		$3p - 6d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VIII	137.93	150		$3p - 5d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VIII	173.44	250		$3p - 5d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VIII	148.73	100		$3p - 5s$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P18
Ar VIII	149.33	150		$3p - 5s$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P18
Ar VIII	158.92	400		$3s - 4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VIII	159.18	250		$3s - 4p$	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	P18
Ar VIII	179.40	500		$3p - 4d$	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VIII	180.25	750		$3p - 4d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VIII	184.27	150		$3d - 5f$	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	P18
Ar VIII	184.32	250		$3d - 5f$	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$	P18
Ar VIII	229.44	250		$3p - 4s$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	P18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar VIII	230.88	350		3p - 4s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	P18
Ar VIII	260.25	200		3d - 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P18
Ar VIII	260.33	300		3d - 4f	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	P18
Ar VIII	337.26	100d		3d - 4p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	P18
Ar VIII	338.22	10d		3d - 4p	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{1}{2}$	P18
Ar VIII	519.43	150		3p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	P18
Ar VIII	526.46	250		3p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	P18
Ar VIII	526.87	50		3p - 3d	$^2P^{\circ} - ^2D$	$\frac{5}{2} - \frac{3}{2}$	P18
Ar VIII	700.40	1000		3s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	P18, F21
Ar VIII	713.99	500		3s - 3p	$g^2S - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	P18, F21

ARGON IX (Ar⁸⁺), Z = 18Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)Ionization Potential 3 407 300 cm⁻¹; 422.44 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar IX	31.52	600		2p ⁶ - 2p ⁵ 6d	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F15
Ar IX	31.66	700		2p ⁶ - 2p ⁵ 6d	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F15
Ar IX	32.64	400		2p ⁶ - 2p ⁵ 5d	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F15
Ar IX	35.02	700		2p ⁶ - 2p ⁵ 4d	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F15
Ar IX	35.28	300		2p ⁶ - 2p ⁵ 4d	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F15
Ar IX	35.82	500		2s ² 2p ⁶ - 2s2p ⁶ 3p	$g^1S - ^1P^{\circ}$	0 - 1	F8, F15
Ar IX	36.96	100		2p ⁶ - 2p ⁵ 4s	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$?	0 - 1	F16, W13
Ar IX	41.48	600		2p ⁶ - 2p ⁵ 3d	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F15
Ar IX	42.02	200		2p ⁶ - 2p ⁵ 3d	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F15
Ar IX	42.56	200		2p ⁶ - 2p ⁵ 3d	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F15
Ar IX	48.73	500		2p ⁶ - 2p ⁵ 3s	$g^1S - \frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1	P18
Ar IX	49.18	500		2p ⁶ - 2p ⁵ 3s	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	P18

ARGON X (Ar⁹⁺), Z = 18Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}^{\circ}$ (9 electrons)Ionization Potential 3 860 900 cm⁻¹; 478.68 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar X	29.1	100		2p ⁵ - 2p ⁴ 5d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar X	29.2	50		2p ⁵ - 2p ⁴ 5d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X	30.96	150		2p ⁵ - 2p ⁴ 4d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar X	31.08	100		2p ⁵ - 2p ⁴ 4d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X	32.45	320		2s ² 2p ⁵ - 2s2p ⁵ 3p	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	C15
Ar X	32.55	50		2s ² 2p ⁵ - 2s2p ⁵ 3p	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar X	32.61	200		2s ² 2p ⁵ - 2s2p ⁵ 3p	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	C15
Ar X	32.70	230		2s ² 2p ⁵ - 2s2p ⁵ 3p	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	C15
Ar X	32.74	50		2s ² 2p ⁵ - 2s2p ⁵ 3p	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X?	36.39	100					F16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar X?	36.56	100					F16
Ar X	36.69	200		$2p^4 - 2p^4(^1S)3d$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar X	36.78	150		$2p^4 - 2p^4(^1S)3d$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X?	37.10	50					F16
Ar X	37.43	250		$2p^4 - 2p^4(^1D)3d$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar X	37.60	200		$2p^4 - 2p^4(^1D)3d$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X	38.23	150		$2p^4 - 2p^4(^3P)3d$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar X	38.40	500		$2p^4 - 2p^4(^3P)3d$	$g^3P^o - ^3P$?	F15, K8
Ar X	38.51	420		$2p^4 - 2p^4(^3P)3d$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	C15
Ar X	38.64	700		$2p^4 - 2p^4(^3P)3d$	$g^3P^o - ^3P$?	F15, K8
Ar X	38.88	500		$2p^4 - 2p^4(^3P)3d$	$g^3P^o - ^4D$?	F15, K8
Ar X	41.57	200		$2p^4 - 2p^4(^1S)3s$	$g^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F16
Ar X	41.89	100		$2p^4 - 2p^4(^1S)3s$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F16
Ar X	42.94	250		$2p^4 - 2p^4(^1D)3s$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar X	43.27	150		$2p^4 - 2p^4(^1D)3s$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X	43.69	350		$2p^4 - 2p^4(^3P)3s$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	F16
Ar X	43.92	450		$2p^4 - 2p^4(^3P)3s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X	44.05	350		$2p^4 - 2p^4(^3P)3s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	F16
Ar X	44.27	450		$2p^4 - 2p^4(^3P)3s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X	44.45	450		$2p^4 - 2p^4(^3P)3s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar X	44.63	400		$2p^4 - 2p^4(^3P)3s$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X	44.84	300		$2s 2p^4 - 2s 2p^4(^3P^o)3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	F15
Ar X	45.03	350		$2s 2p^4 - 2s 2p^4(^3P^o)3s$	$^3S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar X	165.53	400		$2s^2 2p^4 - 2s 2p^4$	$g^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	D1, F15
Ar X	170.63	200		$2s^2 2p^4 - 2s 2p^4$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	D1, F15

ARGON XI (Ar^{10+}), $Z = 18$ Ground State $1s^2 2s^2 2p^4 ^3P_2$ (8 electrons)Ionization Potential $4\ 347\ 000\ cm^{-1}$; $538.95\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XI	29.48	150		$2s^2 2p^4 - 2s 2p^4(^4P)3p$	$g^3P - ^3S^o$	2-1	C15
Ar XI	30.40	150		$2s^2 2p^4 - 2s 2p^4(^4P)3p$	$g^3P - ^3P^o$	2-2	C15
Ar XI	31.10	200		$2s^2 2p^4 - 2s 2p^4(^4P)3p$	$^1S - ^1P^o$	0-1	C15
Ar XI	31.36	300		$2s^2 2p^4 - 2s 2p^4(^4P)3p$	$^1S - ^1P^o$	0-1	C15
Ar XI?	33.03	50					F16
Ar XI	33.53	100		$2p^4 - 2p^4(^3P^o)3d$	$g^3P - ^3D^o$?	F16
Ar XI	33.65	300		$2p^4 - 2p^4(^3P^o)3d$	$g^3P - ^3D^o$	2-3	F16
Ar XI	33.84	200		$2p^4 - 2p^4(^3P^o)3d$	$g^3P - ^3D^o$	1-2	F16
Ar XI	33.96	100		$2p^4 - 2p^4(^3P^o)3d$	$g^3P - ^3D^o$	0-1	F16
Ar XI	34.10	100		$2p^4 - 2p^4(^3D^o)3d$	$g^3P - ^3S^o$	2-1	F16
Ar XI	34.24	150		$2p^4 - 2p^4(^3D^o)3d$	$g^3P - ^3P^o$	2-2	F16
Ar XI	34.33	300		$2p^4 - 2p^4(^3D^o)3d$	$g^3P - ^3D^o$	2-3	F16
Ar XI	34.52	100		$2p^4 - 2p^4(^3D^o)3d$	$g^3P - ^3D^o$	1-2	F16
Ar XI	34.80	500		$2p^4 - 2p^4(^3D^o)3d$	$^1D - ^1F^o$	2-3	F16, G13
Ar XI	35.07	100		$2p^4 - 2p^4(^3D^o)3d$	$^1D - ^1D^o$	2-2	F16
Ar XI	35.37	200		$2p^4 - 2p^4(^4S^o)3d$	$g^3P - ^3D^o$	2-3	F16
Ar XI	35.58	150		$2p^4 - 2p^4(^4S^o)3d$	$g^3P - ^3D^o$	1-2	F16
Ar XI	35.70	100		$2p^4 - 2p^4(^4S^o)3d$	$g^3P - ^3D^o$	0-1	F16
Ar XI	35.96	100		$2p^4 - 2p^4(^3D^o)3d$	$^1S - ^1P^o$	0-1	F16
Ar XI?	36.16	200					F16
Ar XI?	36.31	200					F16
Ar XI	37.79	150		$2p^4 - 2p^2 3d$	$^1D - ^1F^o$?	F16, G13
Ar XI	38.00	150		$2p^4 - 2p^2(^3P^o)3s$	$g^3P - ^3P^o$?	F16, K8
Ar XI	38.33	380		$2p^4 - 2p^2 3s$	$^1D - ^1P^o$	2-1	C15
Ar XI	38.62	400		$2p^4 - 2p^2(^3D^o)3s$	$g^3P - ^3D^o$	2-3	F16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XI	38.79	300		$2p^4 - 2p^2(^2D^{\circ})3s$	$g^2P - ^2D^{\circ}$	1 - 2	F16
Ar XI	38.87	250		$2p^4 - 2p^2(^2D^{\circ})3s$	$g^2P - ^2D^{\circ}$	0 - 1	F16
Ar XI?	39.30	200					F16
Ar XI	39.49	300		$2p^4 - 2p^2(^2D^{\circ})3s$	$^1D - ^1D^{\circ}$	2 - 2	F16
Ar XI	39.64	300		$2p^4 - 2p^2(^2D^{\circ})3s$	$^1D - ^2D^{\circ}$? 2 - 2	F16, K8
Ar XI	39.75	250		$2p^4 - 2p^2(^4S^{\circ})3s$	$g^2P - ^2S^{\circ}$	2 - 1	F16
Ar XI?	39.79	150					F16
Ar XI	39.98	150		$2p^4 - 2p^2(^4S^{\circ})3s$	$g^2P - ^2S^{\circ}$	1 - 1	F16
Ar XI	40.02	100		$2p^4 - 2p^2(^4S^{\circ})3s$	$g^2P - ^2S^{\circ}$	0 - 1	F16
Ar XI	40.04	250		$2p^4 - 2p^2(^2P^{\circ})3s$	$^1S - ^1P^{\circ}$	0 - 1	F16
Ar XI	151.86			$2s^1 2p^4 - 2s 2p^4$	$^1D - ^1P^{\circ}$	2 - 1	D1
Ar XI	171.36	P		$2s^1 2p^4 - 2s 2p^4$	$^1S - ^1P^{\circ}$	0 - 1	K8
Ar XI	184.51			$2s^2 2p^4 - 2s 2p^4$	$g^2P - ^2P^{\circ}$	2 - 1	D1
Ar XI	187.08			$2s^2 2p^4 - 2s 2p^4$	$g^2P - ^2P^{\circ}$	1 - 0	D1
Ar XI	188.82			$2s^2 2p^4 - 2s 2p^4$	$g^2P - ^2P^{\circ}$	2 - 2	D1
Ar XI	189.57			$2s^2 2p^4 - 2s 2p^4$	$g^2P - ^2P^{\circ}$	1 - 1	D1
Ar XI	190.96			$2s^2 2p^4 - 2s 2p^4$	$g^2P - ^2P^{\circ}$	0 - 1	D1
Ar XI	194.09			$2s^2 2p^4 - 2s 2p^4$	$g^2P - ^2P^{\circ}$	1 - 2	D1

ARGON XII (Ar^{11+}), $Z = 18$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential $4\ 986\ 600\ cm^{-1}$; $618.24\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XII	25.19	100		$2p^2 - 2p^2 4d$			F16
Ar XII	25.24	100		$2p^2 - 2p^2 4d$			F16
Ar XII	28.05	100		$2s^2 2p^2 - 2s 2p^2 3p$	$^2P^{\circ} - ^2P$		C15
Ar XII	30.65			$2p^2 - 2p^2(^1D)3d$	$^2D^{\circ} - ^2D$		C15
Ar XII?	31.18	50					F16
Ar XII	31.35	250		$2p^2 - 2p^2 3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XII	31.39	300		$2p^2 - 2p^2 3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XII?	31.47	300					C15
Ar XII	31.55	100		$2p^2 - 2p^2 3d$			F16
Ar XII	31.65	350		$2p^2 - 2p^2(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XII	31.99	200		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XII	32.16	50		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2D$? $\frac{3}{2} - \frac{3}{2}$	F16, K8
Ar XII	32.20	50		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2D$? $\frac{3}{2} - \frac{3}{2}$	F16, K8
Ar XII	32.35	250		$2p^2 - 2p^2(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XII	34.67	300		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XII	34.80	250		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XII	34.88	200		$2p^2 - 2p^2(^2P)3s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XII	35.68	220		$2p^2 - 2p^2(^1D)3s$	$^2D^{\circ} - ^2P$? $\frac{3}{2} - \frac{3}{2}$	C15
Ar XII	36.67	500		$2p^2 - 2p^2(^2P)3s$	$^2P^{\circ} - ^4P$? $\frac{3}{2} - \frac{3}{2}$	F15, K8
Ar XII	45.38	50		$2p^2 - 2p^2(^1D)3s$	$^2D^{\circ} - ^2D$? $\frac{3}{2} - \frac{3}{2}$	F16, K8
Ar XII	45.49	100		$2p^2 - 2p^2(^1D)3s$	$^2D^{\circ} - ^2D$? $\frac{3}{2} - \frac{3}{2}$	C15, K8
Ar XII	149.93			$2s^2 2p^2 - 2s 2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	D2
Ar XII	153.63			$2s^2 2p^2 - 2s 2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	D2
Ar XII	154.43			$2s^2 2p^2 - 2s 2p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	D2
Ar XII	163.23			$2s^2 2p^2 - 2s 2p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	D2
Ar XII	164.51			$2s^2 2p^2 - 2s 2p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F16
Ar XII	167.62			$2s^2 2p^2 - 2s 2p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	D2
Ar XII	169.00			$2s^2 2p^2 - 2s 2p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	D2
Ar XII	176.62			$2s^2 2p^2 - 2s 2p^4$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	D2
Ar XII	178.15			$2s^2 2p^2 - 2s 2p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	D2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XII	192.66			$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	D2
Ar XII	193.68			$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	D2
Ar XII	217.21			$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	D2
Ar XII	218.29			$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	D2
Ar XII	224.25			$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	D2

ARGON XIII (Ar^{12+}), $Z = 18$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential $5\ 533\ 800\ cm^{-1}$; $686.09\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XIII	23.03	50		$2p^2 - 2p4d$	$g^3P - ^3P^o$		C15
Ar XIII	23.39	50		$2p^2 - 2p4d$	$^1D - ^1P^o$	2 - 1	C15
Ar XIII	23.57	200		$2p^2 - 2p4s$	$g^3P - ^3P^o$		C15
Ar XIII	23.93	50		$2p^2 - 2p4d$	$^1S - ^1P^o$	0 - 1	C15
Ar XIII	24.61	80		$2p^2 - 2p4s$	$^1S - ^3P^o$	0 - 1	C15
Ar XIII	26.36	110		$2s^2 2p^2 - 2s 2p^2 3p$	$g^3P - ^3S^o$		C15
Ar XIII	26.53	60		$2s^2 2p^2 - 2s 2p^2 3p$	$g^3P - ^3P^o$		C15
Ar XIII	26.82	40		$2s^2 2p^2 - 2s 2p^2 3p$	$^1D - ^1P^o$	2 - 1	C15
Ar XIII	27.17	60		$2s^2 2p^2 - 2s 2p^2 3p$	$^1D - ^1D^o$	2 - 2	C15
Ar XIII	27.60	100		$2s^2 2p^2 - 2s 2p^2 3p$	$g^3P - ^3D^o$		C15
Ar XIII	28.68	80		$2s^2 2p^2 - 2s 2p^2 3p$	$^1S - ^1P^o$	0 - 1	C15
Ar XIII	29.20	100		$2p^2 - 2p3d$	$g^3P - ^3P^o$	1 - 0	F16, K8
Ar XIII	29.32	150		$2p^2 - 2p3d$	$g^3P - ^3P^o$	2 - 1	F16, K8
Ar XIII	29.37	250		$2p^2 - 2p3d$	$g^3P - ^3P^o$	2 - 2	F16, K8
Ar XIII	29.56	250		$2p^2 - 2p3d$	$g^3P - ^3D^o$?	F16, K8
Ar XIII	29.67	50		$2p^2 - 2p3d$	$^1D - ^1F^o$?	F16, K8
Ar XIII	29.85	100		$2p^2 - 2p3d$	$^1D - ^1P^o$	2 - 1	C15
Ar XIII?	30.21	50					F16
Ar XIII?	30.24	50					F16
Ar XIII	30.34	50		$2p^2 - 2p3d$	$^1D - ^1D^o$?	F16, K8
Ar XIII?	30.58	100					F16
Ar XIII	30.68	50		$2p^2 - 2p3d$	$^1S - ^3P^o$?	F16, K8
Ar XIII?	30.77	50					F16
Ar XIII?	30.84	50					F16
Ar XIII	31.56	100		$2p^2 - 2p3s$	$g^3P - ^1P^o$?	F16, K8
Ar XIII	31.66	?		$2p^2 - 2p3s$	$g^3P - ^3P^o$	1 - 2	K8
Ar XIII	31.70	?		$2p^2 - 2p3s$	$g^3P - ^3P^o$	0 - 1	K8
Ar XIII	31.78	?		$2p^2 - 2p3s$	$g^3P - ^3P^o$	2 - 2	K8
Ar XIII	31.86	?		$2p^2 - 2p3s$	$g^3P - ^3P^o$	1 - 0	K8
Ar XIII	31.92	?		$2p^2 - 2p3s$	$g^3P - ^3P^o$	2 - 1	K8
Ar XIII	32.25	200		$2p^2 - 2p3s$	$^1D - ^1P^o$	2 - 1	C15
Ar XIII	33.95	300		$2p^2 - 2p3s$	$^1S - ^1P^o$	0 - 1	C15
Ar XIII	159.08			$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3S^o$	0 - 1	D2
Ar XIII	161.61			$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3S^o$	1 - 1	D2
Ar XIII	162.96			$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1P^o$	2 - 1	D2
Ar XIII	164.80			$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3S^o$	2 - 1	D2
Ar XIII	184.90			$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1D^o$	2 - 2	F16
Ar XIII	186.38			$2s^2 2p^2 - 2s 2p^3$	$^1S - ^1P^o$	0 - 1	F16
Ar XIII	201.69			$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^o$	0 - 1	F16
Ar XIII	205.24			$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^o$	1 - 2	F16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XIII	205.77			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 P^o$	1 - 1	F16
Ar XIII	205.94			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 P^o$	1 - 0	F16
Ar XIII	210.46			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 P^o$	2 - 2	F16
Ar XIII	211.00			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 P^o$	2 - 1	F16
Ar XIII	236.27			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 D^o$	0 - 1	F16
Ar XIII	241.90			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 D^o$	1 - 1	F16
Ar XIII	242.22			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 D^o$	1 - 2	F16
Ar XIII	248.68			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 D^o$	2 - 3	F16
Ar XIII	249.46			$2s^2 2p^3 - 2s 2p^3$	$g^2 P - ^2 D^o$	2 - 2	F16

ARGON XIV (Ar^{13+}), $Z = 18$
 Ground State $1s^2 2s^2 2p^2 P_{1/2}^o$ (5 electrons)
 Ionization Potential 6 095 500 cm^{-1} ; 755.73 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XIV	21.61 ?			$2p - 4s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	K8
Ar XIV	25.42	60		$2s^2 2p - 2s 2p(^1 P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$	C15
Ar XIV	25.58	60		$2s^2 2p - 2s 2p(^1 P^o) 3p$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	C15
Ar XIV	26.72	40		$2s^2 2p - 2s 2p(^3 P^o) 3p$	$g^2 P^o - ^2 P$		C15
Ar XIV	27.22	50		$2s 2p^2 - 2s 2p(^1 P^o) 3d$	$^3 D - ^2 F^o$	$\frac{5}{2} - \frac{7}{2}$	F16
Ar XIV	27.42	200		$2s 2p^2 - 2s 2p(^1 P^o) 3d$	$^3 D - ^2 D^o$?	F16
Ar XIV	27.47	300		$2s^2 2p - 2s^2 3d$	$g^2 P^o - ^2 D$? $\frac{1}{2} - \frac{3}{2}$	F16
Ar XIV	27.63	300		$2s^2 2p - 2s^2 3d$	$g^2 P^o - ^2 D$? $\frac{3}{2} - \frac{5}{2}$	F16
Ar XIV	29.33	150		$2s^2 2p - 2s^2 3s$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	C15
Ar XIV	29.49	150		$2s^2 2p - 2s^2 3s$	$g^2 P^o - ^2 S$? $\frac{3}{2} - \frac{1}{2}$	C15
Ar XIV	29.90	50		$2s 2p^2 - 2s 2p 3d$	$^3 P - ^2 D^o$? $\frac{3}{2} - \frac{5}{2}$	F16, K8
Ar XIV	32.55	150		$2s 2p^2 - 2s^2 3p$	$^3 S - ^2 P^o$? $\frac{1}{2} - \frac{3}{2}$	F16, K8
Ar XIV	32.74	100		$2s 2p^2 - 2s^2 3p$	$^3 S - ^2 P^o$? $\frac{1}{2} - \frac{1}{2}$	F16, K8
Ar XIV	180.29			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar XIV	183.41			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$	F16
Ar XIV	187.95			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XIV	191.35			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$	F16
Ar XIV	194.39			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	F16
Ar XIV	203.35			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	F16
Ar XIV	204.64			$2s 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar XIV	208.31			$2s 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{3}{2}$	F16
Ar XIV	213.42			$2s 2p^2 - 2p^2$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{1}{2}$	F16
Ar XIV	243.74			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F16
Ar XIV	257.37			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F16
Ar XIV	257.98			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F16

ARGON XV (Ar^{14+}), $Z = 18$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential $6\ 894\ 200\ \text{cm}^{-1}$; $854.75\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XV	3.33	5		$1s^2 2s^2 - 1s 2s^2 4p$	$g^1S - ^1P^o$	0 - 1	P10
Ar XV	3.45	5		$1s^2 2s^2 - 1s 2s^2 3p$	$g^1S - ^1P^o$	0 - 1	P10
Ar XV	4.015	70		$1s^2 2s^2 - 1s 2s^2 2p$	$g^1S - ^1P^o$	0 - 1	P10
Ar XV	25.05	100		$2s^2 - 2s 3p$	$g^1S - ^2P^o$	0 - 1	C15
Ar XV	25.60	100		$2s 2p - 2s 3d$	$^3P^o - ^1D$? 2 - 2	F16, K8
Ar XV	25.72	40		$2s 2p - 2s 3d$	$^3P^o - ^3D$	0 - 1	C15
Ar XV	25.84	60		$2s 2p - 2s 3d$	$^3P^o - ^3D$	1 - 2	C15
Ar XV	26.00	80		$2s 2p - 2s 3d$	$^3P^o - ^3D$	2 - 3	C15
Ar XV	27.14	P		$2s 2p - 2s 3s$	$^3P^o - ^2S$	2 - 1	K8
Ar XV	27.41	120		$2s 2p - 2s 3d$	$^1P^o - ^1D$	1 - 2	C15
Ar XV	28.26	120		$2s 2p - 2s 3s$	$^1P^o - ^1S$	1 - 0	C15
Ar XV	28.32	150		$2s 2p - 2s 3s$	$^1P^o - ^1S$? 1 - 0	F16, C15
Ar XV	29.57	500		$2p^2 - 2s 3p$	$^1D - ^1P^o$? 2 - 1	F15, K8
Ar XV	221.10			$2s^2 - 2s 2p$	$g^1S - ^1P^o$	0 - 1	F16
Ar XV	431.03	P		$2s^2 - 2s 2p$	$g^1S - ^2P^o$	0 - 1	K8

ARGON XVI (Ar^{15+}), $Z = 18$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential $[7\ 404\ 400]\ \text{cm}^{-1}$; $[918]\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XVI	3.25	5		$1s^2 2s - 1s 2s 4p$	$g^2S - ^2P^o$	$1/2 - 3/2$	P10
Ar XVI	3.268	5		$1s^2 2p - 1s 2p 4p$	$^3P^o - ^3D$	$3/2 - 5/2$	F10
Ar XVI	3.42	5		$1s^2 2s - 1s 2s 3p$	$g^2S - ^2P^o$	$1/2 - 3/2$	P10
Ar XVI	3.430	150		$1s^2 2p - 1s 2p 3p$	$^3P^o - ^3D$	$3/2 - 5/2$	P10
Ar XVI	3.989	260b		$1s^2 2s - 1s 2s 2p$	$g^2S - ^2P^o$	$1/2 - 3/2$	P10
Ar XVI	3.992	260b		$1s^2 2p - 1s 2p^2$	$^3P^o - ^3D$	$3/2 - 5/2$	P10
Ar XVI	25.71	400		$2p - 3s$	$^2P^o - ^2S$? $1/2 - 1/2$	F15, K8
Ar XVI	351.60	P		$2s - 2p$	$g^2S - ^2P^o$	$1/2 - 3/2$	K8
Ar XVI	387.66	P		$2s - 2p$	$g^2S - ^2P^o$	$1/2 - 1/2$	K8

ARGON XVII (Ar^{16+}), $Z = 18$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential $33\ 237\ 173\ \text{cm}^{-1}$; $4120.778\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XVII	3.095	5		$1s^2 - 1s 5p$	$g^1S - ^1P^o$	0 - 1	P10
Ar XVII	3.138	5		$1s^2 - 1s 5p$	$g^1S - ^1P^o$	0 - 1	P10
Ar XVII	3.203	130		$1s^2 - 1s 4p$	$g^1S - ^1P^o$	0 - 1	P10
Ar XVII	3.366	190		$1s^2 - 1s 3p$	$g^1S - ^1P^o$	0 - 1	P10
Ar XVII	3.948	1000		$1s^2 - 1s 2p$	$g^1S - ^1P^o$	0 - 1	P10

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XVII	3.968	550		$1s^2 - 1s2p$	$g^1S - ^4P^o$	0 - 1	P10
Ar XVII	4.014	f		$1s^2 - 1s2s$	$g^1S - ^2S$	0 - 1	D6
Ar XVII	21.17	100		$1s2s - 1s3p$	$^2S - ^2P^o$? 1 - 2	C15
Ar XVII	22.37	40		$1s2s - 1s3p$	$^1S - ^1P^o$? 0 - 1	C15

ARGON XVIII (Ar¹⁷⁺), Z = 18Ground State $1s^2S_{1/2}$ (1 electron)Ionization Potential 35 699 937 cm⁻¹; 4426.11 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ar XVIII	2.881	P		$1s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Ar XVIII	2.918	P		$1s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Ar XVIII	2.987	P	10	$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Ar XVIII	3.151	P	30	$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Ar XVIII	3.733	P	100	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, P10
Ar XVIII	12.21	P		2 - 7			G2
Ar XVIII	12.61	P		2 - 6			G2
Ar XVIII	13.35	P		2 - 5			G2
Ar XVIII	14.94	P		2 - 4			G2
Ar XVIII	20.16	P		2 - 3			G2
Ar XVIII	30.94	P		3 - 7			G2
Ar XVIII	33.68	P		3 - 6			G2
Ar XVIII	39.47	P		3 - 5			G2
Ar XVIII	57.7	P		3 - 4			G2
Ar XVIII	66.73	P		4 - 7			G2
Ar XVIII	80.9	P		4 - 6			G2
Ar XVIII	124.8	P		4 - 5			G2
Ar XVIII	143.4	P		5 - 7			G2
Ar XVIII	229.9	P		5 - 6			G2
Ar XVIII	381.4	P		6 - 7			G2

POTASSIUM, Z = 19

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K	255.530	50					E29
K	265.353	50					E29
K	294.515	50					E29
K	322.146	50					E29
K	331.966	50					E29
K	353.325	150					E29
K	353.455	150					E29
K	354.397	50					E29
K	354.627	20					E29
K	363.647	50					E29
K	368.465	50					E29
K	368.580	100					E29
K	376.061	150					E29
K	384.689	50					E29
K	394.063	50					E29
K	406.912	50					E29
K	409.737	400					E29
K	423.371	50					E29
K	423.558	50					E29
K	482.281	50					E29
K	502.798	50					E29
K	503.697	50					E29
K	511.371	50					E29
K	520.493	150					E29
K	527.565	50					E29
K	528.519	100					E29
K	534.059	100					E29
K	655.188	50					E29
K	675.335	50					E29
K	696.608	50					E29
K	737.761	50					E29
K	738.075	50					E29
K	747.677	150					E29
K	748.783	50					E29
K	774.192	50					E29
K	781.338	50					E29
K	812.493	50					E29
K	843.317	50					E29
K	940.839	50					E29
K	986.203	50					E29
K	986.763	50					E29
K	1017.337	50					E29
K	1020.566	20					E29
K	1032.768	100					E29
K	1033.875	100					E29

POTASSIUM I (K⁰⁺), Z = 19
 Ground State 1s²2s²2p⁶3s²3p⁶4s ²S_{1/2} (19 electrons)
 Ionization Potential 35 009.77 cm⁻¹; 4.341 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K I	653.31			3p ⁶ 4s - 3p ⁵ 4s ²	g ² S - ² P ^o	1/2 - 1/2	M22
K I	662.329	20		3p ⁶ 4s - 3p ⁵ 4s ²	g ² S - ² P ^o	1/2 - 3/2	E29, M22

POTASSIUM II (K¹⁺), Z = 19
 Ground State 1s²2s²2p⁶3s²3p⁶ ¹S₀ (18 electrons)
 Ionization Potential 255 076 cm⁻¹; 31.625 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K II?	261.200	50					E29
K II?	441.812	250					E29
K II	465.078	50		3p ⁶ - 3p ⁵ (² P ^o)5s	g ¹ S - 1/2 [1/2]'	0 - 1	E29, K29
K II	469.50			3p ⁶ - 3p ⁵ (² P ^o)5s	g ¹ S - 3/2 [3/2]'	0 - 1	K29
K II?	476.029	100					E29
K II?	495.144	300					E29
K II	600.765	300	2	3p ⁶ - 3p ⁵ (² P ^o)4s	g ¹ S - 1/2 [1/2]'	0 - 1	E29, M23
K II	607.931	250	3	3p ⁶ - 3p ⁵ (² P ^o)3d	g ¹ S - 3/2 [1/2]'	0 - 1	E29, M23
K II	612.621	300	1	3p ⁶ - 3p ⁵ (² P ^o)4s	g ¹ S - 3/2 [3/2]'	0 - 1	E29, M23

POTASSIUM III (K²⁺), Z = 19
 Ground State 1s²2s²2p⁶3s²3p⁵ ²P_{3/2}^o (17 electrons)
 Ionization Potential 368 800 cm⁻¹; 45.72 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K III	325.278	20		3p ⁵ -	g ² P ^o - 2	3/2 - 3/2	E29, T11
K III	327.605	50		3p ⁵ -	g ² P ^o - 2	1/2 - 3/2	E29, T11
K III?	328.845	100					E29
K III?	328.933	150					E29
K III	329.053	100		3p ⁵ - 3p ⁴ (¹ S)3d	g ² P ^o - ² D	3/2 - 3/2	E29, T11
K III	330.684	250		3p ⁵ - 3p ⁴ (¹ S)3d	g ² P ^o - ² D	3/2 - 3/2	E29, T11
K III	331.416	50		3p ⁵ - 3p ⁴ (¹ S)3d	g ² P ^o - ² D	1/2 - 3/2	E29, T11
K III?	341.924	300					E29
K III?	344.270	200					E29
K III?	344.635	200					E29
K III	345.405	100		3p ⁵ - 3p ⁴ (¹ D)5s	g ² P ^o - ² D	3/2 - 3/2	E29, T11
K III	345.545	100		3p ⁵ - 3p ⁴ (¹ D)5s	g ² P ^o - ² D	3/2 - 3/2	E29, T11
K III	347.999	150		3p ⁵ - 3p ⁴ (¹ D)5s	g ² P ^o - ² D	1/2 - 3/2	E29, T11
K III	379.118	300		3p ⁵ - 3p ⁴ (³ P)5s	g ² P ^o - ² P	3/2 - 1/2	E29, T11
K III	380.477	250b		3p ⁵ - 3p ⁴ (³ P)5s	g ² P ^o - ² P	3/2 - 3/2	E29, T11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K III	382.229	300					
K III	396.763	20		$3p^5 - 3p^4(^2P)5s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K III	398.633	150		$3p^5 -$	$g^2P^o - 1$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
K III	402.104	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
K III	406.484	300		$3p^5 - 3p^4(^1L)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
				$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K III	408.959	460					
K III	410.102	400		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K III	412.289	250		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
K III	413.792	500	6	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
K III	414.870	300		$3p^5 - 3p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
				$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
K III	416.001	300					
K III	417.535	300	6	$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K III	418.623	300		$3p^5 - 3p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K III	431.622	50		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
K III	434.722	750		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E29, K8
				$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E29, K8
K III	435.676	500					
K III?	437.216	150		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	E29, K8
K III?	440.429	750					
K III?	442.913	150					
K III	444.344	750	5				
K III	448.595	750	5	$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, E20
K III	466.793	750	4	$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E29, E20
K III	470.089	1000	4	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, M23
K III	471.569	750	4	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, M23
K III	474.920	450	4	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, M23
				$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E29, M23
K III	479.185	400					
K III	482.107	100		$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E29, E20
K III	482.408	100		$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E29, E20
K III	484.200	50		$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	E29, E20
K III	497.104	750	3	$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	E29, E20
				$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	E29, M23
K III?	514.943	100					
K III	520.611	500	2				
K III	523.792	250	2	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, M23
K III	529.796	400	2	$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, M23
K III	539.731	150		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E29, S29
K III	546.123	150					
K III	550.323	50		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E29, S29
K III?	708.838	200		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, S29
K III?	765.314	200					
K III	765.644	300	1				
K III	773.528	350	1	$3s^2 3p^5 - 3s 3p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E29, M23
K III	872.313	200					
K III?	873.865	100		$3s^2 3p^5 - 3s 3p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E29, M23
K III?	874.045	150		$3s 3p^5 - 3s^2 3p^4(^2P)4p$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
							E29
							E29

POTASSIUM IV (K^{3+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
 Ionization Potential $491\,300\text{ cm}^{-1}$; 60.91 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K IV	271.820	150					
K IV	273.065	100		$3p^4 - 3p^3(^4S^o)5s$	$g^3P - ^3S^o$	2 - 1	B23
K IV	273.546	50		$3p^4 - 3p^3(^4S^o)5s$	$g^3P - ^3S^o$	1 - 1	E29, B23
K IV?	274.552	150		$3p^4 - 3p^3(^4S^o)5s$	$g^3P - ^3S^o$	0 - 1	B23
K IV	279.877			$3p^4 - 3p^3(^2D^o)3d$	$^1D - ^1F^o$	2 - 3	E29 F2

Element	Wavelength	Intensity	Multiple	Configuration	Term	J - J	References
K IV	340.462	300		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	2-2	E29,K8
K IV	340.745	150		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$? 2-1	E29,K8
K IV	342.410	150		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	1-2	E29,K8
K IV	342.835	100		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	1-0	E29,K8
K IV	354.739	100		$3p^4 - 3p^3(^1D^o)4s$	$g^3P - ^1D^o$	2-2	E29,B23
K IV	354.927	300b		$3p^4 - 3p^3(^3P^o)4s$	$^1D - ^1P^o$	2-1	E29,B23
K IV	356.260	150		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^1D^o$	1-2	E29,B23
K IV	359.730	300		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2-3	E29,K22
K IV	359.907	200		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2-2	E29,K8
K IV	360.568	100		$3p^4 - 3p^3(^3P^o)4s$	$^1D - ^3P^o$	2-2	E29,B23
K IV	362.085	250		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	1-2	E29,K8
K IV	362.154	150		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	1-1	E29,K8
K IV	363.021	150		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	0-1	E29,K8
K IV	368.030	100		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^1D^o$	1-2	E29,S29
K IV	375.955	300		$3p^4 - 3p^3(^3D^o)4s$	$^1D - ^1D^o$	2-2	E29,K22
K IV	379.279	100		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-1	B23
K IV	379.877	300		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^1F^o$	2-3	E29,S29
K IV	380.477	250b		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-2	E29,S29
K IV	381.702	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	1-1	E29,S29
K IV	382.229	300		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-3	E29,S29
K IV	382.487	150		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^1P^o$	2-1	B23
K IV	382.646	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	0-1	B23,S29
K IV	382.906	300		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	1-2	E29,S29
K IV	384.095	250		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	2-1	E29,K8
K IV	386.610	200		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$? 1-1	E29,K8
K IV	388.920	250		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-1	E29,S29
K IV	389.069	250b		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^1D^o$	2-2	E29,S29
K IV	390.415	250		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-0	E29,S29
K IV	390.574	300		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-2	E29,S29
K IV	391.462	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-1	E29,S29
K IV	392.274	100		$3p^4 - 3p^3(^3P^o)4s$	$^1S - ^3P^o$	0-1	E29,E4
K IV	392.467	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	0-1	E29,S29
K IV	393.142	500		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-2	E29,S29
K IV	400.210	400		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3S^o$	2-1	E29,S29
K IV	402.907	300		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3S^o$	1-1	E29,S29
K IV	403.967	250		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3S^o$	0-1	E29,S29
K IV	404.412	150		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^3D^o$	2-1	E29,S29
K IV	405.773	100		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^3D^o$	2-2	E29,S29
K IV	408.076	250		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1P^o$	2-1	E29,B23
K IV	417.280	150		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^3P^o$	2-2	E29,S29
K IV?	440.905	100					E29
K IV	442.300	200b		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-1	E29,T11
K IV	442.518	100b		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-0	E29,T11
K IV	443.567	300		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$	2-2	E29,T11
K IV	445.607	200		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$	1-1	E29,T11
K IV	446.830	250		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$? 1-2	E29,K8
K IV	446.926	100		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$	0-1	E29,T11
K IV	448.595	750b		$3p^4 - 3p^3(^3D^o)3d$	$^1S - ^1P^o$	0-1	E29,K8
K IV	456.328	400b		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1P^o$	2-1	E29,T11
K IV	473.207	100		$3p^4 - 3p^3(^3D^o)3d$	$^1S - ^3S^o$	0-1	E29,K8
K IV	485.359	100		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1F^o$	2-3	E29,T11
K IV	499.993	100		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1D^o$? 2-2	E29,S29
K IV?	500.047	100					E29
K IV?	500.125	150					E29
K IV?	505.761	50					E29
K IV	523.001	250		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	2-2	E29,T11
K IV	526.448	200b		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	2-3	E29,T11
K IV	527.064	100		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	1-1	E29,T11
K IV	527.617	150		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	1-2	E29,T11
K IV	528.879	50		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	0-1	E29,T11
K IV?	543.640	100					E29
K IV?	543.973	50					E29
K IV?	591.237	50					E29
K IV?	591.311	50					E29
K IV?	605.316	50					E29

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K IV?	605.908	50					E29
K IV	646.188	750		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^1P^o$	$\lambda - 1$	E29, E4
K IV?	705.641	150					E29
K IV?	725.848	50					E29
K IV	737.144	500		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^2P^o$	2 - 1	E29, B18
K IV	741.950	500		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^2P^o$	1 - 0	E29, B18
K IV	745.264	500		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^2P^o$	2 - 2	E29, B18
K IV	746.350	400		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^2P^o$	1 - 1	E29, B18
K IV	749.993	300		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^2P^o$	0 - 1	E29, B18
K IV	754.194	150		$3s^2 3p^4 - 3s 3p^5$	$^1S - ^1P^o$	0 - 1	E29, E4
K IV	754.673	400		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^2P^o$	1 - 2	E29, B18
K IV?	855.815	100					E29
K IV?	892.621	100					E29

POTASSIUM V (K^{4+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [666 700] cm^{-1} ; [82.66] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K V?	213.121	50					E29
K V?	214.351	100					E29
K V?	232.673	50					E29
K V?	282.355	150					E29
K V	293.050	100		$3p^3 - 3p^2(^3P)4s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E27
K V	293.332	150		$3p^3 - 3p^2(^3P)4s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E29, E27
K V	294.836	300		$3p^3 - 3p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	E29, B23
K V	296.169	200		$3p^3 - 3p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	E29, B23
K V	297.064	200		$3p^3 - 3p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E29, B23
K V	300.252	200		$3p^3 - 3p^2(^1D)4s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, B23
K V	300.503	200		$3p^3 - 3p^2(^1D)4s$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{3}{2}$	E29, B23
K V	311.243	200		$3p^3 - 3p^2(^3P)4s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, B23
K V	312.770	250		$3p^3 - 3p^2(^3P)4s$	$^2D^o - ^2P$	$\frac{5}{2} - \frac{3}{2}$	E29, B23
K V	315.181	200		$3p^3 - 3p^2(^1D)4s$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E29, B23
K V	315.537	150		$3p^3 - 3p^2(^1D)4s$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E29, B23
K V?	318.969	50					E29
K V	327.031	100		$3p^3 - 3p^2(^3P)4s$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E29, B23
K V	327.376	250		$3p^3 - 3p^2(^3P)4s$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, B23
K V	328.973	100		$3p^3 - 3p^2(^3P)4s$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B23
K V	329.307	50		$3p^3 - 3p^2(^3P)4s$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, B23
K V?	331.168	50					E29
K V?	342.703	100					E29
K V?	343.468	150					E29
K V	349.504	200		$3p^3 -$	$^2D^o - 6$	$\frac{3}{2} - \frac{5}{2}$	E29, T11
K V	349.793	150		$3p^3 -$	$^2D^o - 6$	$\frac{5}{2} - \frac{5}{2}$	E29, T11
K V	352.463	100		$3p^3 -$	$^2D^o - 5$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	352.750	100		$3p^3 -$	$^2D^o - 5$	$\frac{5}{2} - \frac{3}{2}$	E29, T11
K V	355.800	50		$3p^3 - 3p^2(^1D)3d$	$g^4S^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, K8
K V	356.372	50		$3p^3 - 3p^2(^1D)3d$	$g^4S^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$	E29, K8
K V	356.615	150		$3p^3 - 3p^2(^1S)3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, K8
K V	357.685	150		$3p^3 - 3p^2(^1S)3d$	$^2D^o - ^2D$	$\frac{5}{2} - \frac{5}{2}$	E29, K8
K V?	370.523	150					E29
K V?	370.580	150					E29
K V	372.148	500		$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{7}{2}$	E29, E27
K V	372.462	200		$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2F$	$\frac{5}{2} - \frac{5}{2}$	E29, E27

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K V	372.774	200		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2F$? $\frac{1}{2} - \frac{1}{2}$	E29, K8
K V	373.074	100		$3p^3 -$	$g^4S^{\circ} - 3$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V?	373.318	150					E29
K V	375.955	300		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E27
K V	377.763	250		$3p^3 - 3p^2(^1S)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K V	378.219	150		$3p^3 - 3p^2(^1S)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K V	379.118	300		$3p^3 - 3p^2(^1S)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{1}{2}$	E27
K V	383.318	100		$3p^3 - 3p^2(^3P)3d$	$g^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, K8
K V?	384.400	100					E29
K V	385.020	50		$3p^3 - 3p^2(^3P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
K V	385.689	100		$3p^3 - 3p^2(^3P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	387.800	300		$3p^3 - 3p^2(^3P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	389.069	250b		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	389.428	100		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	389.750	100		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, E27
K V	390.114	2:0		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, E27
K V	394.909	1:0		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K V	395.395	250b		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K V	398.363	200		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K V	398.878	200		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K V	399.400	150		$3p^3 -$	$^2D^{\circ} - 4$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	399.754	200		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, E27
K V?	412.080	300					E29
K V	414.400	150		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
K V	415.000	250		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	415.465	150		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	415.793	200		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	419.045	100		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	419.310	100		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	419.731	50		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	422.178	400		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, B23
K V	425.159	300		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, B23
K V	425.588	500		$3p^3 - 3p^2(^3P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, B23
K V	438.023	250		$3p^3 -$	$^2P^{\circ} - 3$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
K V	438.647	100		$3p^3 -$	$^2P^{\circ} - 3$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V?	445.878	50					E29
K V?	447.085	150					E29
K V	449.013	150b		$3p^3 - 3p^2(^3P)3d$	$g^4S^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	449.708	200		$3p^3 - 3p^2(^3P)3d$	$g^4S^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	452.227	100		$3p^3 - 3p^2(^3P)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B23
K V	452.900	200		$3p^3 - 3p^2(^3P)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, B23
K V	455.670	250		$3p^3 - 3p^2(^3P)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E29, B23
K V	456.328	400b		$3p^3 - 3p^2(^3P)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, B23
K V?	459.005	150					E29
K V?	468.447	100					E29
K V	482.706	200		$3p^3 - 3p^2(^3P)3d$	$g^4S^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V	483.745	200		$3p^3 - 3p^2(^3P)3d$	$g^4S^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V?	515.320	50					E29
K V?	534.873	100					E29
K V?	536.216	100					E29
K V?	544.537	50					E29
K V?	544.627	50					E29
K V	580.319	750		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, B23
K V	585.510	250		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, B23
K V	586.322	500		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, B23
K V	602.269	250		$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E29, T11
K V	603.429	400		$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
K V	638.668	250		$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, B23
K V	639.982	100		$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, B23
K V	644.963	20		$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, B23
K V	686.978	50		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
K V	687.495	300		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
K V	688.085	150		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
K V?	694.477	100					E29
K V?	695.042	150					E29

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K V?	713.041	50					
K V	720.432	300					E29
K V	724.420	400b		$3s^2 3p^2 - 3s 3p^4$	$g^4 S^o - 4P$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
K V	731.858	600		$3s^2 3p^2 - 3s 3p^4$	$g^4 S^o - 4P$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V?	743.292	100		$3s^2 3p^2 - 3s 3p^4$	$g^4 S^o - 4P$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
K V?	750.230	150					E29
K V?	750.381	50					E29
K V?	757.112	200					E29
K V?	758.559	50					E29
K V?	769.402	100					E29
K V	770.287	150					E29
K V?	771.376	150		$3s^2 3p^2 - 3s 3p^4$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E29, E27
K V	771.456	150					E29
K V?	784.713	100		$3s^2 3p^2 - 3s 3p^4$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, E27
K V?	786.464	100					E29
K V?	802.122	100					E29
K V?	803.826	100					E29
K V?	810.215	50					E29
K V?	810.893	50					E29
K V?	823.047	150					E29
K V?	823.358	150					E29
K V?	825.559	50					E29
K V?	826.395	50					E29
K V?	830.785	50					E29
K V?	839.439	50					E29
K V?	854.416	100					E29
K V?	854.771	50					E29
K V?	867.9 ^o 1	50					E29
K V?	868.140	50					E29
K V?	868.552	50					E29
K V?	869.965	150					E29
K V?	874.883	50					E29
K V?	874.985	50					E29
K V?	881.405	150					E29
K V?	917.498	50					E29
K V?	1021.332	100					E29
K V?	1027.174	100					E29
K V	1035.60 ?			$3s^2 3p^2 - 3s 3p^4$	$^2P^o - 4P$	$\frac{3}{2} - \frac{5}{2}$	K8

POTASSIUM VI (K^{5+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [805 700] cm^{-1} ; [99.89] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K VI?	157.433	50					E29
K VI?	200.341	50					E29
K VI	256.831	150					E29, W5
K VI	257.657	100		$3p^2 - 3p 4s$	$g^3 P - ^3P^o$	1 - 2	E29, W5
K VI	258.018	200		$3p^2 - 3p 4s$	$g^3 P - ^3P^o$	0 - 1	E29, W5
				$3p^2 - 3p 4s$	$g^3 P - ^3P^o$	2 - 2	E29, W5
K VI	258.411	50					E29, W5
K VI	258.873	150		$3p^2 - 3p 4s$	$g^3 P - ^3P^o$	1 - 1	E29, W5
K VI	259.609	100		$3p^2 - 3p 4s$	$g^3 P - ^3P^o$	1 - 0	E29, W5
K VI	266.344	200		$3p^2 - 3p 4s$	$g^3 P - ^3P^o$	2 - 1	E29, W5
K VI	284.860	20		$3p^2 - 3p 4s$	$^1D - ^1P^o$	2 - 1	E27
				$3p^2 - 3p 4s$	$^1S - ^1P^o$	0 - 1	E27

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K VI?	293.438	100					E29
K VI?	302.657	100					E29
K VI?	335.175	150					E29
K VI?	338.161	150					E29
K VI?	367.378	100					E29
K VI?	370.115	100					E29
K VI	374.940	250		3p ² - 3p 3d	¹ D - ¹ F ^o	2 - 3	E27
K VI?	377.263	100					E29
K VI	384.514	100		3p ² - 3p 3d	g ² P - ³ D ^o	0 - 1	E27
K VI	385.547	200b		3p ² - 3p 3d	g ² P - ³ D ^o	1 - 2	E27
K VI	386.193			3p ² - 3p 3d	g ² P - ³ D ^o	1 - 1	E27
K VI?	386.505	100					E29
K VI	387.809	300		3p ² - 3p 3d	g ¹ P - ² D ^o	2 - 3	E27
K VI	388.241	150		3p ² - 3p 3d	g ² P - ² D ^o	2 - 2	E27
K VI?	388.485	100					E29
K VI?	389.531	100					E29
K VI	394.480	150		3p ² - 3p 3d	g ² P - ² P ^o	0 - 1	E27
K VI	395.407	150		3p ² - 3p 3d	g ² P - ² P ^o	1 - 0	E27
K VI	396.242	50		3p ² - 3p 3d	g ² P - ² P ^o	1 - 1	E27
K VI	398.104	150		3p ² - 3p 3d	g ² P - ¹ P ^o	1 - 2	E27
K VI	399.075	100		3p ² - 3p 3d	g ² P - ² P ^o	2 - 1	E27
K VI	399.419	100		3p ² - 3p 3d	¹ S - ¹ P ^o	0 - 1	E27
K VI	400.963	200		3p ² - 3p 3d	g ² P - ³ P ^o	2 - 2	E27
K VI?	404.684	200					E29
K VI?	405.178	100					E29
K VI?	405.475	50					E29
K VI?	405.675	100					E29
K VI?	406.102	100					E29
K VI?	412.790	50					E29
K VI?	416.509	50					E29
K VI?	418.160	100					E29
K VI	426.338	100		3p ² - 3p 3d	¹ D - ³ P ^o	? 2 - 1	E29, K8
K VI?	428.315	100					E29
K VI	428.538	250		3p ² - 3p 3d	¹ D - ³ P ^o	? 2 - 2	E29, K8
K VI?	429.438	100					E29
K VI?	439.047	150					E29
K VI?	441.370	150					E29
K VI?	446.009	200					E29
K VI	449.009	50		3s ² 3p ² - 3s 3p ³	g ² P - ¹ P ^o	1 - 1	E27
K VI?	451.320	100					E29
K VI	452.658	10		3s ² 3p ² - 3s 3p ²	g ² P - ¹ P ^o	2 - 1	E27
K VI?	457.323	50					E29
K VI?	457.427	20					E29
K VI	458.043	50		3s ² 3p ² - 3s 3p ³	g ² P - ³ S ^o	0 - 1	E27
K VI	460.438	150		3s ² 3p ² - 3s 3p ³	g ² P - ³ S ^o	1 - 1	E27
K VI?	461.737	150					E29
K VI	464.274	250		3s ² 3p ³ - 3s 3p ²	g ³ P - ³ S ^o	2 - 1	E27
K VI?	480.397	50					E29
K VI	488.134	250		3s ² 3p ³ - 3s 3p ²	¹ D - ¹ P ^o	2 - 1	E27
K VI?	490.423	100					E29
K VI	501.664	20		3s ² 3p ³ - 3s 3p ³	¹ D - ² S ^o	2 - 1	E27
K VI	554.136			3s ² 3p ² - 3s 3p ²	¹ S - ¹ P ^o	0 - 1	E27
K VI	571.643	20		3s ² 3p ² - 3s 3p ²	¹ S - ² S ^o	0 - 1	E27
K VI	611.862	150		3s ² 3p ² - 3s 3p ³	g ² P - ³ P ^o	0 - 1	E29, W5
K VI?	612.272	50					E29
K VI	616.140	150		3s ² 3p ² - 3s 3p ²	g ² P - ² P ^o	1 - 2	E27
K VI	623.011	250		3s ² 3p ² - 3s 3p ³	g ² P - ³ P ^o	2 - 2	E27
K VI	625.405	150		3s ² 3p ² - 3s 3p ²	¹ D - ¹ D ^o	2 - 2	E27
K VI?	627.560	100					E29
K VI?	630.940	50					E29
K VI?	637.195	50					E29
K VI?	657.931	150					E29
K VI?	661.402	150					E29
K VI?	668.864	150					E29
K VI	710.525	50		3s ² 3p ³ - 3s 3p ³	g ² P - ³ D ^o	0 - 1	E27

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K VI?	710.932	50					
K VI?	712.728	50					
K VI	716.012	100					E29
K VI	716.276	20		$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^o$	1 - 2	E29
K VI	724.278	200		$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^o$	1 - 1	E27
				$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^o$	2 - 3	E27
K VI	725.331	20					
K VI?	739.177	50		$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^o$	2 - 2	E27
K VI?	747.848	100					
K VI?	753.877	150					E29
K VI?	757.199	200					E29
							E29
K VI?	770.022	50					E29
K VI?	771.103	250					E29
K VI?	776.957	200					E29
K VI?	882.184	100					E29
K VI?	918.581	100					E29
							E29
K VI?	929.374	50					E29
K VI?	930.318	50					E29
K VI?	968.518	250					E29
K VI?	982.115	100					E29
K VI?	1000.056	100					E29

POTASSIUM VII (K^{6+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 P_{1/2}^o$ (13 electrons)
 Ionization Potential $948\,200\text{ cm}^{-1}$; 117.56 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K VII	126.650	10					
K VII	127.151	20		$3p - 6d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	133.084	10		$3p - 6d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E27
K VII	139.480	20		$3p - 6s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E27
K VII	140.085	50		$3p - 5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
				$3p - 5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E27
K VII	152.858	20					
K VII	153.624	100		$3p - 5s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E27
K VII	175.210	100		$3p - 5s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E27
K VII	176.122	200		$3p - 4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	176.181	20		$3p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E27
				$3p - 4d$	$g^2P^o - ^2D$	$\frac{5}{2} - \frac{7}{2}$	E27
K VII	207.568	20					
K VII	218.987	20		$3d - 5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E27
K VII	219.063			$3s 3p^2 - 3s^2 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E27
K VII	220.629	100		$3s 3p^2 - 3s^2 4f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	E27
K VII	221.035	100		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	E27
				$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{5}{2} - \frac{7}{2}$	E27
K VII	221.480	150					
K VII	221.567	10		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{5}{2} - \frac{7}{2}$	E27
K VII	221.597	10		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	E27
K VII	222.122	100		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	E27
K VII	222.450	100		$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	E27
				$3s 3p^2 - 3s 3p(^2P^o) 4s$	$^4P - ^4P^o$	$\frac{5}{2} - \frac{7}{2}$	E27
K VII	227.625	100					
K VII	229.258	150					
K VII	279.433	20		$3p - 4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E27
K VII	279.521	20		$3p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E27
K VII	279.521	20		$3d - 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E27
K VII	397.691	20		$3d - 4f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	E27
				$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	398.354	50					
K VII	398.943	200		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{1}{2} - \frac{1}{2}$	E27
K VII	399.006			$3p - 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	399.495	50		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	E27
K VII	400.147	100		$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$	E27
				$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{5}{2}$	E27
				$3s 3p^2 - 3s 3p(^2P^o) 3d$	$^4P - ^4D^o$	$\frac{5}{2} - \frac{7}{2}$	E27

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K VII	401.553	150		$3s3p^2 - 3s3p(^1P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	401.790	100		$3s3p^2 - 3s3p(^3P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	402.132	100		$3s3p^2 - 3s3p(^3P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	402.291	20		$3s3p^2 - 3s3p(^3P^o)3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	403.800	300		$3p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	403.991	150		$3s3p^2 - 3s3p(^3P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	405.345	100		$3s3p^2 - 3s3p(^3P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	406.850	20		$3s3p^2 - 3s3p(^3P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	408.210	50		$3s3p^2 - 3s3p(^3P^o)3d$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	479.780	200		$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	484.261	250		$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	487.102	350		$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	491.722	200		$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E27
K VII?	516.853	50					E29
K VII	517.794	50		$3s3p^2 - 3p^2$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	517.926	100		$3s^23p - 3s3p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E27
K VII	520.857	100		$3s3p^2 - 3p^2$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII?	524.639	100					E29
K VII	525.612	150		$3s3p^2 - 3p^2$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	526.453	100		$3s^23p - 3s3p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E27
K VII	658.420	200		$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
K VII	671.535	250		$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
K VII	672.302	20		$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27

POTASSIUM VIII (K^{7+}), $Z = 19$
 Ground State $1s^22s^22p^63s^2\ ^1S_0$ (12 electrons)
 Ionization Potential $1\ 249\ 100\ \text{cm}^{-1}$; $154.86\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K VIII	155.715	125		$3s3p - 3s4d$	$^3P^o - ^2D$	0 - 1	P6
K VIII	155.961	175		$3s3p - 3s4d$	$^3P^o - ^2D$	1 - 2	P6
K VIII	155.985	100		$3s3p - 3s4d$	$^3P^o - ^2D$	1 - 1	P6
K VIII	156.507	225		$3s3p - 3s4d$	$^3P^o - ^2D$	2 - 3	P6
K VIII	156.543	75		$3s3p - 3s4d$	$^3P^o - ^2D$	2 - 2	P6
K VIII	156.566	25		$3s3p - 3s4d$	$^2P^o - ^2D$	2 - 1	P6
K VIII	198.536	125		$3s3p - 3s4s$	$^3P^o - ^2S$	0 - 1	P6
K VIII	198.975	250		$3s3p - 3s4s$	$^3P^o - ^2S$	1 - 1	P6
K VIII	199.921	375		$3s3p - 3s4s$	$^3P^o - ^2S$	2 - 1	P6
K VIII	230.678	250		$3s3d - 3s4f$	$^3D - ^2F^o$	1 - 2	P6
K VIII	230.706	300		$3s3d - 3s4f$	$^3D - ^2F^o$	2 - 3	P6
K VIII	230.745	375		$3s3d - 3s4f$	$^3D - ^2F^o$	3 - 4	P6
K VIII	416.628	75		$3s3p - 3s3d$	$^2P^o - ^2D$	0 - 1	P6
K VIII	418.443	175		$3s3p - 3s3d$	$^2P^o - ^2D$	1 - 2	P6
K VIII	418.571	25		$3s3p - 3s3d$	$^2P^o - ^2D$	1 - 1	P6
K VIII	422.511	250		$3s3p - 3s3d$	$^2P^o - ^2D$	2 - 3	P6
K VIII	422.642	50		$3s3p - 3s3d$	$^2P^o - ^2D$	2 - 2	P6
K VIII	430.31			$3p^2 - 3p3d$	$^3P - ^2D^o$	1 - 2	F2
K VIII	434.01			$3p^2 - 3p3d$	$^3P - ^2D^o$	2 - 3	F2
K VIII	441.33			$3p^2 - 3p3d$	$^3P - ^2P^o$	2 - 2	F2
K VIII	474.83			$3p^2 - 3p3d$	$^1D - ^1D^o$	2 - 2	F2
K VIII	519.372	250		$3s^2 - 3s3p$	$g^1S - ^1P^o$	0 - 1	E29, T11
K VIII	557.029	50		$3s3p - 3p^2$	$^3P^o - ^2P$	1 - 2	P6
K VIII	561.593	150		$3s3p - 3p^2$	$^3P^o - ^2P$	0 - 1	P6
K VIII	564.462	300		$3s3p - 3p^2$	$^3P^o - ^2P$	2 - 2	P6

K VIII

K IX

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K VIII	565.112	150		3s3p - 3p ²	² P° - ³ P	1 - 1	P6
K VIII	569.479	100		3s3p - 3p ²	² P° - ³ P	1 - 0	P6
K VIII	569.696	20		3s3p - 3s3d	¹ P° - ³ D	1 - 2	E29, K8
K VIII	569.915	20		3s3p - 3s3d	¹ P° - ³ D	1 - 1	E29, K8
K VIII	572.790	125		3s3p - 3p ²	² P° - ³ P	2 - 1	P6
K VIII	585.25			3s3d - 3p3d	² D - ³ D°	3 - 3	F2
K VIII	605.61			3s3p - 3p ²	¹ P° - ¹ S	1 - 0	F2
K VIII	721.4			3s3d - 3p3d	² D - ³ F°	3 - 4	F2
K VIII	729.9			3s3d - 3p3d	² D - ³ F°	2 - 3	F2
K VIII	737.2			3s3d - 3p3d	² D - ³ F°	1 - 2	F2
K VIII	774.738	150		3s ² - 3s3p	g ¹ S - ² P°	0 - 1	E29, B3
K VIII	938.287	100		3s3p - 3s3d	² P° - ¹ D	1 - 2	E29, T11

POTASSIUM IX (K⁸⁺), Z = 19
 Ground State 1s²2s²2p⁶3s ²S_{1/2} (11 electrons)
 Ionization Potential 1 418 070 cm⁻¹; 175.814 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K IX	112.113	50		3p - 5d	² P° - ² D	1/2 - 3/2	K25
K IX	112.581	100		3p - 5d	² P° - ² D	3/2 - 5/2	K25
K IX	131.646	150		3s - 4p	g ² S - ² P°	1/2 - 3/2	K25
K IX	131.896	100		3s - 4p	g ² S - ² P°	1/2 - 1/2	K25
K IX	145.702	125		3d - 5f	² D - ² F°	3/2 - 5/2	K25
K IX	145.753	125		3d - 5f	² D - ² F°	5/2 - 7/2	K25
K IX	147.157	150		3p - 4d	² P° - ² D	1/2 - 3/2	K25
K IX	147.943	200		3p - 4d	² P° - ² D	3/2 - 5/2	K25
K IX	147.973	25		3p - 4d	² P° - ² D	3/2 - 3/2	K25
K IX	184.586	175		3p - 4s	² P° - ² S	1/2 - 1/2	K25
K IX	185.883	250		3p - 4s	² P° - ² S	3/2 - 1/2	K25
K IX	205.772	300		3d - 4f	² D - ² F°	3/2 - 5/2	K25
K IX	205.862	375		3d - 4f	² D - ² F°	5/2 - 7/2	K25
K IX	260.052	125		3d - 4p	² D - ² P°	3/2 - 3/2	K25
K IX	260.834	75		3d - 4p	² D - ² P°	3/2 - 1/2	K25
K IX	451.078	50		4p - 5s	² P° - ² S	1/2 - 1/2	E29, T .
K IX	453.882	20		4p - 5s	² P° - ² S	3/2 - 1/2	E29, T11
K IX	459.498	50		3p - 3d	² P° - ² D	1/2 - 3/2	K25
K IX	466.943	100		3p - 3d	² P° - ² D	3/2 - 3/2	K25
K IX	544.855	50		4f - 5g	² F° - ² G	5/2 - 7/2	E29, T11
K IX	545.232	100		4f - 5g	² F° - ² G	7/2 - 9/2	E29, T11
K IX	621.422	225		3s - 3p	g ² S - ² P°	1/2 - 3/2	K25
K IX	636.300	125		3s - 3p	g ² S - ² P°	1/2 - 1/2	K25

POTASSIUM X (K^{9+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
 Ionization Potential $4\ 060\ 600\ \text{cm}^{-1}$; $503.44\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K X	29.588	100		$2p^6 - 2p^5 4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E26
K X	29.794	50		$2p^6 - 2p^5 4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E26
K X	30.887	50		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^1P^o$	0 - 1	E26
K X	30.937	20		$2p^6 - 2p^5 4s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E26
K X	31.062	20		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^3P^o$	0 - 1	E26
K X	31.200	20		$2p^6 - 2p^5 4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E26
K X	35.307	400		$2p^6 - 2p^5 3d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E26
K X	35.779	200		$2p^6 - 2p^5 3d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E26
K X	36.229	100		$2p^6 - 2p^5 3d$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E26
K X	41.148	700		$2p^6 - 2p^5 3s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E26
K X	41.541	700		$2p^6 - 2p^5 3s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E26

POTASSIUM XI (K^{10+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
 Ionization Potential $4\ 550\ 100\ \text{cm}^{-1}$; $564.13\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XI	32.180	100		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E76, K8
K XI	32.339	50		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E26, K8
K XI	32.810	50		$2p^5 - 2p^4(^3P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E26, K8
K XI	36.662	70		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E26
K XI	36.971	50		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E26
K XI	37.435	70		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E26
K XI	37.696	50		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E26
K XI	37.870	20		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	E26
K XI	38.31	P		$2s 2p^6 - 2s 2p^5(^2P^o)3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K8
K XI	152.46			$2s^2 2p^6 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	D2
K XI	158.11			$2s^2 2p^6 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	D2

POTASSIUM XII (K^{11+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
 Ionization Potential $5\ 074\ 100\ \text{cm}^{-1}$; $629.09\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XII	140.85			$2s^2 2p^4 - 2s 2p^5$	$^1D - ^1P^o$	2 - 1	D2
K XII	153.26			$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^o$	0 - 1	F9
K XII	169.71			$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2 - 1	D2
K XII	172.57			$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 0	D2
K XII	174.40			$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	2 - 2	D2
K XII	175.35			$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 1	D2
K XII	176.68			$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	0 - 1	D2
K XII	180.37			$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 2	D2

POTASSIUM XIII (K^{12+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential $5\ 759\ 100\ \text{cm}^{-1}$; $714.02\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XIII	138.50	250		$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	B12
K XIII	142.68	250		$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	B12
K XIII	143.76	500		$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	B12
K XIII	151.05	50		$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	B12
K XIII	152.77	300		$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	B12
K XIII	156.03	50		$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	B12
K XIII	157.86	200		$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	B12
K XIII	164.13	250		$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	B12
K XIII	166.19	100		$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	B12
K XIII	173.15	300		$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	B12
K XIII	179.46	400		$2s^2 2p^3 - 2s 2p^4$	$^3D^o - ^3D$	$\frac{5}{2} - \frac{5}{2}$	B12
K XIII	198.49	150		$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	B12
K XIII	199.54	50		$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	B12
K XIII	201.48	200		$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B12
K XIII	202.01	50		$2s^2 2p^3 - 2s 2p^4$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	B12
K XIII	208.12	150		$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B12

POTASSIUM XIV (K^{13+}), $Z = 19$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential $6\ 348\ 800\ \text{cm}^{-1}$; $787.13\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XIV	147.57	50		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 S^{\circ}$	0 - 1	B12
K XIV	150.48	100		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 S^{\circ}$	1 - 1	B12
K XIV	151.68	100		$2s^2 2p^2 - 2s 2p^3$	$^1 D - ^1 P^{\circ}$	2 - 1	B12
K XIV	153.91	200		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 S^{\circ}$	2 - 1	B12
K XIV	172.26	100		$2s^2 2p^2 - 2s 2p^3$	$^1 D - ^1 D^{\circ}$	2 - 2	B12
K XIV	174.09	50		$2s^2 2p^2 - 2s 2p^3$	$^1 S - ^1 P^{\circ}$	0 - 1	B12
K XIV	186.06	P		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 P^{\circ}$	0 - 1	D2
K XIV	190.07	P		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 P^{\circ}$	1 - 2	D2
K XIV	190.75	P		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 P^{\circ}$	1 - 0	D2
K XIV	195.59	P		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 P^{\circ}$	2 - 2	D2
K XIV	196.31	P		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 P^{\circ}$	2 - 1	D2

POTASSIUM XV (K^{14+}), $Z = 19$
 Ground State $1s^2 2s^2 2p \ ^2P_{1/2}^{\circ}$ (5 electrons)
 Ionization Potential $6\ 950\ 800\ \text{cm}^{-1}$; $861.77\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XV	24.34	?		$2p - 3d$	$g^2 P^{\circ} - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	K8
K XV	25.91	?		$2p - 3s$	$g^2 P^{\circ} - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	K8
K XV	175.68	50		$2s^2 2p - 2s 2p^2$	$g^2 P^{\circ} - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	B12
K XV	184.07	?		$2s^2 2p - 2s 2p^2$	$g^2 P^{\circ} - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	K8
K XV	194.44	?		$2s^2 2p - 2s 2p^2$	$g^2 P^{\circ} - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	K8

POTASSIUM XVI (K^{15+}), $Z = 19$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential $[7\ 791\ 500]\ \text{cm}^{-1}$; $[966]\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XVI	15.05	?		$2s^2 - 2s 5p$	$g^1 S - ^2 P^{\circ}$	0 - 1	K8
K XVI	16.70	?		$2s^2 - 2s 4p$	$g^1 S - ^2 P^{\circ}$	0 - 1	K8
K XVI	20.76	?		$2s^2 - 2p 3s$	$g^1 S - ^1 P^{\circ}$	0 - 1	K8
K XVI	211.81	?		$2s^2 - 2s 2p$	$g^1 S - ^1 P^{\circ}$	0 - 1	K8
K XVI	405.20	?		$2s^2 - 2s 2p$	$g^1 S - ^2 P^{\circ}$	0 - 1	K8

POTASSIUM XVII (K^{16+}), $Z = 19$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [8 340 000] cm^{-1} ; [1034] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XVII	13.92	P		2p - 6d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
K XVII	13.98	P		2p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
K XVII	14.14	P		2s - 5p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G15
K XVII	14.70	P		2p - 5d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
K XVII	14.76	P		2p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
K XVII	15.75	P		2s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G15
K XVII	16.43	P		2p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
K XVII	16.50	P		2p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
K XVII	20.88	P		2s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G15
K XVII	20.93	P		2s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	G15
K XVII	22.020	100		2p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
K XVII	22.163	100		2p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
K XVII	22.53	P		2p - 3s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	G15
K XVII	22.70	P		2p - 3s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	G15
K XVII	323.74	P		2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	K8
K XVII	363.37	P		2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	K8

POTASSIUM XVIII (K^{17+}), $Z = 19$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential 37 190 818 cm^{-1} ; 4610.955 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XVIII	2.80	P		$1s^2 - 1s5p$	$g^1S - ^1P^{\circ}$	0 - 1	K8
K XVIII	2.86	P		$1s^2 - 1s4p$	$g^1S - ^1P^{\circ}$	0 - 1	K8
K XVIII	3.02			$1s^2 - 1s3p$	$g^1S - ^1P^{\circ}$	0 - 1	C11
K XVIII	3.53	P		$1s^2 - 1s2p$	$g^1S - ^1P^{\circ}$	0 - 1	K8, C11
K XVIII	3.55	P		$1s^2 - 1s2p$	$g^1S - ^3P^{\circ}$	0 - 1	K8, C11
K XVIII	3.59	?	f	$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	K8

POTASSIUM XIX (K^{18+}), $Z = 19$
 Ground State $1s^2S_{1/2}$ (1 electron)
 Ionization Potential $39\,795\,864\text{ cm}^{-1}$; 4933.93 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
K XIX	2.584 P			$1s-6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
K XIX	2.617 P			$1s-5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
K XIX	2.680 P	10		$1s-4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
K XIX	2.826 P	30		$1s-3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
K XIX	3.348 P	100		$1s-2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
K XIX	10.95 P			$2-7$			G2
K XIX	11.32 P			$2-6$			G2
K XIX	11.97 P			$2-5$			G2
K XIX	13.41 P			$2-4$			G2
K XIX	18.08 P			$2-3$			G2
K XIX	27.77 P			$3-7$			G2
K XIX	30.22 P			$3-6$			G2
K XIX	35.41 P			$3-5$			G2
K XIX	51.8 P			$3-4$			G2
K XIX	59.88 P			$4-7$			G2
K XIX	72.59 P			$4-6$			G2
K XIX	112.0 P			$4-5$			G2
K XIX	128.7 P			$5-7$			G2
K XIX	206.3 P			$5-6$			G2
K XIX	342.2 P			$6-7$			G2

CALCIUM, Z = 20

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca	135.597	50					E29
Ca	143.173	100					E29
Ca	144.038	150					E29
Ca	175.963	50					E29
Ca	178.557	50					E29
Ca	187.515	40					E29
Ca	242.384	150					E29
Ca	330.809	50					E29
Ca	337.020	50					E29
Ca	337.396	100					E29
Ca	368.303	150					E29
Ca	369.647	250					E29
Ca	427.655	50					E29
Ca	440.118	100					E29
Ca	442.607	50					E29
Ca	444.254	50					E29
Ca	459.811	50					E29
Ca	468.540	50					E29
Ca	476.177	100					E29
Ca	477.300	50					E29
Ca	478.305	200					E29
Ca	480.345	100					E29
Ca	482.471	150					E29
Ca	482.663	50					E29
Ca	482.769	100					E29
Ca	484.368	150					E29
Ca	514.498	50					E29
Ca	528.286	400					E29
Ca	569.122	50					E29
Ca	576.662	50					E29
Ca	603.622	150					E29
Ca	611.186	50					E29
Ca	620.566	50					E29
Ca	642.812	100					E29
Ca	659.694	50					E29
Ca	667.126	100					E29
Ca	668.462	50					E29
Ca	672.083	50					E29
Ca	686.190	100					E29
Ca	769.602	50					E29
Ca	772.641	100					E29
Ca	780.116	50					E29
Ca	846.611	150					E29
Ca	850.966	150					E29
Ca	856.635	200					E29
Ca	856.791	200					E29
Ca	860.983	50					E29
Ca	890.892	100					E29
Ca	897.972	50					E29
Ca	916.917	100					E29
Ca	917.278	115					E29
Ca	938.699	50					E29
Ca	987.336	250					E29
Ca	998.397	150					E29
Ca	1019.371	100					E29
Ca	1028.560	200					E29
Ca	1031.760	200					E29

CALCIUM I (Ca^{0+}), $Z = 20$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 \ ^1S_0$ (20 electrons)
 Ionization Potential $49\ 305.72\ \text{cm}^{-1}$; $6.113\ \text{eV}$

CALCIUM II (Ca^{1+}), $Z = 20$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 4s \ ^2S_{1/2}$ (19 electrons)
 Ionization Potential $95\ 751.87\ \text{cm}^{-1}$; $11.871\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca II	1341.889	240	2	4s - 6p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E6,E23
Ca II	1342.535	120	2	4s - 6p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E6,E23
Ca II	1432.503	120	7	3d - 6f	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E6,E23
Ca II	1433.749	200	7	3d - 6f	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	E6,E23
Ca II	1553.176	200	6	3d - 5f	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E6,E23
Ca II	1554.642	320	6	3d - 5f	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	E6,E23
Ca II	1642.802	40	5	3d - 6p	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	E6,E23
Ca II	1643.770	200	5	3d - 6p	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	E6,E23
Ca II	1644.442	360	5	3d - 6p	$^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$	E6,E23
Ca II	1649.858	600	1	4s - 5p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	E6,E23
Ca II	1651.991	320	1	4s - 5p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E6,E23
Ca II	1673.860	120		4p - 7d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E6,E23
Ca II	1680.051	200		4p - 7d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E6,E23
Ca II	1680.129	20		4p - 7d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E6,E23
Ca II	1691.779	80		4p - 8s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E6,E23
Ca II	1698.183	160		4p - 8s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E6,E23
Ca II	1807.337	200	11	4p - 6d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E6,E23
Ca II	1814.495	400	11	4p - 6d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E6,E23
Ca II	1814.647	40	11	4p - 6d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E6,E23
Ca II	1838.008	400	4	3d - 4f	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E6,E23
Ca II	1840.061	600	4	3d - 4f	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	E6,E23
Ca II	1843.088	200	10	4p - 7s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E6,E23
Ca II	1850.691	400	10	4p - 7s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E6,E23

CALCIUM III (Ca^{2+}), $Z = 20$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1S_0$ (18 electrons)
 Ionization Potential $410\ 614.1\ \text{cm}^{-1}$; $50.908\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca III	273.695	50		$3p^6 - 3p^5(^2P^o)5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	B15
Ca III	274.461	10		$3p^6 - 3p^5(^2P^o)6s$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	B15
Ca III	296.958	300		$3p^6 - 3p^5(^2P^o)4d$	$g^1S - ^1P^o$	0 - 1	B14
Ca III	301.741	200		$3p^6 - 3p^5(^2P^o)5s$	$g^1S - ^1P^o$	0 - 1	B14
Ca III	304.330	150		$3p^6 - 3p^5(^2P^o)5s$	$g^1S - ^3P^o$	0 - 1	B14

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca III	304.910	150		$3p^6 - 3p^5(2P^{\circ})4d$	$g^1S - 2D^{\circ}$	0 - 1	B14
Ca III	357.980	150b		$3p^6 - 3p^5(2P^{\circ})3d$	$g^1S - 1P^{\circ}$	0 - 1	B14
Ca III	403.724	450		$3p^6 - 3p^5(2P^{\circ})4s$	$g^1S - 1P^{\circ}$	0 - 1	B14
Ca III	409.954	350		$3p^6 - 3p^5(2P^{\circ})4s$	$g^1S - 2P^{\circ}$	0 - 1	B14
Ca III	439.691	250		$3p^6 - 3p^5(2P^{\circ})3d$	$g^1S - 2D^{\circ}$	0 - 1	B14
Ca III	450.549	200		$3p^6 - 3p^5(2P^{\circ})3d$	$g^1S - 3P^{\circ}$	0 - 1	B14
Ca III	552.411	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2 - 3	B15
Ca III	561.969	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3P^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2 - 3	B15
Ca III	562.607	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})7f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4 - 5	B14
Ca III	580.058	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	3 - 4	B14
Ca III	583.350	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2 - 3	B14
Ca III	586.547	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4 - 4	B14
Ca III	587.354	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4 - 5	B14
Ca III	589.013	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3P^{\circ} - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B14
Ca III	590.987	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3 - 4	B14
Ca III	591.584	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3P^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2 - 3	B14
Ca III	594.978	50w		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	0 - 1	B14
Ca III	596.675	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	1 - 1	B14
Ca III	597.291	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	1 - 2	B14
Ca III	600.852	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2 - 2	B14
Ca III	606.756	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})7f$	$1F^{\circ} - \frac{1}{2}[\frac{7}{2}]$	3 - 4	B14
Ca III	610.225	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})7f$	$3D^{\circ} - \frac{3}{2}[\frac{7}{2}]$	3 - 4	B14
Ca III	624.821	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{1}{2}[\frac{7}{2}]$	2 - 4	B14
Ca III	625.269	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$1D^{\circ} - \frac{1}{2}[\frac{7}{2}]$	2 - 3	B14
Ca III	628.663	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{1}{2}[\frac{7}{2}]$	2 - 3	B14
Ca III	629.922	25					B14
Ca III	631.015	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B14
Ca III	632.017	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4 - 4	B14
Ca III	633.325	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3 - 3	B14
Ca III	633.468	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4 - 4	B14
Ca III	633.588	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4 - 5	B14
Ca III	635.481	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$1F^{\circ} - \frac{1}{2}[\frac{7}{2}]$	3 - 4	B14
Ca III	636.318	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{7}{2}]$	3 - 4	B14
Ca III	636.388	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{7}{2}]$	3 - 3	B14
Ca III	637.111	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$1D^{\circ} - \frac{3}{2}[\frac{7}{2}]$	2 - 3	B14
Ca III	637.788	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3 - 4	B14
Ca III	639.124	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$3D^{\circ} - \frac{3}{2}[\frac{7}{2}]$	2 - 4	B14
Ca III	640.280	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{7}{2}]$	2 - 3	B14
Ca III	648.618	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})6f$	$1F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3 - 4	B14
Ca III	675.424	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$1D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2 - 3	B14
Ca III	677.626	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$1D^{\circ} - \frac{1}{2}[\frac{7}{2}]$	2 - 3	B14
Ca III	679.845	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{1}{2}[\frac{7}{2}]$	3 - 4	B14
Ca III	680.049	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$3P^{\circ} - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B14
Ca III	682.632	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2 - 3	B14
Ca III	684.018	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B14
Ca III	684.659	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$3P^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2 - 2	B14
Ca III	685.408	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$3P^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2 - 3	B14
Ca III	688.543	75		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$1D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2 - 3	B14
Ca III	689.602	1		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$1F^{\circ} - \frac{1}{2}[\frac{7}{2}]$	3 - 4	B14
Ca III	689.708	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$1F^{\circ} - \frac{1}{2}[\frac{7}{2}]$	2 - 3	B14
Ca III	690.963	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3 - 3	B14
Ca III	691.136	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$1D^{\circ} - \frac{3}{2}[\frac{7}{2}]$	2 - 3	B14
Ca III	692.148	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$1D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2 - 2	B15
Ca III	693.487	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3F^{\circ} - \frac{3}{2}[\frac{7}{2}]$	3 - 4	B14
Ca III	694.154	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2 - 1	B14
Ca III	694.370	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{3}{2}[\frac{7}{2}]$	1 - 1	B14
Ca III	694.898	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$3P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	1 - 2	B14
Ca III	694.994	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2 - 2	B14
Ca III	695.219	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3 - 4	B14
Ca III	695.382	10					B14
Ca III	696.031	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2 - 3	B14
Ca III	697.551	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$3P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	0 - 1	B14
Ca III	698.690	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$3D^{\circ} - \frac{3}{2}[\frac{7}{2}]$	2 - 3	B14
Ca III	699.085	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$3P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	1 - 2	B14
Ca III	699.891	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	1 - 1	B14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca III	701.390	300		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-3	B14
Ca III	704.772	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2P^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-1	B14
Ca III	705.426	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5f$	$1F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-4	B14
Ca III	709.802	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 2P$	0-1	B14
Ca III	714.628	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 1P$	1-1	B14
Ca III	717.283	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 2P$	2-1	B14
Ca III	717.836	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 2P$	2-2	B14
Ca III	724.762	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 2D$	0-1	B14
Ca II'	725.556	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 1D$	1-2	B14
Ca III	727.656	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	3-4	B14
Ca III	728.004	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	3-3	B14
Ca III	730.474	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 2D$	1-2	B14
Ca III	731.217	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 1D$	2-2	B14
Ca III	732.244	190		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-2	B14
Ca III	732.894	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-3	B14
Ca III	733.096	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-3	B14
Ca III	736.239	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 2S$	0-1	B14
Ca III	736.693	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4-4	B14
Ca III	736.823	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4-3	B14
Ca III	738.845	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 2S$	1-1	B14
Ca III	740.330	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4-4	B14
Ca I'	740.553	400		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	4-5	B14
Ca III	742.541	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-4	B14
Ca III	742.672	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-3	B14
Ca III	744.293	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2P^{\circ} - 2S$	2-1	B14
Ca III	746.060	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-3	B14
Ca III	746.248	300		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-4	B14
Ca III	747.978	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-3	B14
Ca III	749.479	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-2	B14
Ca III	764.699	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 2P$	3-2	B14
Ca III	770.321	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 2F$	2-2	B14
Ca III	772.498	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 1P$	2-1	B14
Ca III	779.608	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 2D$	4-3	B14
Ca III	779.902	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 1D$	3-2	B14
Ca III	785.120	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 2D$	3-2	B14
Ca III	786.159	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 2D$	3-3	B14
Ca III	791.051	25		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 2D$	2-2	B14
Ca III	799.529	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-2	B14
Ca III	800.301	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-3	B14
Ca III	800.550	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-3	B14
Ca III	800.886	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5p$	$2F^{\circ} - 2S$	2-1	B14
Ca III	803.396	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	3-4	B14
Ca III	803.553	10		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	3-3	B14
Ca III	809.642	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-2	B14
Ca III	809.930	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	1-2	B14
Ca III	810.434	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-3	B14
Ca III	810.687	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{1}{2}[\frac{3}{2}]$	2-3	B14
Ca III	817.056	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	3-4	B14
Ca III	817.223	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	3-3	B14
Ca III	817.480	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1F^{\circ} - \frac{1}{2}[\frac{3}{2}]$	3-3	B14
Ca III	818.321	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-3	B14
Ca III	820.131	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-2	B14
Ca III	821.572	300		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-4	B14
Ca III	822.432	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-3	B14
Ca III	825.880	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-3	B14
Ca III	826.108	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-4	B14
Ca III	828.920	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-3	B14
Ca III	829.445	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-2	B14
Ca III	830.777	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-2	B14
Ca III	831.077	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	1-2	B14
Ca III	833.141	150		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-3	B14
Ca III	835.861	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-4	B14
Ca III	836.024	100		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1F^{\circ} - \frac{3}{2}[\frac{3}{2}]$	3-3	B14
Ca III	836.769	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-2	B14
Ca III	837.918	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$2D^{\circ} - \frac{3}{2}[\frac{3}{2}]$	2-1	B14

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Ca III	838.237	200		$3p^5(2P^o)3d - 3p^5(2P^o)4f$	$2D^o - \frac{3}{2}[\frac{3}{2}]$	1 - 1	B14
Ca III	838.501	25		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$2D^o - \frac{3}{2}[\frac{3}{2}]$	1 - 0	B15
Ca III	840.317	25		$3p^5(2P^o)3d - 3p^5(2P^o)4f$	$1F^o - \frac{3}{2}[\frac{3}{2}]$	3 - 3	B14
Ca III	840.558	300		$3p^5(2P^o)3d - 3p^5(2P^o)4f$	$1F^o - \frac{3}{2}[\frac{3}{2}]$	3 - 4	B14
Ca III	847.757	50		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$1D^o - 1P$	2 - 1	B14
Ca III	855.660	100		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$2D^o - 2P$	2 - 1	B14
Ca III	855.978	25		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$2D^o - 2P$	1 - 1	B14
Ca III	864.035	150		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$1F^o - 2P$	3 - 2	B14
Ca III	864.470	50		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$2D^o - \frac{1}{2}[\frac{1}{2}]$	1 - 0	B15
Ca III	865.629	100		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$1D^o - 2D$	2 - 1	B14
Ca III	867.545	200		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$2D^o - 1D$	3 - 2	B14
Ca III	870.152	25		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$1D^o - 2D$	2 - 2	B14
Ca III	874.009	25		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$2D^o - 2D$	3 - 2	B14
Ca III	875.301	25		$3p^5(2P^o)3d - 3p^5(2P^o)5p$	$2D^o - 2D$	3 - 3	B14
Ca III	934.875	50		$3p^5(2P^o)4s - 3p^5(2P^o)4f$	$2P^o - \frac{1}{2}[\frac{3}{2}]$? 1 - 2	E29,K8
Ca III	938.497	25		$3p^5(2P^o)3d - 3p^5(2P^o)6f$	$1P^o - \frac{3}{2}[\frac{3}{2}]$	1 - 2	B15
Ca III	966.196	25		$3p^5(2P^o)3d - 3p^5(2P^o)6f$	$1P^o - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B15
Ca III	984.919	25		$3p^5(2P^o)4p - 3p^5(2P^o)6d$	$2D - 2F^o$	1 - 2	B14
Ca III	995.135	10		$3p^5(2P^o)4p - 3p^5(2P^o)6d$	$1D - 1F^o$	2 - 3	B14
Ca III	997.804	50		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2P$	1 - 2	B14
Ca III	1002.143	25		$3p^5(2P^o)4p - 3p^5(2P^o)6d$	$2D - 2F^o$	3 - 4	B14
Ca III	1005.000	10		$3p^5(2P^o)4p - 3p^5(2P^o)6d$	$2D - 2F^o$	2 - 3	B14
Ca III	1009.546	50		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 1D$	2 - 2	B14
Ca III	1012.125	10		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2D$	2 - 1	B14
Ca III	1013.715	50		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2P$	0 - 1	B14
Ca III	1018.302	100		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2D$	2 - 2	B14
Ca III	1018.600	100		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 1P$	0 - 1	B14
Ca III	1020.071	300		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2D$	2 - 3	B14
Ca III	1023.849	100		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 1D$	1 - 2	B14
Ca III	1026.495	100		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2D$	1 - 1	B14
Ca III	1032.862	200		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2D$	1 - 2	B14
Ca III	1034.650	250		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2S$	2 - 1	B14
Ca III	1035.607	50		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$1P^o - 2P$	1 - 1	B14
Ca III	1036.766	150		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$1P^o - 2P$	1 - 2	B14
Ca III	1040.705	100		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$1P^o - 1P$	1 - 1	B14
Ca III	1044.518	10		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2D$	0 - 1	B14
Ca III	1049.673	150		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$2P^o - 2S$	1 - 1	B14
Ca III	1060.751	50		$3p^5(2P^o)3d - 3p^5(2P^o)5f$	$1P^o - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B14
Ca III	1064.899	50		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$1P^o - 1D$	1 - 2	B14
Ca III	1067.781	25		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$1P^o - 2D$	1 - 1	B14
Ca III	1074.607	10		$3p^5(2P^o)4s - 3p^5(2P^o)5p$	$1P^o - 2D$	1 - 2	B14
Ca III	1099.495	50		$3p^5(2P^o)3d - 3p^5(2P^o)5f$	$1P^o - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B15
Ca III	1124.039	100		$3p^5(2P^o)4p - 3p^5(2P^o)6s$	$2S - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B15
Ca III	1145.062	100		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2S - \frac{1}{2}[\frac{3}{2}]$	1 - 2	B15
Ca III	1148.399	100		$3p^5(2P^o)3d - 3p^5(2P^o)4p$	$2P^o - 1S$	1 - 0	B14
Ca III	1149.848	150		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2S - \frac{1}{2}[\frac{3}{2}]$	1 - 1	B15
Ca III	1152.706	100		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2S - \frac{1}{2}[\frac{3}{2}]$	1 - 0	B15
Ca III	1181.988	150		$3p^5(2P^o)4p - 3p^5(2P^o)6s$	$1D - \frac{3}{2}[\frac{3}{2}]$	2 - 1	B15
Ca III	1187.303	250		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$1P - \frac{3}{2}[\frac{3}{2}]$	1 - 1	B15
Ca III	1188.606	400		$3p^5(2P^o)4p - 3p^5(2P^o)6s$	$2D - \frac{1}{2}[\frac{3}{2}]$	3 - 2	B15
Ca III	1190.864	250		$3p^5(2P^o)4p - 3p^5(2P^o)6s$	$2D - \frac{1}{2}[\frac{3}{2}]$	2 - 1	B15
Ca III	1193.697	150		$3p^5(2P^o)4p - 3p^5(2P^o)6s$	$2D - \frac{1}{2}[\frac{3}{2}]$	2 - 2	B15
Ca III	1200.772	50		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$1D - \frac{3}{2}[\frac{3}{2}]$	2 - 2	B15
Ca III	1202.309	200		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2D - \frac{1}{2}[\frac{3}{2}]$	1 - 1	B15
Ca III	1203.507	10		$3p^5(2P^o)4p - 3p^5(2P^o)6s$	$1P - \frac{3}{2}[\frac{3}{2}]$	1 - 0	B15
Ca III	1207.341	150		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2D - \frac{1}{2}[\frac{3}{2}]$	2 - 2	B15
Ca III	1207.838	200		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2P - \frac{3}{2}[\frac{3}{2}]$	1 - 1	B15
Ca III	1208.046	150		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2D - 2F^o$	3 - 3	B14
Ca III	1208.716	50		$3p^5(2P^o)4p - 3p^5(2P^o)6s$	$2D - \frac{1}{2}[\frac{3}{2}]$	1 - 1	B15
Ca III	1211.822	450		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2D - \frac{1}{2}[\frac{3}{2}]$	3 - 4	B15
Ca III	1211.889	250		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2D - 2F^o$	3 - 4	B14
Ca III	1212.682	200		$3p^5(2P^o)4p - 3p^5(2P^o)6s$	$2P - \frac{1}{2}[\frac{3}{2}]$	2 - 1	B15
Ca III	1213.301	300		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2D - 2F^o$	2 - 3	B14
Ca III	1217.450	50		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$2D - \frac{1}{2}[\frac{3}{2}]$	2 - 2	B15
Ca III	1218.738	50		$3p^5(2P^o)4p - 3p^5(2P^o)5d$	$1D - \frac{1}{2}[\frac{3}{2}]$	2 - 1	B15

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca III	1222.895	200		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})6s$	$3P - \frac{3}{2}[\frac{1}{2}]^{\circ}$	1 - 1	B15
Ca III	1223.185	450		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$1P - \frac{3}{2}[\frac{1}{2}]^{\circ}$	1 - 2	B15
Ca III	1225.321	200		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})6s$	$1D - \frac{1}{2}[\frac{3}{2}]^{\circ}$	2 - 1	B15
Ca III	1225.699	350		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$3D - \frac{1}{2}[\frac{3}{2}]^{\circ}$	1 - 2	B15
Ca III	1228.317	200		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})6s$	$1D - \frac{1}{2}[\frac{3}{2}]^{\circ}$	2 - 2	B15
Ca III	1230.975	400		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$3P - \frac{3}{2}[\frac{1}{2}]^{\circ}$	2 - 3	B15
Ca III	1234.400	100		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$3P - \frac{3}{2}[\frac{1}{2}]^{\circ}$	2 - 2	B15
Ca III	1236.102	50		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$3D - \frac{1}{2}[\frac{3}{2}]^{\circ}$	1 - 2	B15
Ca III	1239.863	150		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$1P - \frac{1}{2}[\frac{3}{2}]^{\circ}$	1 - 1	B15
Ca III	1239.976	400		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$1D - \frac{1}{2}[\frac{1}{2}]^{\circ}$	2 - 3	B15
Ca III	1243.008	350		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$3P - \frac{3}{2}[\frac{1}{2}]^{\circ}$	1 - 2	B15
Ca III	1253.464	300		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$1D - \frac{1}{2}[\frac{3}{2}]^{\circ}$	2 - 2	B15
Ca III	1254.413	100		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$3P - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	B15
Ca III	1259.209	150		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$1D - \frac{1}{2}[\frac{1}{2}]^{\circ}$	2 - 1	B15
Ca III	1261.381	150		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})6s$	$3P - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	B15
Ca III	1262.653	500		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3P$	0 - 1	B14
Ca III	1269.333	10		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})6s$	$3P - \frac{1}{2}[\frac{3}{2}]^{\circ}$	1 - 1	B15
Ca III	1270.333	450		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3P$	1 - 1	B14
Ca III	1272.544	100		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})6s$	$3P - \frac{1}{2}[\frac{3}{2}]^{\circ}$	1 - 2	B15
Ca III	1273.775	100		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5d$	$3P - \frac{1}{2}[\frac{3}{2}]^{\circ}$	2 - 3	B15
Ca III	1278.392	550		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3P$	1 - 0	B14
Ca III	1281.553	500		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3P$	1 - 2	B14
Ca III	1285.908	400		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 1P$	0 - 1	B14
Ca III	1286.523	600		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3P$	2 - 1	B14
Ca III	1288.029	100		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5s$	$3P - \frac{1}{2}[\frac{3}{2}]^{\circ}$	2 - 2	B15
Ca III	1293.871	450		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 1P$	1 - 1	B14
Ca III	1296.035	600		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3P$	2 - 2	B14
Ca III	1309.418	50		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})5d$	$3P - \frac{1}{2}[\frac{1}{2}]^{\circ}$	1 - 0	B15
Ca III	1310.669	450		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 1P$	2 - 1	B14
Ca III	1317.699	550		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 1D$	1 - 2	B14
Ca III	1328.945	500		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3D$	0 - 1	B14
Ca III	1335.129	550		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 1D$	2 - 2	B14
Ca III	1337.466	200		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3D$	1 - 1	B14
Ca III	1355.415	450		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3D$	2 - 1	B14
Ca III	1360.010	500		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3D$	1 - 2	B14
Ca III	1362.222	200		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})6s$	$1S - \frac{3}{2}[\frac{1}{2}]^{\circ}$	0 - 1	B15
Ca III	1378.584	250		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3D$	2 - 2	B14
Ca III	1385.426	550		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3D$	2 - 3	B14
Ca III	1397.887	550		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1P^{\circ} - \frac{1}{2}[\frac{3}{2}]^{\circ}$	1 - 2	B14
Ca III	1420.067	200		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})6s$	$1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	B15
Ca III	1453.157	650		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3S$	0 - 1	B14
Ca III	1459.787	600		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3P$	3 - 2	B14
Ca III	1461.875	550		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1P^{\circ} - \frac{3}{2}[\frac{3}{2}]^{\circ}$	1 - 2	B14
Ca III	1463.335	750		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3P^{\circ} - 3S$	1 - 1	B14
Ca III	1465.477	300		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3P$	2 - 1	B14
Ca III	1480.425	450		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3P$	2 - 2	B14
Ca III	1480.527	450		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$1P^{\circ} - \frac{3}{2}[\frac{3}{2}]^{\circ}$	1 - 2	B14
Ca III	1484.869	800		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4f$	$3P^{\circ} - 3S$	2 - 1	B14
Ca III	1496.884	600		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 1P$	2 - 1	B14
Ca III	1506.876	550		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 1D$	3 - 2	B14
Ca III	1528.866	450		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 1D$	2 - 2	B14
Ca III	1545.294	1000		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3D$	4 - 3	B14
Ca III	1555.527	750		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3D$	2 - 1	B14
Ca III	1562.473	900		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3D$	3 - 2	B14
Ca III	1571.268	650		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3D$	3 - 3	B14
Ca III	1586.125	650		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3D$	2 - 2	B14
Ca III	1595.193	450		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$3F^{\circ} - 3D$	2 - 3	B14
Ca III	1684.392	25		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})4d$	$3D - 1P^{\circ}$	2 - 1	B14
Ca III	1688.770	450		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5s$	$3S - 1P^{\circ}$	1 - 1	B14
Ca III	1698.939	450		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5s$	$3S - 3P^{\circ}$	1 - 0	B14
Ca III	1720.334	300		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})4d$	$3D - 1P^{\circ}$	1 - 1	B14
Ca III	1754.153	100		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})4d$	$1D - 1P^{\circ}$	2 - 1	B14
Ca III	1762.259	500		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$1D^{\circ} - 3P$	2 - 1	B14
Ca III	1773.241	400		$3p^5(2P^{\circ})4p - 3p^5(2P^{\circ})5s$	$3S - 3P^{\circ}$	1 - 1	B14
Ca III	1783.929	500		$3p^5(2P^{\circ})3d - 3p^5(2P^{\circ})4p$	$1D^{\circ} - 3P$	2 - 2	B14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca III	1788.827	230		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^2S - ^1D^{\circ}$	1 - 2	B14
Ca III	1794.223	500		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^2S - ^2P^{\circ}$	1 - 2	B14
Ca III	1798.246	450		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^1P - ^1P^{\circ}$	1 - 1	B14
Ca III	1800.208	600		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^2P$	3 - 2	B14
Ca III	1807.885	650		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^1D^{\circ} - ^1P$	2 - 1	B14
Ca III	1812.153	700		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^2P$	2 - 1	B14
Ca III	1813.585	550		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^2P$	1 - 1	B14
Ca III	1822.592	25		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^2P - ^1P^{\circ}$	2 - 1	B14
Ca III	1830.059	600		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^2P$	1 - 0	B14
Ca III	1835.072	200		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^2P$	2 - 2	B14
Ca III	1845.775	450		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^2P - ^1P^{\circ}$	1 - 1	B14
Ca III	1851.090	150		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^3D - ^1P^{\circ}$	2 - 1	B14
Ca III	1860.432	500		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^1P$	2 - 1	B14
Ca III	1870.263	700		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^1F^{\circ} - ^2P$	3 - 2	B14
Ca III	1872.367	700		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^1D$	3 - 2	B14
Ca III	1876.915	10		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3S - ^2F^{\circ}$	1 - 2	B14
Ca III	1894.124	500		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^1D^{\circ} - ^3D$	2 - 1	B14
Ca III	1894.582	250		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^3D - ^1P^{\circ}$	1 - 1	B14
Ca III	1907.385	450		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^3D - ^2P^{\circ}$	1 - 0	B14
Ca III	1910.097	550		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^1D$	2 - 2	B14
Ca III	1911.692	450		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^1D$	1 - 2	B14
Ca III	1935.72	600		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^1D - ^1P^{\circ}$	2 - 1	B14
Ca III	1938.572	150		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3D - ^2D^{\circ}$	3 - 2	B14
Ca III	1939.244	400		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3D - ^2D^{\circ}$	3 - 3	B14
Ca II	1939.683	500		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^1D^{\circ} - ^2D$	2 - 2	B14
Ca III	1943.012	550		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3S - ^2P^{\circ}$	1 - 2	B14
Ca III	1948.257	600		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^1F^{\circ} - ^1D$	3 - 2	B14
Ca III	1951.888	150		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^3D$	2 - 1	B14
Ca III	1952.133	450		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3D - ^2D^{\circ}$	2 - 2	B14
Ca III	1952.823	200		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3D - ^2D^{\circ}$	2 - 3	B14
Ca III	1953.064	450		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^3D - ^2P^{\circ}$	2 - 1	B14
Ca III	1953.295	150		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^1D^{\circ} - ^3D$	2 - 3	B14
Ca III	1953.546	500		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^3D$	1 - 1	B14
Ca III	1958.149	300		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3D - ^1D^{\circ}$	3 - 2	B14
Ca III	1958.971	500		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^3D$	3 - 2	B14
Ca III	1964.614	650		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^3D - ^2P^{\circ}$	3 - 2	B14
Ca III	1967.936	650		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^2S - ^2P^{\circ}$	1 - 1	B14
Ca III	1971.992	250		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3D - ^1D^{\circ}$	2 - 2	B14
Ca III	1972.823	600		$3p^5(^2P^{\circ})3d - 3p^5(^2P^{\circ})4p$	$^3D^{\circ} - ^3D$	3 - 3	B14
Ca III	1977.013	500		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3D - ^3D^{\circ}$	2 - 1	B14
Ca III	1978.551	500		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^3D - ^2P^{\circ}$	2 - 2	B14
Ca III	1981.192	550		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})4d$	$^3S - ^2P^{\circ}$	1 - 0	B14
Ca III	1989.512	450		$3p^5(^2P^{\circ})4p - 3p^5(^2P^{\circ})5s$	$^1P - ^1P^{\circ}$	1 - 1	B14

CALCIUM IV (Ca³⁺), Z = 20Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 \ ^2P^{\circ}_{3/2}$ (17 electrons)Ionization Potential 541 200 cm⁻¹; 67.10 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca IV	249.408	150		$3p^5 - 3p^4(^1D)5s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F29, T11
Ca IV	250.153	150		$3p^5 - 3p^4(^1D)5s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
Ca IV	251.354	150		$3p^5 - 3p^4(^1D)5s$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
Ca IV	296.554	250		$3p^5 - 3p^4(^1S)4s$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E29, K23
Ca IV	299.315	200		$3p^5 - 3p^4(^1S)4s$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E29, K23

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca IV	318.094	200		$3p^5 - 3p^4(^1D)4s$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, K23
Ca IV	318.385	50		$3p^5 - 3p^4(^1D)4s$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, K23
Ca IV	321.593	120		$3p^5 - 3p^4(^1D)4s$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K23
Ca IV?	328.577	50					E29
Ca IV	329.116	250		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, F13
Ca IV	329.391	150		$3p^5 - 3p^4(^2P)4s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, G1
Ca IV	331.442	200		$3p^5 - 3p^4(^2P)4s$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, G1
Ca IV	331.991	250		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, G1
Ca IV	332.531	235		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E29, G1
Ca IV	332.808	150		$3p^5 - 3p^4(^2P)4s$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, G1
Ca IV	338.828	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, F13
Ca IV	339.790	150		$3p^5 - 3p^4(^2P)4s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E29, K23
Ca IV	340.286	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, G1
Ca IV	341.284	200		$3p^5 - 3p^4(^2P)4s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E29, K23
Ca IV	341.455	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E29, F13
Ca IV	342.447	250b		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, F13
Ca IV	343.194	100		$3p^5 - 3p^4(^2P)4s$	$g^2P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E29, K23
Ca IV	343.438	200		$3p^5 - 3p^4(^2P)4s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{1}{2}$	E29, K23
Ca IV	343.933	250		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E29, G1
Ca IV	344.958	200		$3p^5 - 3p^4(^2P)4s$	$g^2P^\circ - ^4P$	$\frac{1}{2} - \frac{3}{2}$	E29, K23
Ca IV	345.130	215		$3p^5 - 3p^4(^1D)3d$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E29, F13
Ca IV	374.744	250		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
Ca IV	434.570	600		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
Ca IV	437.271	100		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
Ca IV	437.773	250		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
Ca IV	438.930	200		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
Ca IV	443.821	750		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
Ca IV?	444.766	150					E29
Ca IV	445.018	50		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^4D$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
Ca IV	450.565	500		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E29, S29
Ca IV	454.553	50		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E29, S29
Ca IV	456.981	250		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E29, S29
Ca IV	461.085	250		$3p^5 - 3p^4(^2P)3d$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E29, S29
Ca IV?	536.790	85					E29
Ca IV	565.463	150		$3s3p^6 - 3s^23p^4(^2P)4p$	$^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
Ca IV	655.998	750		$3s^23p^5 - 3s3p^6$	$g^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B14, E29
Ca IV	669.696	500		$3s^23p^5 - 3s3p^6$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B14, E29
Ca IV?	775.526	150					E29
Ca IV?	892.671	150					E29
Ca IV?	994.311	300					E29
Ca IV?	997.579	350					E29
Ca IV?	1024.339	250					E29
Ca IV?	1027.309	250					E29
Ca IV?	1029.566	150					E29
Ca IV?	1030.273	200					E29

CALCIUM V (Ca⁴⁺), Z = 20Ground State $1s^22s^22p^63s^23p^4\ ^3P_2$ (16 electrons)Ionization Potential 680 800 cm⁻¹; 84.41 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca V	184.280	150		$3p^4 - 3p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	2 - 2	B23
Ca V	184.415	50		$3p^4 - 3p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	2 - 1	B23
Ca V	185.102	100		$3p^4 - 3p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	1 - 2	B23
Ca V	185.288	50		$3p^4 - 3p^3(^2P^\circ)5s$	$g^3P - ^2P^\circ$	1 - 0	B23
Ca V	185.540	100		$3p^4 - 3p^3(^2P^\circ)5s$	$g^3P - ^3P^\circ$	0 - 1	B23

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca V	190.363	200					
Ca V	190.457	250		$3p^4 - 3p^3(2P^o)5s$	$1D - 1P^o$	2 - 1	B23
Ca V	190.558	150		$3p^4 - 3p^3(2D^o)5s$	$3P - 3D^o$	2 - 3	B23
Ca V	191.439	150		$3p^4 - 3p^3(2D^o)5s$	$3P - 3D^o$	2 - 2	B23
Ca V	191.480	100		$3p^4 - 3p^3(2D^o)5s$	$3P - 3D^o$	1 - 2	B23
Ca V	191.801	100		$3p^4 - 3p^3(2D^o)4s$	$3P - 3D^o$	1 - 1	B23
Ca V	196.970	250		$3p^4 - 3p^3(2D^o)5s$	$3P - 3D^o$	0 - 1	B23
Ca V	197.531	100		$3p^4 - 3p^3(2D^o)5s$	$1D - 1D^o$	2 - 2	B23
Ca V	197.648	100		$3p^4 - 3p^3(2D^o)5s$	$1D - 3D^o$	2 - 3	B23
Ca V	197.685	20		$3p^4 - 3p^3(2D^o)5s$	$1D - 3D^o$	2 - 2	B23
Ca V	199.553	300		$3p^4 - 3p^3(2D^o)5s$	$1D - 3D^o$	2 - 1	E29, K8
Ca V	199.890	150		$3p^4 - 3p^3(4S^o)5s$	$3P - 3S^o$	2 - 1	R23, K13
Ca V	200.512	250		$3p^4 - 3p^3(2P^o)5s$	$1S - 1P^o$	0 - 1	B23
Ca V	200.860	150		$3p^4 - 3p^3(4S^o)5s$	$3P - 3S^o$	1 - 1	R23
Ca V	257.976	265		$3p^4 - 3p^3(4S^o)5s$	$3P - 3S^o$	0 - 1	B23
Ca V	258.251	150		$3p^4 - 3p^3(2P^o)4s$	$3P - 3P^o$	2 - 2	E29, K8
Ca V	259.576	150		$3p^4 - 3p^3(2P^o)4s$	$3P - 3P^o$	2 - 1	E29, K8
Ca V	259.856	150		$3p^4 - 3p^3(2P^o)4s$	$3P - 3P^o$	1 - 2	E29, K8
Ca V	259.978	150		$3p^4 - 3p^3(2P^o)4s$	$3P - 3P^o$	1 - 1	E29, K8
Ca V	260.446	165		$3p^4 - 3p^3(2P^o)4s$	$3P - 3P^o$	1 - 0	E29, K8
Ca V	266.863	150		$3p^4 - 3p^3(2P^o)4s$	$3P - 2P^o$	0 - 1	E29, K8
Ca V	267.772	400		$3p^4 - 3p^3(2D^o)4s$	$3P - 1D^o$	2 - 2	B23
Ca V	268.583	100		$3p^4 - 3p^3(2P^o)4s$	$1D - 1P^o$	2 - 1	B23
Ca V	270.305	300		$3p^4 - 3p^3(2D^o)4s$	$3P - 1D^o$	1 - 2	B23
Ca V	270.494	150		$3p^4 - 3p^3(2D^o)4s$	$3P - 3D^o$	2 - 3	E29, K8
Ca V	270.570	100		$3p^4 - 3p^3(2D^o)4s$	$3P - 3D^o$	2 - 2	E29, K8
Ca V	271.141	200		$3p^4 - 3p^3(2P^o)4s$	$3P - 2D^o$	2 - 1	B23
Ca V	271.440	50		$3p^4 - 3p^3(2P^o)4s$	$1D - 3P^o$	2 - 2	B23
Ca V	272.265	250		$3p^4 - 3p^3(2P^o)4s$	$1D - 2P^o$	2 - 1	B23
Ca V	272.336	150		$3p^4 - 3p^3(2D^o)4s$	$3P - 3D^o$	1 - 2	E29, K8
Ca V	272.982	200		$3p^4 - 3p^3(2D^o)4s$	$3P - 3D^o$	1 - 1	E29, K8
Ca V	280.992	400		$3p^4 - 3p^3(2D^o)4s$	$3P - 3D^o$	0 - 1	E29, K8
Ca V	284.794	100		$3p^4 - 3p^3(2D^o)4s$	$1D - 1D^o$	2 - 2	B23
Ca V	284.978	300		$3p^4 - 3p^3(2D^o)4s$	$1D - 3D^o$	2 - 3	B23
Ca V	286.96	450b		$3p^4 - 3p^3(4S^o)4s$	$3P - 3S^o$	2 - 1	E29, K8
Ca V	287.657	150		$3p^4 - 3p^3(4S^o)4s$	$3P - 3S^o$	1 - 1	B23, K8
Ca V	301.139	20		$3p^4 - 3p^3(4S^o)4s$	$3P - 3S^o$	0 - 1	E29, K8
Ca V	316.115	150		$3p^4 - 3p^3(4S^o)4s$	$D - 3S^o$	2 - 1	B23
Ca V	321.609	120b		$3p^4 - 3p^3(2P^o)3d$	$3P - 1D^o$	1 - 2	E29, S29
Ca V	322.166	500		$3p^4 - 3p^3(2P^o)3d$	$3P - 3D^o$	2 - 1	B23
Ca V	322.757	250		$3p^4 - 3p^3(2P^o)3d$	$1D - 1F^o$	2 - 3	E29, G1
Ca V	323.223	300		$3p^4 - 3p^3(2P^o)3d$	$3P - 3D^o$	2 - 2	E29, G1
Ca V	324.110	150		$3p^4 - 3p^3(2P^o)3d$	$1S - 1P^o$	0 - 1	E29, S29
Ca V	324.477	250		$3p^4 - 3p^3(2P^o)3d$	$3P - 3D^o$	1 - 1	E29, G1
Ca V	325.020	150		$3p^4 - 3p^3(2P^o)3d$	$3P - 3D^o$	2 - 3	E29, G1
Ca V	325.282	250		$3p^4 - 3p^3(2P^o)3d$	$3P - 3D^o$	0 - 1	E29, G1
Ca V	330.937	300		$3p^4 - 3p^3(2D^o)3d$	$3P - 3D^o$	1 - 2	E29, G1
Ca V	333.438	200		$3p^4 - 3p^3(2D^o)3d$	$3P - 1P^o$	2 - 1	B23
Ca V	333.570	200		$3p^4 - 3p^3(2P^o)3d$	$1D - 1D^o$	2 - 2	E29, F13
Ca V	333.857	150		$3p^4 - 3p^3(2D^o)3d$	$3P - 1P^o$	1 - 1	B23
Ca V	334.545	200		$3p^4 - 3p^3(2P^o)3d$	$3P - 3P^o$	2 - 1	E29, S29
Ca V	335.344	200b		$3p^4 - 3p^3(2D^o)3d$	$3P - 1P^o$	0 - 1	B23
Ca V	336.554	200		$3p^4 - 3p^3(2P^o)3d$	$3P - 3P^o$	2 - 2	E29, S29
Ca V	337.541	200		$3p^4 - 3p^3(2P^o)3d$	$3P - 3P^o$	1 - 1	E29, S29
Ca V	338.056	250		$3p^4 - 3p^3(2P^o)3d$	$3P - 3P^o$	0 - 1	E29, S29
Ca V	340.389	150		$3p^4 - 3p^3(2P^o)3d$	$3P - 3P^o$	1 - 2	E29, S29
Ca V	343.194	100		$3p^4 - 3p^3(2D^o)3d$	$3P - 3S^o$	2 - 1	E29, S29
Ca V	343.640	200		$3p^4 - 3p^3(2D^o)3d$	$3P - 3S^o$	1 - 1	E29, S29
Ca V	344.219	100		$3p^4 - 3p^3(2P^o)3d$	$1D - 3D^o$	2 - 2	B23
Ca V	352.915	450		$3p^4 - 3p^3(2D^o)3d$	$3P - 3S^o$	0 - 1	E29, S29
Ca V	356.246	250		$3p^4 - 3p^3(2D^o)3d$	$1D - 1P^o$	2 - 1	B23
Ca V?	371.225	300		$3p^4 - 3p^3(2P^o)3d$	$1D - 2P^o$	2 - 1	B23
Ca V?	372.904	300					E29
Ca V?	375.333	150					E29
Ca V	377.181	250		$3p^4 - 3p^3(2D^o)3d$	$1D - 1F^o$	2 - 3	E29, S29

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca V?	380.396	250					E29
Ca V?	381.601	150					E29
Ca V	387.080	200		$3p^4 - 3p^2(^3D^o)3d$	$^1S - ^1P^o$	0 - 1	E29, S29
Ca V	425.000	750		$3p^4 - 3p^2(^3D^o)3d$	$^1D - ^1D^o$	2 - 2	E29, S29
Ca V?	445.933	50					E29
Ca V?	446.036	50					E29
Ca V?	476.606	100					E29
Ca V?	509.293	100					E29
Ca V?	549.070	150					E29
Ca V	558.602	500		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^1P^o$	2 - 1	E29, E4
Ca V?	593.404	50					E29
Ca V?	593.472	50					E29
Ca V?	594.239	50					E29
Ca V	637.928	400		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	2 - 1	E29, K8
Ca V	643.118	300		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	1 - 0	E29, K8
Ca V	646.570	400		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	2 - 2	E29, K8
Ca V	647.876	250		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	1 - 1	E29, K8
Ca V	651.550	250		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	0 - 1	E29, K8
Ca V	656.763	300		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	1 - 2	E29, K8
Ca V	725.088	50		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^3P^o$? 2 - 1	E29, K8
Ca V?	730.257	250					E29
Ca V?	774.088	250					E29
Ca V?	774.354	150					E29
Ca V?	842.950	150					E29
Ca V?	962.896	100					E29
Ca V?	966.466	300					E29
Ca V?	968.276	150					E29
Ca V?	973.437	315					E29
Ca V?	975.825	200					E29
Ca V?	987.680	150					E29
Ca V?	994.946	150					E29
Ca V?	1000.310	300					E29
Ca V?	1001.544	150					E29
Ca V?	1009.638	150					E29
Ca V?	1012.613	150					E29
Ca V?	1014.162	200					E29
Ca V?	1021.159	150					E29

CALCIUM VI (Ca^{5+}), $Z = 20$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)Ionization Potential [877 400] cm^{-1} ; [108.78] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca VI	227.642	20		$3p^3 - 3p^2(^3P)4s$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	E27
Ca VI	227.922	100		$3p^3 - 3p^2(^3P)4s$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	E27
Ca VI	228.628	350		$3p^3 - 3p^2(^3P)4s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B23
Ca VI	229.734	350		$3p^3 - 3p^2(^3P)4s$	$^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B23
Ca VI	230.495	250		$3p^3 - 3p^2(^3P)4s$	$^4S^o - ^4P$	$\frac{5}{2} - \frac{1}{2}$	B23
Ca VI	232.275	300		$3p^3 - 3p^2(^3P)4s$	$^3D^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VI	232.531	250		$3p^3 - 3p^2(^1D)4s$	$^3D^o - ^3D$	$\frac{5}{2} - \frac{3}{2}$	B23
Ca VI	239.296	20		$3p^3 - 3p^2(^3P)4s$	$^3D^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	B23
Ca VI	239.535	350		$3p^3 - 3p^2(^3P)4s$	$^3D^o - ^3P$	$\frac{5}{2} - \frac{3}{2}$	B23
Ca VI	240.721	300		$3p^3 - 3p^2(^3P)4s$	$^3D^o - ^3P$	$\frac{5}{2} - \frac{1}{2}$	B23

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca VI	242.265	150		$3p^3 - 3p^2(^1D)4s$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B23
Ca VI	242.592	150		$3p^3 - 3p^2(^1D)4s$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	B23
Ca VI	242.631	250		$3p^3 - 3p^2(^1D)4s$	$^2P^{\circ} - ^2D$	$\frac{5}{2} - \frac{7}{2}$	B23
Ca VI	249.914	150		$3p^3 - 3p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B23
Ca VI	250.265	200		$3p^3 - 3p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	B23
Ca VI	251.465	200		$3p^3 - 3p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{5}{2} - \frac{7}{2}$	B23
Ca VI	251.816	50		$3p^3 - 3p^2(^2P)4s$	$^2P^{\circ} - ^2P$	$\frac{7}{2} - \frac{9}{2}$	B23
Ca VI?	291.976	50					E29
Ca VI?	316.389	20					E29
Ca VI?	316.947	165					E29
Ca VI?	320.445	100					E29
Ca VI	323.223	300		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	E29, E27
Ca VI	327.806	200		$3p^3 - 3p^2(^1S)3d$	$^2D^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VI	329.298	150		$3p^3 - 3p^2(^1S)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E27
Ca VI	333.44			$3p^3 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	F2
Ca VI	334.14			$3p^3 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{5}{2} - \frac{7}{2}$	F2
Ca VI	335.33			$3p^3 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{7}{2} - \frac{9}{2}$	F2
Ca VI	339.463	150		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E27
Ca VI	339.953	150		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{5}{2} - \frac{7}{2}$	E27
Ca VI	340.037	200		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{7}{2} - \frac{9}{2}$	E27
Ca VI	340.516	150		$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{5}{2} - \frac{7}{2}$	E27
Ca VI	346.335	100		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E29, T11
Ca VI	347.065	200b		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E29, T11
Ca VI?	347.334	50					E29
Ca VI	347.967	150b		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{5}{2} - \frac{7}{2}$	E29, T11
Ca VI	348.650	50		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{7}{2} - \frac{9}{2}$	E29, T11
Ca VI?	348.927	50					E29
Ca VI?	358.153	150					E29
Ca VI?	361.114	200					E29
Ca VI	361.241	20		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VI?	361.645	100					E29
Ca VI	362.617	100		$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E27
Ca VI?	362.788	50					E29
Ca VI?	363.525	100					E29
Ca VI	370.033	250		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E27
Ca VI	373.417	100		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{5}{2} - \frac{7}{2}$	E27
Ca VI	374.000	200		$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{7}{2} - \frac{9}{2}$	E27
Ca VI?	376.279	135					E29
Ca VI?	378.653	50					E29
Ca VI?	378.745	50					E29
Ca VI?	379.138	100					E29
Ca VI?	380.003	50					E29
Ca VI?	381.464	100					E29
Ca VI?	381.849	100					E29
Ca VI?	385.351	100					E29
Ca VI?	385.941	50					E29
Ca VI?	386.106	50					E29
Ca VI?	386.254	50					E29
Ca VI?	388.685	150					E29
Ca VI?	389.495	20					E29
Ca VI	396.044	100		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VI	396.918	100		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E27
Ca VI	399.928	50		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{5}{2} - \frac{7}{2}$	E27
Ca VI	400.827	200		$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2P$	$\frac{7}{2} - \frac{9}{2}$	E27
Ca VI	505.199	400		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	E27
Ca VI	510.435	150		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{5}{2} - \frac{7}{2}$	E27
Ca VI	511.523	50		$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{7}{2} - \frac{9}{2}$	E27
Ca VI	528.746	150		$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E27
Ca VI	530.303	300		$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VI?	536.008	20					E29
Ca VI?	547.898	150					E29
Ca VI	554.996	50		$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E27
Ca VI	561.300			$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VI?	562.250	150					E29
Ca VI	563.066			$3s^2 3p^3 - 3s 3p^4$	$^2P^{\circ} - ^2P$	$\frac{5}{2} - \frac{5}{2}$	E27

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca VI?	578.732	200					E29
Ca VI?	579.775	100					E29
Ca VI?	581.466	150					E29
Ca VI?	587.604	100					E29
Ca VI?	587.872	50					E29
Ca VI?	590.396	150					E29
Ca VI	600.917	300		$3s^2 3p^2 - 3s 3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
Ca VI	601.700	250		$3s^2 3p^2 - 3s 3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
Ca VI	602.389	20		$3s^2 3p^2 - 3s 3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E29, T11
Ca VI?	614.015	150					E29
Ca VI?	617.517	200					E29
Ca VI	629.594	100		$3s^2 3p^2 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E23
Ca VI	633.815	100		$3s^2 3p^2 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B23
Ca VI	641.883	100		$3s^2 3p^2 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B23
Ca VI?	672.315	20					E29
Ca VI	672.651	50		$3s^2 3p^2 - 3s 3p^4$	$^3P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VI	673.367	50		$3p^2 -$	$^2D^\circ - 1$	$\frac{3}{2} - \frac{3}{2}$	E29, K8
Ca VI?	674.046	50					E29
Ca VI	674.278	100		$3s^2 3p^2 - 3s 3p^4$	$^3P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VI?	689.539	100					E29
Ca VI?	758.465	50					E29
Ca VI?	766.522	50					E29
Ca VI?	770.928	50					E29
Ca VI?	777.508	50					E29
Ca VI?	778.718	50					E29
Ca VI?	816.805	100					E29
Ca VI?	854.923	150					E29
Ca VI?	860.827	100					E29
Ca VI?	969.652	300					E29
Ca VI?	975.055	150					E29
Ca VI?	1021.508	200					E29
Ca VI?	1032.612	100					E29

CALCIUM VII (Ca^{6+}), $Z = 20$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential $1\ 030\ 000\ cm^{-1}$; 127.7 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca VII	202.989	150		$3p^2 - 3p 4s$	$g^3P - ^3P^\circ$	1 - 2	E27
Ca VII	203.701	100		$3p^2 - 3p 4s$	$g^3P - ^3P^\circ$	0 - 1	E27
Ca VII	204.002	250		$3p^2 - 3p 4s$	$g^3P - ^3P^\circ$	2 - 2	E27
Ca VII	204.376	50		$3p^2 - 3p 4s$	$g^3P - ^3P^\circ$	1 - 1	E27
Ca VII	204.736	150		$3p^2 - 3p 4s$	$g^3P - ^3P^\circ$	1 - 0	E27
Ca VII	205.402	150		$3p^2 - 3p 4s$	$g^3P - ^3P^\circ$	2 - 1	E27
Ca VII	209.723	250		$3p^2 - 3p 4s$	$^1D - ^1P^\circ$	2 - 1	E27
Ca VII	213.194	10		$3p^2 - 3p 4s$	$^1D - ^3P^\circ$	2 - 1	E27
Ca VII	222.373			$3p^2 - 3p 4s$	$^1S - ^1P^\circ$	0 - 1	E27
Ca VII	226.292	50		$3p^2 - 3p 4s$	$^1S - ^3P^\circ$? 0 - 1	E29, K8
Ca VII?	272.866	150					E29
Ca VII?	295.171	150					E29
Ca VII?	295.396	150					E29
Ca VII?	307.563	100					E29
Ca VII?	313.478	100					E29

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca VII?	314.609	100					E29
Ca VII?	315.702	100					E29
Ca VII	330.010	200		3p ² - 3p3d	¹ D - ¹ F°	2 - 3	E27
Ca VII?	330.403	100					P16
Ca VII?	331.650	160					P16
Ca VII?	332.184	60					P16
Ca VII?	334.136	200					P16
Ca VII?	334.357	100					P16
Ca VII?	334.964	40					P16
Ca VII	338.824	100		3p ² - 3p3d	g ² P - ² D°	0 - 1	E27
Ca VII	339.965	150		3p ² - 3p3d	g ² P - ² D°	1 - 2	E27
Ca VII	340.700	50		3p ² - 3p3d	g ² P - ² D°	1 - 1	E27
Ca VII	342.394	150		3p ² - 3p3d	g ² P - ² D°	2 - 3	E27
Ca VII	342.818	50		3p ² - 3p3d	g ² P - ² D°	2 - 2	E27
Ca VII	347.071	100		3p ² - 3p3d	g ² P - ² P°	0 - 1	E27
Ca VII	347.972	100		3p ² - 3p3d	g ² P - ² P°	1 - 0	E27
Ca VII?	348.043	150					E29
Ca VII	348.999	20		3p ² - 3p3d	g ² P - ² P°	1 - 1	E27
Ca VII	351.373	100		3p ² - 3p3d	g ² P - ² P°	1 - 2	E27
Ca VII	351.469	100		3p ² - 3p3d	¹ S - ¹ P°	0 - 1	E27
Ca VII	352.008	50		3p ² - 3p3d	g ² P - ² P°	2 - 1	E27
Ca VII	354.418	150		3p ² - 3p3d	g ² P - ² P°	2 - 2	E27
Ca VII?	360.296	100					E29
Ca VII?	367.011	150					E29
Ca VII	378.258	150		3p ² - 3p3d	¹ D - ² P°	? 2 - 2	E29, K8
Ca VII?	389.195	50					E29
Ca VII	396.038	50		3s ² 3p ² - 3s3p ²	g ² P - ¹ P°	0 - 1	E27
Ca VII	398.623	50		3s ² 3p ² - 3s3p ²	g ² P - ¹ P°	1 - 1	E27
Ca VII	402.552	50		3s ² 3p ² - 3s3p ²	g ² P - ¹ P°	2 - 1	E27
Ca VII	407.780	100		3s ² 3p ² - 3s3p ²	g ² P - ² S°	0 - 1	E27
Ca VII	410.501	150		3s ² 3p ² - 3s3p ²	g ² P - ² S°	1 - 1	E27
Ca VII?	412.175	100					E29
Ca VII	414.666	200		3s ² 3p ² - 3s3p ²	g ² P - ² S°	2 - 1	E27
Ca VII?	420.191	50					E29
Ca VII?	428.819	50					E29
Ca VII	433.599	250		3s ² 3p ² - 3s3p ²	¹ D - ¹ P°	2 - 1	E27
Ca VII	447.681	20		3s ² 3p ² - 3s3p ²	¹ D - ² S°	2 - 1	E27
Ca VII?	486.838	100					E29
Ca VII?	489.700	50					E29
Ca VII?	491.097	50					E29
Ca VII	491.386	100		3s ² 3p ² - 3s3p ²	¹ S - ¹ P°	0 - 1	E27
Ca VII	501.168	20		3s ² 3p ² - 3s3p ²	g ² P - ¹ D°	2 - 2	E27
Ca VII?	504.591	150					E29
Ca VII	539.395	50		3s ² 3p ² - 3s3p ²	g ² P - ² P°	0 - 1	E27
Ca VII	544.118	50		3s ² 3p ² - 3s3p ²	g ² P - ² P°	1 - 2	E27
Ca VII	544.174	50		3s ² 3p ² - 3s3p ²	g ² P - ² P°	1 - 1	E27
Ca VII	544.269	50		3s ² 3p ² - 3s3p ²	g ² P - ² P°	1 - 0	E27
Ca VII	550.194	200		3s ² 3p ² - 3s3p ²	¹ D - ¹ D°	2 - 2	E27
Ca VII	551.460	250		3s ² 3p ² - 3s3p ²	g ² P - ² P°	2 - 2	E27
Ca VII	624.380	50		3s ² 3p ² - 3s3p ²	g ² P - ² D°	0 - 1	E27
Ca VII	630.517	100		3s ² 3p ² - 3s3p ²	g ² P - ² D°	1 - 2	E27
Ca VII	630.766	50		3s ² 3p ² - 3s3p ²	g ² P - ² D°	1 - 1	E27
Ca VII	639.212	200		3s ² 3p ² - 3s3p ²	g ² P - ² D°	2 - 3	E27
Ca VII	640.404	20		3s ² 3p ² - 3s3p ²	g ² P - ² D°	2 - 2	E27
Ca VII?	647.292	100					E29
Ca VII?	673.885	50					E29
Ca VII?	676.563	150					E29
Ca VII?	681.363	150					E29
Ca VII?	684.383	160					E29
Ca VII?	684.743	250					E29
Ca VII?	687.985	100					E29
Ca VII?	688.273	50					E29
Ca VII?	697.281	100					E29
Ca VII?	697.809	100					E29
Ca VII?	697.972	100					E29

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca VII?	709.001	100					E29
Ca VII?	709.932	100					E29
Ca VII?	710.671	100					E29
Ca VII?	711.390	100					E29
Ca VII?	713.793	150					E29
Ca VII?	714.176	135					E29
Ca VII?	721.514	50					E29
Ca VII?	722.456	100					E29
Ca VII?	727.185	50					E29
Ca VII?	954.270	150					E29
Ca VII?	970.887	100					E29
Ca VII?	983.432	200					E29
Ca VII?	987.867	150					E29
Ca VII?	989.973	150					E29
Ca VII?	992.740	50					E29
Ca VII?	1002.398	250					E29
Ca VII?	1003.61	100					E29
Ca VII?	1019.759	150					E29
Ca VII?	1022.010	100					E29
Ca VII?	1027.110	150					E29
Ca VII?	1028.366	100					E29

CALCIUM VIII (Ca⁷⁺), Z = 20
 Ground State 1s²2s²2p⁶3s²3p²P_{1/2}^o (13 electrons)
 Ionization Potential 1 187 600 cm⁻¹; 147.24 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca VIII	102.067	10		3p - 6d	g ² F ^o - ² D	1/2 - 3/2	E27
Ca VIII	102.482	50		3p - 6d	g ² P ^o - ² D	3/2 - 5/2	E27
Ca VIII	112.906	50		3p - 5d	g ² P ^o - ² D	1/2 - 3/2	E27
Ca VIII	113.453	100		3p - 5d	g ² P ^o - ² D	3/2 - 5/2	E27
Ca VIII?	114.566	40					P16
Ca VIII?	115.107	80					P16
Ca VIII	131.420	10		3d - 7f	² D - ² F ^o	3/2 - 5/2	E27
Ca VIII	131.470	10		3d - 7f	² D - ² F ^o	5/2 - 7/2	E27
Ca VIII	141.110	50		3d - 6f	² D - ² F ^o	3/2 - 5/2	E27
Ca VIII	141.153	50		3d - 6f	² D - ² F ^o	5/2 - 7/2	E27
Ca VIII	143.216	250		3p - 4d	g ² P ^o - ² D	1/2 - 3/2	E27
Ca VIII	144.069	260		3p - 4d	g ² P ^o - ² D	3/2 - 5/2	E27
Ca VIII	144.111	50		3p - 4d	g ² P ^o - ² D	5/2 - 7/2	E27
Ca VIII	160.592	50		3d - 5f	² D - ² F ^o	3/2 - 5/2	E27
Ca VIII	160.640	50		3d - 5f	² D - ² F ^o	5/2 - 7/2	E27
Ca VIII	174.910	50		3s 3p ² - 3s ² 4f	² D - ² F ^o	3/2 - 5/2	E27
Ca VIII	174.976	50		3s 3p ² - 3s ² 4f	² D - ² F ^o	5/2 - 7/2	E27
Ca VIII	177.886	200		3s 3p ² - 3s 3p(³ P ^o) 4s	⁴ P - ⁴ P ^o	3/2 - 5/2	E27
Ca VIII	178.241	200		3s 3p ² - 3s 3p(³ P ^o) 4s	⁴ P - ⁴ P ^o	1/2 - 3/2	E27
Ca VIII	178.559	200		3s 3p ² - 3s 3p(³ P ^o) 4s	⁴ P - ⁴ P ^o	3/2 - 5/2	E27
Ca VIII	178.684	50		3s 3p ² - 3s 3p(³ P ^o) 4s	⁴ P - ⁴ P ^o	1/2 - 1/2	F27
Ca VIII	178.747	10		3s 3p ² - 3s 3p(³ P ^o) 4s	⁴ P - ⁴ P ^o	3/2 - 3/2	F27
Ca VIII	179.215	100		3s 3p ² - 3s 3p(³ P ^o) 4s	⁴ P - ⁴ P ^o	3/2 - 1/2	E27
Ca VIII	179.509	150		3s 3p ² - 3s 3p(³ P ^o) 4s	⁴ P - ⁴ P ^o	5/2 - 3/2	F27
Ca VIII	182.707	200		3p - 4s	g ² P ^o - ² S	1/2 - 1/2	E27

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca VIII	184.158	200		3p 4s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E27
Ca VIII	216.955	100		3d 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	217.040	200		3d 4f	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	E27
Ca VIII	352.998			3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VIII	353.649	20		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E27
Ca VIII	354.165	150		3p - 3d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VIII	354.488	50		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	354.975	100		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	355.704	100		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	E27
Ca VIII	356.907	50		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VIII	357.348	150		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	357.492	50		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	357.977	100		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	359.364	200		3p - 3d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	359.647	50		3p - 3d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	360.298	100		3s 3p ² - 3s 3p(² P ^o) 3d	$^2P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	361.984	20		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	363.391	50		3s 3p ² - 3s 3p(² P ^o) 3d	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	428.100	150		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VIII	432.866	150		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E27
Ca VIII	436.134	200		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	441.084	150		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E27
Ca VIII	461.705	150		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E27
Ca VIII	462.591	50		3s 3p ² - 3p ³	$^4P - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VIII	465.993	100		3s 3p ² - 3p ³	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	471.070	100		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E27
Ca VIII	471.183	100		3s 3p ² - 3p ³	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	582.834	150		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
Ca VIII	596.940	150		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
Ca VIII	597.832			3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27

CALCIUM IX (Ca⁸⁺), Z = 20Ground State 1s²2s²2p⁶3s² ¹S₀ (12 electrons)Ionization Potential 1 520 700 cm⁻¹; 188.54 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca IX	100.645	40		3s 3p - 3s 5d	$^3P^{\circ} - ^3D$	1 - 2	P6
Ca IX	100.958	80		3s 3p - 3s 5d	$^3P^{\circ} - ^3D$	2 - 3	P6
Ca IX	129.197	120		3s 3p - 3s 4d	$^3P^{\circ} - ^3D$	0 - 1	P6
Ca IX	129.425	240		3s 3p - 3s 4d	$^3P^{\circ} - ^3D$	1 - 2	P6
Ca IX	129.445	40		3s 3p - 3s 4d	$^3P^{\circ} - ^3D$	1 - 1	P6
Ca IX	129.934	400		3s 3p - 3s 4d	$^3P^{\circ} - ^3D$	2 - 3	P6
Ca IX	129.970	40		3s 3p - 3s 4d	$^3P^{\circ} - ^3D$	2 - 2	P6
Ca IX	161.979	80		3s 3p - 3s 4s	$^3P^{\circ} - ^3S$	0 - 1	P6
Ca IX	162.371	160		3s 3p - 3s 4s	$^3P^{\circ} - ^3S$	1 - 1	P6
Ca IX	163.229	240		3s 3p - 3s 4s	$^3P^{\circ} - ^3S$	2 - 1	P6
Ca IX	184.338	120		3s 3d - 3s 4f	$^3D - ^3F^{\circ}$	1 - 2	P6
Ca IX	184.377	240		3s 3d - 3s 4f	$^3D - ^3F^{\circ}$	2 - 3	P6
Ca IX	184.433	320		3s 3d - 3s 4f	$^3D - ^3F^{\circ}$	3 - 4	P6
Ca IX	371.902	100b		3s 3p - 3s 3d	$^3P^{\circ} - ^3D$	0 - 1	E29, P6
Ca IX	373.802	400		3s 3p - 3s 3d	$^3P^{\circ} - ^3D$	1 - 2	P6
Ca IX	373.979	600		3s 3p - 3s 3d	$^3P^{\circ} - ^3D$	1 - 1	P6
Ca IX	378.089	800		3s 3p - 3s 3d	$^3P^{\circ} - ^3D$	2 - 3	P6
Ca IX	378.382	40		3s 3p - 3s 3d	$^3P^{\circ} - ^3D$	2 - 2	P6
Ca IX	378.551	50b		3s 3p - 3s 3d	$^3P^{\circ} - ^3D$	2 - 1	E29, P6
Ca IX	385.61			3p ² - 3p 3d	$^3P - ^3D^{\circ}$	1 - 2	F2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca IX	388.77			$3p^2 - 3p3d$	$^3P - ^3D^o$	2 - 3	F2
Ca IX	395.01			$3p^2 - 3p3d$	$^3P - ^3P^o$	2 - 2	F2
Ca IX	424.34			$3p^2 - 3p3d$	$^1D - ^1D^o$	2 - 2	F2
Ca IX	455.34			$3p^2 - 3p3d$	$^1S - ^1P^o$	0 - 1	F2
Ca IX	466.227	300		$3s^2 - 3s3p$	$g^1S - ^1P^o$	0 - 1	E29, T11
Ca IX	497.996	40		$3s3p - 3p^2$	$^2P^o - ^2P$	1 - 2	P6
Ca IX	503.261	20		$3s3p - 3p^2$	$^2P^o - ^2P$	0 - 1	P6
Ca IX	506.163	160		$3s3p - 3p^2$	$^2P^o - ^2P$	2 - 2	P6
Ca IX	507.105	20		$3s3p - 3p^2$	$^2P^o - ^2P$	1 - 1	P6
Ca IX	512.060	20		$3s3p - 3p^2$	$^2P^o - ^2P$	1 - 0	P6
Ca IX	515.576	40		$3s3p - 3p^2$	$^2P^o - ^2P$	2 - 1	P6
Ca IX	525.43			$3s3d - 3p3d$	$^3D - ^3D^o$	3 - 3	F2
Ca IX	542.26			$3s3p - 3p^2$	$^1P^o - ^1S$	1 - 0	F2
Ca IX	651.31			$3s3d - 3p3d$	$^3D - ^3F^o$	2 - 3	F2
Ca IX	659.48			$3s3d - 3p3d$	$^3D - ^3F^o$	1 - 2	F2
Ca IX	693.824	100		$3s^2 - 3s3p$	$g^1S - ^3P^o$	0 - 1	E29, M22
Ca IX	828.451	(c)		$3s3p - 3s3d$	$^1P^o - ^1D$	1 - 2	E29, T11

CALCIUM X (Ca^{9+}), $Z = 20$ Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)Ionization Potential $1\ 704\ 650\ cm^{-1}$; $211.270\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca X	93.069	25		$3p - 5d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K25
Ca X	97.502	50		$3p - 5d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	K25
Ca X	191.977	60		$3d - 6f$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{7}{2}$	K25
Ca X	210.962	75		$3s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K25
Ca X	211.197	50		$3s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	K25
Ca X	118.174	50		$3d - 5f$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{5}{2}$	K25
Ca X	118.223	100		$3d - 5f$	$^3D - ^3F^o$	$\frac{5}{2} - \frac{7}{2}$	K25
Ca X	122.995	50		$3p - 4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K25
Ca X	123.733	125		$3p - 4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	K25
Ca X	151.832	75		$3p - 4s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K25
Ca X	153.012	150		$3p - 4s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K25
Ca X	166.945	200		$3d - 4f$	$^3D - ^3F^o$	$\frac{3}{2} - \frac{5}{2}$	K25
Ca X	167.034	250		$3d - 4f$	$^3D - ^3F^o$	$\frac{5}{2} - \frac{7}{2}$	K25
Ca X	206.746	50		$3d - 4p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{3}{2}$	K25
Ca X	207.386	25		$3d - 4p$	$^3D - ^3P^o$	$\frac{3}{2} - \frac{1}{2}$	K25
Ca X	371.902	100b		$4p - 5s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E29, T11
Ca X	411.690	75		$3p - 3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K25
Ca X	419.757	200		$3p - 3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	K25
Ca X	470.493	25		$3p - 3d$	$^2P^o - ^2D$	$\frac{5}{2} - \frac{3}{2}$	K25
Ca X	557.740	100		$3s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K25
Ca X	574.007	50		$3s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	K25

CALCIUM XI (Ca^{10+}), $Z = 20$
 Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
 Ionization Potential 4 768 900 cm^{-1} ; 591.25 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XI	25.327	100		$2p^6 - 2p^5 4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E26
Ca XI	25.517	100		$2p^6 - 2p^5 4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E26
Ca XI	26.442	20		$2p^6 - 2p^5 4s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E26
Ca XI	26.639	20		$2p^6 - 2p^5 4s$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	E26
Ca XI	26.962	100		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^1P^o$	0 - 1	E26
Ca XI	27.079	20		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^3P^o$	0 - 1	E26
Ca XI	30.448	600		$2p^6 - 2p^5 3d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E26
Ca XI	30.867	300		$2p^6 - 2p^5 3d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E26
Ca XI	31.257	200		$2p^6 - 2p^5 3d$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E26
Ca XI	35.212	800		$2p^6 - 2p^5 3s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E26
Ca XI	35.576	800		$2p^6 - 2p^5 3s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E26

CALCIUM XII (Ca^{11+}), $Z = 20$
 Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
 Ionization Potential 5 294 300 cm^{-1} ; 656.39 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XII	27.412	20		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E26
Ca XII	27.606	20		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E26
Ca XII	27.978	100		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$?	E26, K8
Ca XII	28.134	50		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$?	E26, K8
Ca XII	31.660	100		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E26
Ca XII	31.960	50		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E26
Ca XII	32.280	100		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E26
Ca XII	32.498	50		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E26
Ca XII	32.655	20		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E26
Ca XII	33.01	P		$2s 2p^6 - 2s 2p^6(^3P^o)3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K8
Ca XII	141.05	60		$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F9, Z1
Ca XII	147.27	50		$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F9, Z1

CALCIUM XIII (Ca¹²⁺), Z = 20
 Ground State 1s²2s²2p⁴ ³P₂ (8 electrons)
 Ionization Potential 5 856 000 cm⁻¹; 726.03 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XIII	25.76			2p ⁴ - 2p ³ (² P°)3d	³ P - ³ D°	2-3	F5
Ca XIII	26.02			2p ⁴ - 2p ³ (² D°)3d	³ P - ³ D°	2-3	F5
Ca XIII	26.36			2p ⁴ - 2p ³ (² D°)3d	¹ D - ¹ F°	2-3	F5
Ca XIII	131.22			2s ² 2p ⁴ - 2s2p ⁵	¹ D - ¹ P°	2-1	F9
Ca XIII	142.39			2s ² 2p ⁴ - 2s2p ⁵	¹ S - ¹ P°	0-1	F9
Ca XIII	156.68			2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	2-1	F9
Ca XIII	159.82			2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1-0	F9
Ca XIII	161.75			2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	2-2	F9
Ca XIII	162.91			2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1-1	F9
Ca XIII	164.09			2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	0-1	F9
Ca XIII	168.40			2s ² 2p ⁴ - 2s2p ⁵	g ³ P - ³ P°	1-2	F9

CALCIUM XIV (Ca¹³⁺), Z = 20
 Ground State 1s²2s²2p³ ⁴S_{3/2} (7 electrons)
 Ionization Potential 6 586 600 cm⁻¹; 816.61 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XIV	22.07			2p ³ - 2p ² (² P)3s	g ⁴ S° - ⁴ P	3/2 - 3/2	F40
Ca XIV	24.11			2p ³ - 2p ² (² P)3d	g ⁴ S° - ⁴ P	3/2 - 3/2	F5
Ca XIV	24.30			2p ³ - 2p ² (¹ D)3d	² D° - ² F	3/2 - 3/2	F5
Ca XIV	24.6			2p ³ - 2p ² (² P)3d	² D° - ² D	3/2 - 3/2	F5
Ca XIV	128.28			2s ² 2p ³ - 2s2p ⁴	² D° - ² P	3/2 - 1/2	F9
Ca XIV	132.93			2s ² 2p ³ - 2s2p ⁴	² D° - ² P	3/2 - 3/2	F9
Ca XIV	134.30			2s ² 2p ³ - 2s2p ⁴	² D° - ² P	3/2 - 3/2	F9
Ca XIV	140.20			2s ² 2p ³ - 2s2p ⁴	² P° - ² P	1/2 - 1/2	F5
Ca XIV	142.37			2s ² 2p ³ - 2s2p ⁴	² P° - ² P	3/2 - 1/2	F5
Ca XIV	145.80			2s ² 2p ³ - 2s2p ⁴	² P° - ² P	1/2 - 3/2	F5
Ca XIV	148.15			2s ² 2p ³ - 2s2p ⁴	² P° - ² P	3/2 - 3/2	F5
Ca XIV	153.03			2s ² 2p ³ - 2s2p ⁴	² P° - ² S	1/2 - 1/2	F5
Ca XIV	155.62			2s ² 2p ³ - 2s2p ⁴	² P° - ² S	3/2 - 1/2	F5
Ca XIV	157.30			2s ² 2p ³ - 2p ⁵	² D - ² P°	3/2 - 3/2	F5
Ca XIV	165.36			2s ² 2p ³ - 2s2p ⁴	² D° - ² D	3/2 - 3/2	F5
Ca XIV	167.00			2s ² 2p ³ - 2s2p ⁴	² D° - ² D	3/2 - 3/2	F5
Ca XIV	183.46			2s ² 2p ³ - 2s2p ⁴	g ⁴ S° - ⁴ P	3/2 - 1/2	F5
Ca XIV	185.74			2s ² 2p ³ - 2s2p ⁴	² P° - ² D	1/2 - 3/2	F5
Ca XIV	186.62			2s ² 2p ³ - 2s2p ⁴	g ⁴ S° - ⁴ P	3/2 - 3/2	F5
Ca XIV	189.00			2s ² 2p ³ - 2s2p ⁴	² P° - ² D	3/2 - 3/2	F5
Ca XIV	193.88			2s ² 2p ³ - 2s2p ⁴	g ⁴ S° - ⁴ P	3/2 - 3/2	F5

CALCIUM XV (Ca^{14+}), $Z = 20$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential $7\ 219\ 800\ \text{cm}^{-1}$; $895.12\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XV	22.73			$2p^2 - 2p\ 3d$	$g^3P - ^3D^o$	2 - 3	F5
Ca XV	137.21			$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^3S^o$	0 - 1	F5
Ca XV	140.55			$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^3S^o$	1 - 1	F5
Ca XV	141.66			$2s^2 2p^2 - 2s\ 2p^2$	$^1D - ^1P^o$	2 - 1	F5
Ca XV	144.29			$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^3S^o$	2 - 1	F5
Ca XV	169.96			$2s^2 2p^2 - 2s\ 2p^2$	$^1D - ^1D^o$	2 - 2	F5
Ca XV	164.94	P		$2s^2 2p^2 - 2s\ 2p^2$	$^1S - ^1P^o$	0 - 1	D2
Ca XV	171.58			$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	0 - 1	F5
Ca XV	176.88			$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	1 - 1	F5
Ca XV	181.90			$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2P^o$	2 - 2	F5
Ca XV	208.66			$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	1 - 2	F5
Ca XV	215.37			$2s^2 2p^2 - 2s\ 2p^2$	$g^2P - ^2D^o$	2 - 3	F5

CALCIUM XVI (Ca^{15+}), $Z = 20$
 Ground State $1s^2 2s^2 2p\ ^2P_{1/2}^o$ (5 electrons)
 Ionization Potential $[7\ 856\ 000]\ \text{cm}^{-1}$; $[974]\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XVI	16.81	?		$2p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8
Ca XVI	21.61	?		$2p - 3d$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	K8
Ca XVI	22.95	?		$2p - 3s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8
Ca XVI	172.73	?		$2s^2 2p - 2s\ 2p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K8
Ca XVI	184.37	?		$2s^2 2p - 2s\ 2p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8

CALCIUM XVII (Ca^{16+}), $Z = 20$
 Ground State $1s^2 2s^2\ ^1S_0$ (4 electrons)
 Ionization Potential $[8\ 751\ 300]\ \text{cm}^{-1}$; $[1085]\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XVII	13.41	?		$2s^2 - 2s\ 5p$	$g^1S - ^3P$	0 - 1	K8
Ca XVII	14.90	?		$2s^2 - 2s\ 4p$	$g^1S - ^3P^o$	0 - 1	K8
Ca XVII	18.60	?		$2s^2 - 2p\ 3s$	$g^1S - ^1P^o$	0 - 1	K8
Ca XVII	19.368	20		$2s\ 2p - 2p\ 3p$	$^3P^o - ^3P$	2 - 2	G16
Ca XVII	19.438	200		$2s\ 2p - 2p\ 3p$	$^3P^o - ^2S$	2 - 1	G16
Ca XVII	19.459	300		$2s\ 2p - 2p\ 3p$	$^3P^o - ^3D$	2 - 3	G16
Ca XVII	19.539	200		$2s\ 2p - 2p\ 3p$	$^3P^o - ^3D$	2 - 2	G16
Ca XVII	19.638	300		$2s^2 - 2s\ 3p$	$g^1S - ^1P^o$	0 - 1	G16
Ca XVII	20.082	100		$2s\ 2p - 2p\ 3p$	$^1P^o - ^1P$	1 - 1	G16
Ca XVII	20.330	200		$2s\ 2p - 2s\ 3d$	$^3P - ^3D$	1 - 2	G16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XVII	20.433	300		2s 2p - 2s 3d	$^3P^{\circ} - ^3D$	2-3	G16
Ca XVII	20.502	100		2s 2p - 2p 3p	$^1P^{\circ} - ^1P$	1-1	G16
Ca XVII	20.655	200		2p ² - 2p 3d	$^3P - ^3P^{\circ}$	1-2	G16
Ca XVII	20.700	100		2p ² - 2p 3d	$^3P - ^3P^{\circ}$	2-1	G16
Ca XVII	20.754	200		2p ² - 2p 3d	$^3P - ^3P^{\circ}$	2-2	G16
Ca XVII	20.768	100		2p ² - 2p 3d	$^3P - ^3D^{\circ}$	1-2	G16
Ca XVII	20.827	300		2p ² - 2p 3d	$^3P - ^3D^{\circ}$	2-3	G16
Ca XVII	20.855	200		2p ² - 2p 3d	$^3P - ^3D^{\circ}$	2-2	G16
Ca XVII	26.880	300		2p ² - 2p 3d	$^1D - ^1F^{\circ}$	2-3	G16
Ca XVII	21.212	200		2s 2p - 2s 3d	$^1P^{\circ} - ^1D$	1-2	G16
Ca XVII	21.267	200		2p ² - 2p 3d	$^1D - ^1D^{\circ}$	2-2	G16
Ca XVII	21.303	100		2s 2p - 2s 3s	$^3P^{\circ} - ^3S$	2-1	G16
Ca XVII	21.606	200		2p ² - 2p 3s	$^3P - ^3P^{\circ}$	2-2	G16
Ca XVII	22.113	200		2s 2p - 2s 3s	$^1P^{\circ} - ^1S$	1-0	G16
Ca XVII	22.347	100		2p ² - 2p 3s	$^1S - ^1P^{\circ}$	0-1	G16
Ca XVII	199.74	?		2s ² - 2s 2p	$g^1S - ^1P^{\circ}$	0-1	K8
Ca XVII	382.03	?		2s ² - 2s 2p	$g^1S - ^3P^{\circ}$	0-1	K8

CALCIUM XVIII (Ca¹⁷⁺), Z = 20
 Ground State 1s²2s ²S_{1/2} (3 electrons)
 Ionization Potential [9 332 000] cm⁻¹; [1157] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XVIII	3.197			1s ² 2s - 1s 2s 2p	$g^2S - ^3P^{\circ}$	1/2 - 3/2	D6
Ca XVIII	3.206			1s ² 2s - 1s 2s 2p	$g^2S - ^4P^{\circ}$	1/2 - 3/2	D6
Ca XVIII	12.40	P		2p - 6d	$^3P^{\circ} - ^3D$	1/2 - 3/2	G15
Ca XVIII	12.478	10		2p - 6d	$^3P^{\circ} - ^3D$	3/2 - 5/2	G15
Ca XVIII	12.636	20		2s - 5p	$g^2S - ^3P^{\circ}$	1/2 - 3/2	G15
Ca XVIII	13.118	20		2p - 5d	$^3P^{\circ} - ^3D$	1/2 - 3/2	G15
Ca XVIII	13.191	20		2p - 5d	$^3P^{\circ} - ^3D$	3/2 - 5/2	G15
Ca XVIII	14.082	100		2s - 4p	$g^2S - ^3P^{\circ}$	1/2 - 3/2	G15
Ca XVIII	14.658	100		2p - 4d	$^3P^{\circ} - ^3D$	1/2 - 3/2	G15
Ca XVIII	14.738	300		2p - 4d	$^3P^{\circ} - ^3D$	3/2 - 5/2	G15
Ca XVIII	18.691	500		2s - 3p	$g^2S - ^3P^{\circ}$	1/2 - 3/2	G15
Ca XVIII	18.732	300		2s - 3p	$g^2S - ^3P^{\circ}$	1/2 - 1/2	G15
Ca XVIII	19.642	600		2p - 3d	$^3P^{\circ} - ^3D$	1/2 - 3/2	G15
Ca XVIII	19.789	600		2p - 3d	$^3P^{\circ} - ^3D$	3/2 - 5/2	G15
Ca XVIII	20.052	100		2p - 3s	$^3P^{\circ} - ^3S$	1/2 - 1/2	G15
Ca XVIII	20.220	100		2p - 3s	$^3P^{\circ} - ^3S$	3/2 - 1/2	G15
Ca XVIII	298.40	P		2s - 2p	$g^2S - ^3P^{\circ}$	1/2 - 3/2	K8
Ca XVIII	341.54	P		2s - 2p	$g^2S - ^3P^{\circ}$	1/2 - 1/2	K8

CALCIUM XIX (Ca^{18+}), $Z = 20$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential 41 369 608 cm^{-1} ; 5129.045 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XIX	2.516			$1s^2 - 1s5p$	$g^1S - ^1P^o$	0 - 1	D6
Ca XIX	2.573			$1s^2 - 1s4p$	$g^1S - ^1P^o$	0 - 1	D6
Ca XIX	2.706			$1s^2 - 1s3p$	$g^1S - ^1P^o$	0 - 1	D6
Ca XIX	3.173			$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	D6
Ca XIX	3.186			$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	D6
Ca XIX	3.225	f		$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	D6

CALCIUM XX (Ca^{19+}), $Z = 20$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential 44 117 545 cm^{-1} ; 5469.74 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ca XX	2.314	P		$1s - 7p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Ca XX	2.331	P		$1s - 6p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Ca XX	2.361	P		$1s - 5p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2
Ca XX	2.417	P	10	$1s - 4p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Ca XX	2.549	P	30	$1s - 3p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Ca XX	3.020	P	100	$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	G2, K8
Ca XX	9.88	P		2 - 7			G2
Ca XX	10.21	P		2 - 6			G2
Ca XX	10.80	P		2 - 5			G2
Ca XX	12.09	P		2 - 4			G2
Ca XX	16.31	P		2 - 3			G2
Ca XX	25.05	P		3 - 7			G2
Ca XX	27.27	P		3 - 6			G2
Ca XX	31.95	P		3 - 5			G2
Ca XX	46.7	P		3 - 4			G2
Ca XX	54.03	P		4 - 7			G2
Ca XX	65.50	P		4 - 6			G2
Ca XX	101.1	P		4 - 5			G2
Ca XX	116.1	P		5 - 7			G2
Ca XX	186.1	P		5 - 6			G2
Ca XX	308.8	P		6 - 7			G2

SCANDIUM, Z = 21

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc	84.777	100					B3
Sc	98.180	200					B3
Sc	98.192	100					B3
Sc	98.323	300					B3
Sc	98.889	300d					B3
Sc	98.911	100					B3
Sc	100.675	100					B3
Sc	100.781	100					B3
Sc	100.924	100					B3
Sc	101.918	200					B3
Sc	102.251	300					B3
Sc	102.835	230					B3
Sc	102.868	100					B3
Sc	102.975	100					B3
Sc	104.592	300					B3
Sc	104.658	100					B3
Sc	105.578	300					B3
Sc	106.655	100d					B3
Sc	107.273	100					B3
Sc	107.929	200					B3
Sc	108.026	100d					B3
Sc	108.296	100					B3
Sc	109.609	200					B3
Sc	109.897	300					B3
Sc	110.306	100					B3
Sc	110.498	300					B3
Sc	110.920	200					B3
Sc	111.402	200					B3
Sc	111.711	200					B3
Sc	111.757	100					B3
Sc	112.210	300					B3
Sc	112.434	100					B3
Sc	112.544	300					B3
Sc	113.014	300					B3
Sc	113.767	100d					B3
Sc	116.158	300					B3
Sc	116.770	200					B3
Sc	117.373	100					B3
Sc	118.048	200d					B3
Sc	118.179	100					B3
Sc	118.297	300					B3
Sc	118.552	400					B3
Sc	118.616	300					B3
Sc	120.881	100					B3
Sc	121.022	200					B3
Sc	122.676	400					B3
Sc	122.741	100					B3
Sc	123.223	200					B3
Sc	124.464	100					B3
Sc	125.610	100					B3
Sc	128.088	100					B3
Sc	129.283	100					B3
Sc	129.454	200					B3
Sc	130.213	200					B3
Sc	130.304	200					B3
Sc	130.558	100					B3
Sc	130.642	300					B3
Sc	130.687	100					B3
Sc	130.880	200					B3
Sc	131.068	270					B3

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc	131.354	100					B3
Sc	132.714	400					B3
Sc	133.882	300					B3
Sc	134.794	300					B3
Sc	134.971	200					B3
Sc	137.352	100					B3
Sc	137.418	70					B3
Sc	138.662	200					B3
Sc	139.319	100d					B3
Sc	139.980	100					B3
Sc	142.836	200					B3
Sc	143.120	200					B3
Sc	146.825	300					B3
Sc	148.249	100					B3
Sc	148.287	200					B3
Sc	148.580	100d					B3
Sc	148.743	100d					B3
Sc	148.805	200					B3
Sc	149.357	100d					B3
Sc	152.681	200					B3
Sc	153.172	300					B3
Sc	154.006	230					B3
Sc	154.507	100					B3
Sc	154.643	300					B3
Sc	160.337	230					B3
Sc	160.387	200					B3
Sc	160.949	230					B3
Sc	161.162	200					B3
Sc	161.908	200d					B3
Sc	162.172	200d					B3
Sc	162.236	200					B3
Sc	163.006	300					B3
Sc	169.105	100					B3
Sc	169.451	200					B3
Sc	170.105	100					B3
Sc	170.735	100					B3
Sc	171.530	200					B3
Sc	171.823	100					B3
Sc	173.346	100					B3
Sc	176.325	300					B3
Sc	177.686	200					B3
Sc	182.618	100					B3
Sc	183.593	370					B3
Sc	183.626	130					B3
Sc	183.673	100					B3
Sc	185.219	100					B3
Sc	193.332	200d					B3
Sc	210.550	200					B3
Sc	211.505	170					B3
Sc	277.809	200					B3
Sc	285.966	300					B3
Sc	287.873	400					B3
Sc	288.104	300					B3
Sc	298.66	200					B3
Sc	300.817	200					B3
Sc	308.895	300					B3
Sc	315.786	300					B3
Sc	315.890	200					B3
Sc	316.567	200					B3
Sc	322.35	150					F4
Sc	326.791	400					B3
Sc	330.39	100					F4
Sc	335.18	100					F4
Sc	335.58	50					F4
Sc	335.89	50					F4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc	342.91	50					F4
Sc	355.16	50					F4
Sc	358.22	250					F4
Sc	363.31	50					F4
Sc	367.82	50					F4
Sc	367.82	50					F4
Sc	369.42	50					F4
Sc	377.79	50					F4
Sc	379.77	50					F4
Sc	381.540	100					B3
Sc	393.71	200					F4
Sc	396.440	400					B3
Sc	403.84	100					F4
Sc	407.85	150					F4
Sc	420.82	250					F4
Sc	422.07	100					F4
Sc	430.74	150					F4
Sc	431.82	50					F4
Sc	434.43	150					F4
Sc	436.20	50					F4
Sc	438.800	200					B3
Sc	439.28	150					F4
Sc	440.29	50					F4
Sc	441.72	200					F4
Sc	442.30	50					F4
Sc	456.83	50					F4
Sc	461.91	50					F4
Sc	462.61	200					F4
Sc	463.74	50					F4
Sc	465.54	250					F4
Sc	466.24	300					F4
Sc	470.25	300					F4
Sc	471.83	400					F4
Sc	473.03	150					F4
Sc	474.76	150					F4
Sc	475.41	150					F4
Sc	480.51	200					F4
Sc	482.220	400					B3
Sc	483.40	200					F4
Sc	484.69	50					F4
Sc	487.89	250					F4
Sc	496.52	300					F4
Sc	496.84	150					F4
Sc	497.19	150					F4
Sc	499.70	100					F4
Sc	507.32	350					F4
Sc	508.16	100					F4
Sc	524.43	100					F4
Sc	525.49	200					F4
Sc	525.79	150					F4
Sc	526.28	200					F4
Sc	526.99	200					F4
Sc	527.89	200					F4
Sc	528.58	350					F4
Sc	529.16	300					F4
Sc	531.13	250					F4
Sc	531.82	250					F4
Sc	541.31	350					F4
Sc	542.11	150					F4
Sc	542.68	300					F4
Sc	544.06	300					F4
Sc	546.75	150					F4
Sc	548.45	200					F4
Sc	567.23	350					F4
Sc	574.11	150					F4

Sc

Sc

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc	574.48	150					F4
Sc	580.10	350					F4
Sc	586.29	150					F4
Sc	589.83	400					F4
Sc	591.37	300					F4
Sc	591.75	300					F4
Sc	595.06	50					F4
Sc	597.10	50					F4
Sc	599.57	250					F4
Sc	692.48	100					F4
Sc	693.20	100					F4
Sc	695.72	250					F4
Sc	700.08	350					F4
Sc	707.72	150					F4
Sc	714.87	300					F4
Sc	754.49	250					F4
Sc	757.56	300					F4
Sc	761.50	400					F4
Sc	768.62	150					F4
Sc	769.80	400					F4
Sc	785.21	450					F4
Sc	789.21	450					F4
Sc	793.93	250					F4
Sc	799.97	250					F4
Sc	835.70	300					B3
Sc	837.76	300d					B3
Sc	838.70	300d					B3
Sc	845.07	700					B3
Sc	846.90	600					B3
Sc	867.01	200					B3
Sc	868.32	600					B3
Sc	869.13	200					B3
Sc	874.18	300d					B3
Sc	903.19	500					B3
Sc	905.28	200					B3
Sc	906.95	700					B3
Sc	908.18	700					B3
Sc	908.23	700					B3
Sc	908.73	900					B3
Sc	911.50	200					B3
Sc	912.15	200					B3
Sc	915.85	200					B3
Sc	927.54	400					B3
Sc	930.67	500					B3
Sc	932.40	300					B3
Sc	932.58	300d					B3
Sc	936.77	600					B3
Sc	937.30	700d					B3
Sc	961.32	600					B3
Sc	964.46	1000					B3
Sc	974.65	300					B3
Sc	974.81	600					B3
Sc	975.04	200					B3
Sc	984.49	300					B3
Sc	985.20	800					B3
Sc	994.36	300					B3
Sc	994.86	400					B3
Sc	995.52	200					B3
Sc	996.01	300					B3
Sc	999.12	200					B3
Sc	1003.00	700					B3
Sc	1015.50	900					B3
Sc	1015.71	500					B3
Sc	1016.04	500					B3
Sc	1016.72	400					B3

Element	Wavelength	Intensity	Multiplicity	Configuration	Term	J - J	References
Sc	1023.90	200					B3
Sc	1030.32	800					B3
Sc	1030.50	200					B3
Sc	1033.38	400					B3
Sc	1048.89	300					B3
Sc	1082.62	200					B3
Sc	1107.13	200					B3
Sc	1107.77	200					B3
Sc	1109.40	200					B3
Sc	1110.96	200					B3
Sc	1122.32	200					B3
Sc	1123.96	200					B3
Sc	1128.79	400					B3
Sc	1133.53	200					B3
Sc	1139.53	200					B3
Sc	1147.69	300					B3
Sc	1151.09	200					B3
Sc	1160.91	200					B3
Sc	1162.77	200					B3
Sc	1173.03	300					B3
Sc	1177.14	200					B3
Sc	1181.91	300					B3
Sc	1613.11	300					B3

SCANDIUM I (Sc^{0+}), $Z = 21$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 s^2 \ ^2D_{3/2}$ (21 electrons)Ionization Potential $52\,750\text{ cm}^{-1}$; 6.54 eVSCANDIUM II (Sc^{1+}), $Z = 21$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 s \ ^3D_1$ (20 electrons)Ionization Potential $103\,240\text{ cm}^{-1}$; 12.80 eV

SCANDIUM III (Sc^{2+}), $Z = 21$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 D_{3/2}$ (19 electrons)
 Ionization Potential $199\,677\text{ cm}^{-1}$; 24.76 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc III	557.995	10		3d - 7f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	V1
Sc III	558.608	10		3d - 7f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	582.114	20		3d - 6f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	582.785	30		3d - 6f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	627.069	70		3d - 5f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	627.846	80		3d - 5f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	643.133	20		3d - 6p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	VI
Sc III	643.597	20		3d - 6p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	730.600	100	2	3d - 4f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	731.655	150	2	3d - 4f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	769.019	10		4s - 6p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	VI
Sc III	769.524	10		4s - 6p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	VI
Sc III	780.597	60		3d - 5p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	VI
Sc III	780.729	80		3d - 5p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	961.052	10		4p - 7s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	VI
Sc III	965.448	20		4p - 7s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	VI
Sc III	966.293	15		4p - 6d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	VI
Sc III	970.638	20		4p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	973.295	40		4s - 5p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	VI
Sc III	974.965	30		4s - 5p	$^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	VI
Sc III	1148.241	30		4p - 6s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	VI
Sc III	1154.523	40		4p - 6s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	VI
Sc III	1162.443	40		4p - 5d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	VI
Sc III	1168.608	50		4p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	1168.883	20		4p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	1493.502	2		4d - 7f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	1494.506	2		4d - 7f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	1598.002	160	1	3d - 4p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	1603.064	360	1	3d - 4p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	1610.194	300	1	3d - 4p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	VI
Sc III	1679.824	10		4d - 6f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	1681.105	14		4d - 6f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	VI
Sc III	1742.69	4h		4d - 7p	$^2D - ^2P^{\circ}$		VI
Sc III	1895.441	80	5	4p - 5s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	VI
Sc III	1912.620	120	5	4p - 5s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	VI
Sc III	1993.886	180	4	4p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	VI

SCANDIUM IV (Sc^{3+}), $Z = 21$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 ^1S_0$ (18 electrons)
 Ionization Potential $592\,600\text{ cm}^{-1}$; 73.47 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc IV	174.57	200		$3p^6 - 3p^5(^2P^{\circ})6s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1	F23
Sc IV	175.89	200		$3p^6 - 3p^5(^2P^{\circ})6s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	F23
Sc IV	215.522	100	4	$3p^6 - 3p^5(^2P^{\circ})5s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1	B3, M23
Sc IV	217.189	40	3	$3p^6 - 3p^5(^2P^{\circ})5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	B3, M23
Sc IV?	286.677	40					B3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc IV	289.850	900		$3p^6 - 3p^5(^2P^{\circ})3d$	$g^1S - ^1P^{\circ}$	0 - 1	B3, G1
Sc IV?	290.487	300					B3
Sc IV	296.316	500	2	$3p^6 - 3p^5(^2F^{\circ})4s$	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	B3, G1
Sc IV	299.041	900	1	$3p^6 - 3p^5(^2P^{\circ})4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	B3, G1
Sc IV	313.034	400		$3p^6 - 3p^53d$	$g^1S - ^2D^{\circ}$	0 - 1	B3, F2
Sc IV?	372.415	300					B3
Sc IV?	376.449	300					B3

SCANDIUM V (Sc^{4+}), $Z = 21$
 Ground State $1s^22s^22p^63s^23p^5\ ^2P_{3/2}^{\circ}$ (17 electrons)
 Ionization Potential $739\ 300\ cm^{-1}$; $91.66\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc V	179.42	150		$3p^5 - 3p^4(^1D)5s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F23
Sc V	180.14	350		$3p^5 - 3p^4(^1D)5s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F23
Sc V	180.82	200		$3p^5 - 3p^4(^1D)5s$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F23
Sc V	180.96	200		$3p^5 - 3p^4(^2P)5s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F23
Sc V	181.55	50		$3p^5 - 3p^4(^2P)5s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F23
Sc V	182.392	200		$3p^5 - 3p^4(^2P)5s$	$g^2P^{\circ} - ^2P$? $\frac{1}{2} - \frac{3}{2}$	B3, K8
Sc V	228.565	300		$3p^5 - 3p^4(^1S)4s$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B3
Sc V	230.848	100		$3p^5 - 3p^4(^1S)4s$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B3
Sc V	243.823	40		$3p^5 - 3p^4(^1D)4s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3
Sc V	243.872	500		$3p^5 - 3p^4(^1D)4s$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3
Sc V	246.424	400		$3p^5 - 3p^4(^1D)4s$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B3
Sc V	250.978	400		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B3
Sc V	252.846	500		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3
Sc V	253.733	500		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B3
Sc V	255.379	50		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	K23
Sc V	255.636	300		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B3
Sc V	257.157	200		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B3
Sc V	258.238	150		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$	K23, B31
Sc V	258.808	40		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B3
Sc V	260.054	50		$3p^5 - 3p^4(^2P)4s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	K23
Sc V	280.997	400		$3p^5 - 3p^4(^1T)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3, F13
Sc V	283.911	900		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3, F13
Sc V	284.450	800		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B3, F13
Sc V	288.286	600		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B3, F13
Sc V	289.589	900		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3, F13
Sc V	291.932	1000d		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B3, F13
Sc V	293.248	800		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B3, F13
Sc V	296.166	400		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B3, F13
Sc V	300.094	700		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B3, F13
Sc V	375.048	400		$3p^5 - 3p^4(^2P)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3, S29
Sc V	378.677	100		$3p^5 - 3p^4(^2P)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3, S29
Sc V	388.682	200		$3p^5 - 3p^4(^2P)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3, S29
Sc V	395.317	400		$3p^5 - 3p^4(^2P)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B3, S29
Sc V	399.501	200		$3p^5 - 3p^4(^2P)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B3, S29
Sc V	573.356	1000		$3s^43p^5 - 3s^43p^5$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B3
Sc V	587.935	600		$3s^43p^5 - 3s^43p^5$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B3

SCANDIUM VI (Sc⁵⁺), Z = 21
 Ground State 1s²2s²2p⁶3s²3p⁴ ²P_{1/2} (16 electrons)
 Ionization Potential 896 000 cm⁻¹; 111.1 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc VI	147.740	100		3p ⁴ - 3p ² (² D°)5s	g ³ P - ¹ D°	? 2-2	B3,K8
Sc VI	147.90	100		3p ⁴ - 3p ² (² P°)5s	¹ D - ¹ P°	2-1	F25
Sc VI	148.18	150		3p ⁴ - 3p ² (³ D°)5s	g ³ P - ³ D°	2-3	F23
Sc VI	148.536	100d		3p ⁴ - 3p ² (² D°)5s	g ³ P - ¹ D°	? 1-2	B3,K8
Sc VI	152.60	250		3p ⁴ - 3p ² (² D°)5s	¹ D - ¹ D°	2-2	F23
Sc VI	154.25	50		3p ⁴ - 3p ² (² P°)5s	¹ S - ¹ P°	0-1	F23
Sc VI	154.29	250		3p ⁴ - 3p ² (⁴ S°)5s	g ³ P - ³ S°	2-1	F23
Sc VI	155.10	150		3p ⁴ - 3p ² (⁴ S°)5s	g ³ P - ³ S°	1-1	F23
Sc VI	155.36	50		3p ⁴ - 3p ² (⁴ S°)5s	g ³ P - ³ S°	0-1	F23
Sc VI	160.637	300		3p ⁴ - 3p ² (² D°)4d	g ³ P - ¹ F°	? 2-3	B3,K8
Sc VI	166.35	350		3p ⁴ - 3p ² (² D°)4d	¹ D - ¹ F°	2-3	F23
Sc VI	166.957	200		3p ⁴ - 3p ² (⁴ S°)5s	¹ S - ³ S°	? 0-1	B3,K8
Sc VI	167.17	200		3p ⁴ - 3p ² (² D°)4d	¹ D - ¹ D°	2-2	F23
Sc VI	169.26	350		3p ⁴ - 3p ² (⁴ S°)4d	g ³ P - ³ D°	2-3	F23
Sc VI	170.25	250		3p ⁴ - 3p ² (⁴ S°)4d	g ³ P - ³ D°	1-2	F23
Sc VI	170.54	150		3p ⁴ - 3p ² (⁴ S°)4d	g ³ P - ² D°	0-1	F23
Sc VI	200.810	160		3p ⁴ - 3p ² (² P°)4s	g ³ P - ¹ P°	2-1	K22
Sc VI	202.638	50		3p ⁴ - 3p ² (² P°)4s	g ³ P - ¹ P°	0-1	K22
Sc VI	202.921	200		3p ⁴ - 3p ² (² P°)4s	g ³ P - ³ P°	2-2	B3,K22
Sc VI	203.216	50		3p ⁴ - 3p ² (² P°)4s	g ³ P - ³ P°	2-1	B3,K22
Sc VI	204.310	100		3p ⁴ - 3p ² (² P°)4s	g ³ P - ² P°	1-2	B3,K22
Sc VI	204.610	50		3p ⁴ - 3p ² (² P°)4s	g ³ P - ³ F°	1-1	B3,K22
Sc VI	204.719	200		3p ⁴ - 3p ² (² P°)4s	g ³ P - ³ P°	1-0	B3,K22
Sc VI	205.072	100		3p ⁴ - 3p ² (² P°)4s	g ³ P - ³ P°	0-1	B3,K22
Sc VI	209.050	100		3p ⁴ - 3p ² (² D°)4s	g ³ P - ¹ D°	2-2	K22
Sc VI	209.821	200		3p ⁴ - 3p ² (² P°)4s	¹ D - ¹ P°	2-1	B3,K22
Sc VI	210.523	40		3p ⁴ - 3p ² (² D°)4s	g ³ P - ¹ D°	1-2	B3,K22
Sc VI	211.416	400		3p ⁴ - 3p ² (² D°)4s	g ³ P - ³ D°	2-3	B3,K22
Sc VI	211.612	200		3p ⁴ - 3p ² (² D°)4s	g ³ P - ³ D°	2-2	B3,K22
Sc VI	211.696	50		3p ⁴ - 3p ² (² D°)4s	g ³ P - ³ D°	2-1	K22
Sc VI	212.121	50		3p ⁴ - 3p ² (² P°)4s	¹ D - ¹ P°	2-2	B3,K22
Sc VI	213.118	200		3p ⁴ - 3p ² (² D°)4s	g ³ P - ¹ D°	1-2	B3,K22
Sc VI	213.192	100		3p ⁴ - 3p ² (² D°)4s	g ³ P - ³ D°	1-1	B3,K22
Sc VI	213.702	100		3p ⁴ - 3p ² (² D°)4s	g ³ P - ³ D°	0-1	B3,K22
Sc VI	218.837	400		3p ⁴ - 3p ² (² D°)4s	¹ D - ¹ D°	2-2	B3,K22
Sc VI	221.234	330		3p ⁴ - 3p ² (⁴ S°)4s	g ³ P - ³ S°	2-1	B3,K22
Sc VI	222.844	150		3p ⁴ - 3p ² (² P°)4s	¹ S - ¹ P°	0-1	K22
Sc VI	222.855	300		3p ⁴ - 3p ² (⁴ S°)4s	g ³ P - ³ S°	1-1	K22
Sc VI	223.408	100		3p ⁴ - 3p ² (⁴ S°)4s	g ³ P - ³ S°	0-1	B3,K22
Sc VI?	277.943	300					B3
Sc VI	281.327	200		3p ⁴ - 3p ² (² P°)3d	g ³ P - ³ D°	2-1	B3,S29
Sc VI	282.209	700		3p ⁴ - 3p ² (² P°)3d	¹ D - ¹ F°	2-3	B3,S29
Sc VI	282.497	600		3p ⁴ - 3p ² (² P°)3d	g ³ P - ³ D°	2-2	B3,S29
Sc VI	282.587	300		3p ⁴ - 3p ² (² P°)3d	¹ S - ¹ P°	0-1	B3,S29
Sc VI	283.99	40		3p ⁴ - 3p ² (² P°)3d	g ³ P - ³ D°	1-1	B3,S29
Sc VI	284.263	900		3p ⁴ - 3p ² (² P°)3d	g ³ P - ³ D°	2-3	B3,S29
Sc VI	284.884	600		3p ⁴ - 3p ² (² P°)3d	g ³ P - ³ D°	0-1	B3,S29
Sc VI	285.191	800		3p ⁴ - 3p ² (² P°)3d	g ³ P - ³ D°	1-2	B3,S29
Sc VI	292.344	600		3p ⁴ - 3p ² (² P°)3d	¹ D - ¹ D°	2-2	B3,S29
Sc VI	294.292	700		3p ⁴ - 3p ² (² P°)3d	g ³ P - ¹ P°	? 2-1	B3,S29
Sc VI	295.478	900b		3p ⁴ - 3p ² (² P°)3d	g ³ P - ³ P°	2-2	B3,S29
Sc VI	298.194	800		3p ⁴ - 3p ² (² P°)3d	g ³ P - ³ P°	0-1	B3,S29
Sc VI	298.428	800		3p ⁴ - 3p ² (² D°)3d	g ³ P - ² S°	2-1	B3,S29
Sc VI	300.677	300		3p ⁴ - 3p ² (² P°)3d	¹ D - ³ D°	2-2	B3,S29
Sc VI	301.426	400		3p ⁴ - 3p ² (² D°)3d	g ³ P - ³ S°	1-1	B3,S29
Sc VI	302.436	100d		3p ⁴ - 3p ² (² D°)3d	g ³ P - ³ S°	0-1	B3,S29
Sc VI	311.947	400		3p ⁴ - 3p ² (² D°)3d	¹ D - ¹ P°	2-1	B3,S29
Sc VI	314.049	400		3p ⁴ - 3p ² (² P°)3d	¹ D - ² P°	2-1	B3,S29
Sc VI	331.309	200		3p ⁴ - 3p ² (² D°)3d	¹ D - ¹ F°	2-3	B3,S29
Sc VI	341.62	200		3p ⁴ - 3p ² (² D°)3d	¹ S - ¹ P°	0-1	B3,S29

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc VI	492.423	600		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^1P^o$	2 - 1	B3, E4
Sc VI	561.176	300		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^2P^o$	2 - 1	B3, K22
Sc VI	566.790	100		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^2P^o$	1 - 0	E3, K22
Sc VI	570.307	300		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^2P^o$	2 - 2	B3, K22
Sc VI	571.937	300		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^2P^o$	1 - 1	B3, K22
Sc VI	575.580	300		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^2P^o$	0 - 1	B3, K22
Sc VI	581.404	400		$3s^2 3p^4 - 3s 3p^5$	$^3P - ^2P^o$	1 - 2	B3, K22

SCANDIUM VII (Sc^{6+}), $Z = 21$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [1 105 000] cm^{-1} ; [137] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc VII	180.260	200		$3p^3 - 3p^2(^2P)4s$	$g^4S^o - ^2P$? $\frac{3}{2} - \frac{3}{2}$	B3, K8
Sc VII	182.743	100		$3p^3 - 3p^2(^2P)4s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E27
Sc VII	182.993	400		$3p^3 - 3p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E27
Sc VII	183.96	200		$3p^3 - 3p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	184.607	200		$3p^3 - 3p^2(^2P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	E27
Sc VII	185.526	300		$3p^3 - 3p^2(^2P)4s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27
Sc VII	185.575	40		$3p^3 - 3p^2(^2P)4s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K22, E27
Sc VII	185.808	330		$3p^3 - 3p^2(^2P)4s$	$^2D^o - ^2D$	$\frac{3}{2} - ^2D$	B3, E27
Sc VII	190.654	400		$3p^3 - 3p^2(^2P)4s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	K22, E27
Sc VII	191.602	300		$3p^3 - 3p^2(^2P)4s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	K22, E27
Sc VII	192.607	150		$3p^3 - 3p^2(^2P)4s$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K22, E27
Sc VII	193.004	300		$3p^3 - 3p^2(^2P)4s$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	194.813	40		$3p^3 - 3p^2(^2P)4s$	$^2D^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	B3, K8
Sc VII	197.875	50		$3p^3 - 3p^2(^2P)4s$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B3, E27
Sc VII	198.232	200		$3p^3 - 3p^2(^2P)4s$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	199.166	100		$3p^3 - 3p^2(^2P)4s$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B3, E27
Sc VII	199.522	50		$3p^3 - 3p^2(^2P)4s$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc VII	201.476	40		$3p^3 - 3p^2(^2P)4s$	$^2P^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	B3, K8
Sc VII	266.800	200		$3p^3 - 3p^2(^1D)3d$	$g^4S^o - ^2P$? $\frac{3}{2} - \frac{3}{2}$	B3, K8
Sc VII	286.927	1000		$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	287.48	40		$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2F$? $\frac{3}{2} - \frac{3}{2}$	B3, K8
Sc VII	290.232	800		$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	290.700	600		$3p^3 - 3p^2(^1S)3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B3, E27
Sc VII	292.344	600		$3p^3 - 3p^2(^1S)3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	296.539	400		$3p^3 - 3p^2(^2P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc VII	297.269	700		$3p^3 - 3p^2(^2P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	298.557	600		$3p^3 - 3p^2(^2P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	301.301	300		$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc VII	301.820	500		$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	302.436	100		$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	307.320	200d		$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	B3, E27
Sc VII	308.180	600		$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	309.161	500		$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	B3, E27
Sc VII	310.043	100		$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc VII?	320.406	100					B3
Sc VII?	325.121	200					B3
Sc VII	329.640	300		$3p^3 - 3p^2(^2P)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc VII	333.386	200		$3p^3 - 3p^2(^2P)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	334.138	500		$3p^3 - 3p^2(^2P)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	353.845	200		$3p^3 - 3p^2(^2P)3d$	$^2P^o - ^2P$? $\frac{3}{2} - \frac{1}{2}$	B3, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc VII	437.554	400		$3s^2 3p^3 - 3s 3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc VII	452.704			$3s^2 3p^3 - 3s 3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E27
Sc VII	454.106	500		$3s^2 3p^3 - 3s 3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	B3, E27
Sc VII	470.68			$3s^2 3p^3 - 3s 3p^4$	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F4, E27
Sc VII	477.77			$3s^2 3p^3 - 3s 3p^4$	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F4, E27
Sc VII?	489.77						F4
Sc VII	491.140			$3s^2 3p^3 - 3s 3p^4$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$	E27
Sc VII?	491.90						F4
Sc VII	493.350			$3s^2 3p^3 - 3s 3p^4$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F27
Sc VII?	495.89						F4
Sc VII	497.349			$3s^2 3p^3 - 3s 3p^4$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E27
Sc VII?	498.15						F4
Sc VII	499.615			$3s^2 3p^3 - 3s 3p^4$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E27
Sc VII	533.43			$3s^2 3p^3 - 3s 3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F4, E27
Sc VII	534.50			$3s^2 3p^3 - 3s 3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F4, E27
Sc VII	558.023	200		$3s^2 3p^3 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$	K22, E27
Sc VII	562.547	300		$3s^2 3p^3 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	K22, E27
Sc VII?	563.401	200					B3
Sc VII?	568.329	100					B3
Sc VII	571.256	400		$3s^2 3p^3 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	K22, E27
Sc VII	598.67	100		$3s^2 3p^3 - 3s 3p^4$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27

SCANDIUM VIII (Sc^{7+}), $Z = 21$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)Ionization Potential $1\ 280\ 000\ cm^{-1}$; 158.7 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc VIII?	161.353	300					B3
Sc VIII?	163.416	400		$3p^2 - 3p 4s$	$g^2P - ^1P^\circ$? 1 - 1	B3, K8
Sc VIII?	164.444	100					B3
Sc VIII	164.772	300		$3p^2 - 3p 4s$	$g^2P - ^3P^\circ$	1 - 2	B3, E27
Sc VIII	165.395	300		$3p^2 - 3p 4s$	$g^2P - ^3P^\circ$	0 - 1	B3, E27
Sc VIII	165.654	400		$3p^2 - 3p 4s$	$g^2P - ^3P^\circ$	2 - 2	B3, E27
Sc VIII	166.022	200		$3p^2 - 3p 4s$	$g^2P - ^3P^\circ$	1 - 1	B3, E27
Sc VIII	166.317	300		$3p^2 - 3p 4s$	$g^2P - ^3P^\circ$	1 - 0	B3, E27
Sc VIII	166.916	300		$3p^2 - 3p 4s$	$g^2P - ^3P^\circ$	2 - 1	B3, E27
Sc VIII	169.759	400		$3p^2 - 3p 4s$	$^1D - ^1P^\circ$	2 - 1	B3, E27
Sc VIII	178.821	200		$3p^2 - 3p 4s$	$^1S - ^1P^\circ$	0 - 1	B3, E27
Sc VIII	287.55	50		$3p^2 - 3p 3d$	$^1D - ^1P^\circ$	2 - 1	B3, E27
Sc VIII	295.478	900b		$3p^2 - 3p 3d$	$^1D - ^1F^\circ$	2 - 3	B3, E27
Sc VIII	303.157			$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	0 - 1	E27
Sc VIII	304.456	100		$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	1 - 2	B3, E27
Sc VIII	305.260	100		$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	1 - 1	B3, E27
Sc VIII	307.083	600		$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	2 - 3	B3, E27
Sc VIII	307.447	40		$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	2 - 2	B3, E27
Sc VIII	310.042	500		$3p^2 - 3p 3d$	$g^2P - ^2P^\circ$	0 - 1	K24, E27
Sc VIII	311.138	200		$3p^2 - 3p 3d$	$g^2P - ^2P^\circ$	1 - 0	K24, E27
Sc VIII?	311.332	100					B3
Sc VIII	312.239	200		$3p^2 - 3p 3d$	$g^2P - ^3P^\circ$	1 - 1	K24, E27
Sc VIII	314.53	200j		$3p^2 - 3p 3d$	$^1S - ^1P^\circ$	0 - 1	B3, E27
Sc VIII	315.163	350		$3p^2 - 3p 3d$	$g^2P - ^2P^\circ$	1 - 2	K24, E27
Sc VIII	315.420	300		$3p^2 - 3p 3d$	$g^2P - ^2P^\circ$	2 - 1	K24, E27

Sc VIII

Sc IX

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc VIII?	317.437	400					B3
Sc VIII	318.408	500		$3p^2 - 3p3d$	$g^2P - ^2P^o$	2 - 2	K24, E27
Sc VIII	339.52	200		$3p^2 - 3p3d$	$^1D - ^2P^o$	2 - 2	B3, K8
Sc VIII	358.107	50		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^1P^o$	1 - 1	P16, E27
Sc VIII	362.308	100		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^1P^o$	2 - 1	P16, E27
Sc VIII	367.083	50		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2S^o$	0 - 1	K24, E27
Sc VIII?	368.088	100d					B3
Sc VIII	370.174	150		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2S^o$	1 - 1	K24, E27
Sc VIII?	371.184	300					B3
Sc VIII	374.658	250		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2S^o$	2 - 1	K24, E27
Sc VIII?	375.705	300					B3
Sc VIII	389.866	200		$3s^2 3p^2 - 3s 3p^2$	$^1D - ^1P^o$	2 - 1	B3, E27
Sc VIII	441.197			$3s^2 3p^2 - 3s 3p^2$	$^1S - ^1P^o$	0 - 1	E27
Sc VIII	481.33	300		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	0 - 1	E27
Sc VIII	486.618	200		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	1 - 2	B3, E27
Sc VIII	492.423	600		$3s^2 3p^2 - 3s 3p^2$	$^1D - ^1D^o$	2 - 2	B3, E27
Sc VIII	494.446	600		$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2P^o$	2 - 2	B3, E27
Sc VIII	562.75			$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2D^o$	1 - 2	F4, E27
Sc VIII	571.34			$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2D^o$	2 - 3	F4, E27

SCANDIUM IX (Sc⁸⁺), Z = 21Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 P_{1/2}^o$ (13 electrons)Ionization Potential 1452000 cm^{-1} ; 180.02 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc IX	93.393	100		$3p - 5d$	$g^2F^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B3, E27
Sc IX	93.899	100d		$3p - 5d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	B3, E27
Sc IX	102.047	50		$3p - 5s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	B3, E27
Sc IX	102.653	100		$3p - 5s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc IX	110.718	100d		$3s 3p^2 - 3s^2 5f$	$^2G - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	B3, E27
Sc IX	119.444	400		$3p - 4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	B3, E27
Sc IX	120.236	500		$3p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	B3, E27
Sc IX	120.324	50		$3p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	B3, K8
Sc IX	127.985	50		$3d - 5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	B3, E27
Sc IX	128.035	50		$3d - 5f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	B3, E27
Sc IX	143.324	230		$3s 3p^2 - 3s^2 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	B3, E27
Sc IX	143.393	200		$3s 3p^2 - 3s^2 4f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	B3, E27
Sc IX	146.628	300		$3s 3p^2 - 3s 3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	B3, E27
Sc IX	146.954	400		$3s 3p^2 - 3s 3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	B3, E27
Sc IX	147.310	300		$3s 3p^2 - 3s 3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	B3, E27
Sc IX	147.346	200		$3s 3p^2 - 3s 3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	B3, K8
Sc IX	147.834	200		$3s 3p^2 - 3s 3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc IX	148.103	200		$3s 3p^2 - 3s 3p(^2P^o)4s$	$^4P - ^4P^o$	$\frac{5}{2} - \frac{3}{2}$	B3, E27
Sc IX	150.092	500		$3p - 4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E27, B3
Sc IX	151.401	400		$3p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	B3, E27
Sc IX	173.771	300		$3d - 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	B3, E27
Sc IX	173.858	400		$3d - 4f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	B3, E27
Sc IX	318.615	400		$3p - 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K24, E27
Sc IX	324.199	600		$3p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	K24, E27
Sc IX	324.570	50		$3p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	K24, E27
Sc IX	385.878			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	E27
Sc IX	387.906	40		$4d - 5f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	B3, K8
Sc IX	390.888	400		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	K24, E27
Sc IX	394.652	600		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	K24, E27
Sc IX	399.890	200		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	K24, E27

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc IX	416.036	200		$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	E27, B3
Sc IX	417.46			$3s 3p^2 - 3p^3$	$4P - ^4 S^o$	$\frac{1}{2} - \frac{3}{2}$	F4, E27
Sc IX	421.18			$3s 3p^2 - 3p^3$	$4P - ^4 S^o$	$\frac{3}{2} - \frac{1}{2}$	F4, E27
Sc IX	426.252	200		$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	B3, E27
Sc IX	426.86			$3s 3p^2 - 3p^3$	$4P - ^4 S^o$	$\frac{1}{2} - \frac{3}{2}$	F4, E27
Sc IX	521.896			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	E27
Sc IX	523.490	100		$3s 3p^2 - 3p^3$	$^2 D - ^4 S^o$? $\frac{3}{2} - \frac{3}{2}$	B3, K8
Sc IX	536.901			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	E27
Sc IX?	537.612	300					B3

SCANDIUM X (Sc^{9+}), $Z = 21$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential $1\ 817\ 400\ cm^{-1}$; $225.32\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc X	76.343	100		$3s^2 - 3s 5p$	$g^1 S - ^1 P^o$	0 - 1	B3
Sc X	83.760	40		$3s 3p - 3s 5d$	$^3 P^o - ^3 D$	0 - 1	B3
Sc X	83.901	100		$3s 3p - 3s 5d$	$^3 P^o - ^3 D$	1 - 2	B3
Sc X	84.204	200		$3s 3p - 3s 5d$	$^3 P^o - ^3 D$	2 - 3	B3
Sc X	89.736	40d		$3s 3p - 3s 5d$	$^1 P^o - ^3 D$? 1 - 2	B3, K8
Sc X	95.02	40		$3s 3d - 3s 6f$	$^3 D - ^3 F^o$	1 - 2	B3
Sc X	95.05	40		$3s 3d - 3s 6f$	$^3 D - ^3 F^o$	2 - 3	B3
Sc X	95.09	40		$3s 3d - 3s 6f$	$^3 D - ^3 F^o$	3 - 4	B3
Sc X	100.739	100		$3p^2 - 3s 5f$	$^1 P - ^3 F^o$? 2 - 3	B3, K8
Sc X	101.978	600		$3s^2 - 3s 4p$	$g^1 S - ^1 P^o$	0 - 1	B3
Sc X	106.557	100		$3s 3d - 3s 5p$	$^1 D - ^1 P^o$? 2 - 1	B3, K8
Sc X	109.072	100		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	0 - 1	B3
Sc X	109.202	40		$3s 3d - 3s 5f$	$^3 D - ^3 F^o$	1 - 2	B3
Sc X	109.227	100		$3s 3d - 3s 5f$	$^3 D - ^3 F^o$	2 - 3	B3
Sc X	109.285	300		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	1 - 2	B3
Sc X	109.307	10		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	1 - 1	B3
Sc X	109.765	400		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	2 - 3	B3
Sc X	109.805	200		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	2 - 2	B3
Sc X	112.677	200		$3p^2 - 3s 5p$	$^1 D - ^1 P^o$? 2 - 1	B3, K8
Sc X?	119.049	400					B3
Sc X	119.332	100		$3s 3p - 3s 4d$	$^1 P^o - ^3 D$? 1 - 2	B3, K8
Sc X	134.767	300		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	0 - 1	B3
Sc X	135.128	400		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	1 - 1	B3
Sc X	135.921	500		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	2 - 1	B3
Sc X	150.900	300		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	1 - 2	B3
Sc X	150.939	400		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	2 - 3	B3
Sc X	150.995	500		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	3 - 4	B3
Sc X	331.679	40d		$3s 3p - 3s 3d$	$^3 P^o - ^3 D$	0 - 1	B3
Sc X	333.521	200		$3s 3p - 3s 3d$	$^3 P^o - ^3 D$? 1 - 2	B3
Sc X	337.911	200d		$3s 3p - 3s 3d$	$^3 P^o - ^3 D$? 2 - 3	B3
Sc X	338.03			$3s 3p - 3s 3d$	$^3 P^o - ^3 D$? 1 - 2	F4
Sc X	338.447	200		$3s 3p - 3s 3d$	$^3 P^o - ^3 D$? 2 - 2	B3, K8
Sc X	342.53			$3s 3p - 3s 3d$	$^3 P^o - ^3 D$? 2 - 3	F4
Sc X	348.14			$3p^2 - 3p 3d$	$^3 P - ^3 D^o$	1 - 2	F4
Sc X	353.55			$3p^2 - 3p 3d$	$^3 P - ^3 D^o$	2 - 3	F4
Sc X	357.85			$3p^2 - 3p 3d$	$^3 P - ^3 P^o$	2 - 2	F4
Sc X	382.650	200		$3p^2 - 3p 3d$	$^1 D - ^1 P^o$? 2 - 1	B3, K8
Sc X	383.58			$3p^2 - 3p 3d$	$^1 D - ^1 D^o$	2 - 2	F4
Sc X	410.89			$3p^2 - 3p 3d$	$^1 S - ^1 P^o$	0 - 1	F4
Sc X	422.850	400		$3s^2 - 3s 3p$	$g^1 S - ^1 P^o$	0 - 1	B3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc X	449.28			3s3p - 3p ²	² P° - ² P	1 - 2	F4
Sc X	455.32			3s3p - 3p ²	² P° - ² P	0 - 1	F4
Sc X	458.18			3s3p - 3p ²	² P° - ² P	2 - 2	F4
Sc X	459.38			3s3p - 3p ²	² P° - ² P	1 - 1	F4
Sc X	465.01			3s3p - 3p ²	² P° - ² P	1 - 0	F4
Sc X	468.74			3s3p - 3p ²	² P° - ² P	2 - 1	F4
Sc X	490.23			3s3p - 3p ²	¹ P° - ¹ S	1 - 0	F4
Sc X	576.79			3s3d - 3p3d	² D - ² F°	3 - 4	F4
Sc X	586.96			3s3d - 3p3d	² D - ² F°	2 - 3	F4
Sc X	595.98			3s3d - 3p3d	² D - ² F°	1 - 2	F4
Sc X	628.111	40		3s ² - 3s3p	^g ¹ S - ² P°	0 - 1	B3
Sc X	740.32			3s3p - 3s3d	¹ P° - ¹ D	1 - 2	F4

SCANDIUM XI (Sc¹⁰⁺), Z = 21Ground State 1s²2s²2p⁶3s ²S_{1/2} (11 electrons)Ionization Potential 2 015 080 cm⁻¹; 249.832 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XI	62.132	40		3s - 6p	^g ² S - ² P°	1/2 - 3/2	B3
Sc XI	64.70	10		3p - 7d	² P° - ² D	1/2 - 3/2	B3
Sc XI	64.98	40		3p - 7d	² P° - ² D	3/2 - 5/2	B3
Sc XI	69.252	40		3p - 6d	² P° - ² D	1/2 - 3/2	B3
Sc XI	69.575	100		3p - 6d	² P° - ² D	3/2 - 5/2	B3
Sc XI	70.445	200		3s - 5p	^g ² S - ² P°	1/2 - 3/2	B3
Sc XI	70.509	100		3s - 5p	^g ² S - ² P°	1/2 - 1/2	B3
Sc XI	71.887	40		3p - 6s	² P° - ² S	3/2 - 1/2	B3
Sc XI	77.917	40d		3d - 7f	² D - ² F°	5/2 - 7/2	B3
Sc XI	78.509	100		3p - 5d	² P° - ² D	1/2 - 3/2	B3
Sc XI	78.917	300		3p - 5d	² P° - ² D	3/2 - 5/2	B3
Sc XI	83.958	40		3p - 5s	² P° - ² S	1/2 - 1/2	B3
Sc XI	84.351	40		3d - 6f	² D - ² F°	3/2 - 5/2	B3
Sc XI	84.393	50		3d - 6f	² D - ² F°	5/2 - 7/2	B3
Sc XI	84.433	100		3p - 5s	² P° - ² S	3/2 - 1/2	B3
Sc XI	94.888	600		3s - 4p	^g ² S - ² P°	1/2 - 3/2	B3
Sc XI	95.117	500		3s - 4p	^g ² S - ² P°	1/2 - 1/2	B3
Sc XI	97.777	300		3d - 5f	² D - ² F°	3/2 - 5/2	B3
Sc XI	97.830	400		3d - 5f	² D - ² F°	5/2 - 7/2	B3
Sc XI	104.142	40		3d - 5p	² D - ² P°	3/2 - 5/2	B3
Sc XI	104.219	40		3d - 5p	² D - ² P°	5/2 - 7/2	B3
Sc XI	104.435	500		3p - 4d	² P° - ² D	1/2 - 3/2	B3
Sc XI	105.140	600		3p - 4d	² P° - ² D	3/2 - 5/2	B3
Sc XI	105.170	200		3p - 4d	² P° - ² D	5/2 - 7/2	B3
Sc XI	127.156	500		3p - 4s	² P° - ² S	1/2 - 1/2	B3
Sc XI	128.247	500		3p - 4s	² P° - ² S	3/2 - 1/2	B3
Sc XI	138.283	500		3d - 4f	² D - ² F°	3/2 - 5/2	B3
Sc XI	138.580	506		3d - 4f	² D - ² F°	5/2 - 7/2	B3
Sc XI	168.165	100		4d - 7f	² D - ² F°	7/2 - 9/2	B3, K8
Sc XI	168.396	400		3d - 4p	² D - ² P°	5/2 - 3/2	B3
Sc XI	168.942	200		3d - 4p	² D - ² P°	3/2 - 1/2	B3
Sc XI	354.24	100		4f - 5d	² F° - ² D	? 5/2 - 7/2	F4, K8
Sc XI	354.350	100		4f - 5d	² F° - ² D	? 7/2 - 9/2	B3, K8
Sc XI	372.507	300		5p - 3d	² P° - ² D	? 1/2 - 3/2	K25
Sc XI	381.151	700		3p - 3d	² P° - ² D	? 3/2 - 5/2	K25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XI	505.117	400		3s - 3p	$g^2S - ^1P^o$	$\frac{1}{2} - \frac{3}{2}$	K25
Sc XI	522.810	200		3s - 3p	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	K25

SCANDIUM XII (Sc^{11+}), $Z = 21$
 Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
 Ionization Potential $5\ 532\ 200\ cm^{-1}$; 685.89 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XII	20.298	100		$2p^6 - 2p^5 5d$	$g^1S - ^1P^o$	0 - 1	F24
Sc XII	20.438	50		$2p^6 - 2p^5 5d$	$g^1S - ^3D^o$	0 - 1	F24
Sc XII	21.940	250		$2p^6 - 2p^5 4d$	$g^1S - ^1P^o$	0 - 1	F24
Sc XII	22.119	200		$2p^6 - 2p^5 4d$	$g^1S - ^3D^o$	0 - 1	F24
Sc XII	22.837	50		$2p^6 - 2p^5 4s$	$g^1S - ^1P^o$	0 - 1	F24
Sc XII	23.045	50		$2p^6 - 2p^5 4s$	$g^1S - ^3P^o$	0 - 1	F24
Sc XII	23.725	350		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^1P^o$	0 - 1	F24
Sc XII	23.821	50		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^3P^o$	0 - 1	F24
Sc XII	26.544			$2p^6 - 2p^5 3d$	$g^1S - \frac{1}{2} [\frac{3}{2}]^o$	0 - 1	E26
Sc XII	26.920			$2p^6 - 2p^5 3d$	$g^1S - \frac{3}{2} [\frac{3}{2}]^o$	0 - 1	E26
Sc XII	27.260			$2p^6 - 2p^5 3d$	$g^1S - \frac{3}{2} [\frac{1}{2}]^o$	0 - 1	E26
Sc XII	30.480			$2p^6 - 2p^5 3s$	$g^1S - \frac{1}{2} [\frac{1}{2}]^o$	0 - 1	F26
Sc XII	30.816			$2p^6 - 2p^5 3s$	$g^1S - \frac{3}{2} [\frac{3}{2}]^o$	0 - 1	E26

SCANDIUM XIII (Sc^{12+}), $Z = 21$
 Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}^o$ (9 electrons)
 Ionization Potential $6\ 095\ 400\ cm^{-1}$; 755.47 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XIII	19.93			$2p^5 - 2p^4 4d$			F5
Sc XIII	24.09	20		$2p^5 - 2p^4 (^1S) 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	24.28	30		$2p^5 - 2p^4 (^1S) 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	C10
Sc XIII	24.56	60		$2p^5 - 2p^4 (^1D) 3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	24.65	10		$2p^5 - 2p^4 (^1D) 3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	C10
Sc XIII	24.71	40		$2p^5 - 2p^4 (^1D) 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	24.89	10		$2p^5 - 2p^4 (^1D) 3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	C10
Sc XIII	24.97	30		$2p^5 - 2p^4 (^3P) 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	25.08	20		$2p^5 - 2p^4 (^3P) 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	25.12	20		$2p^5 - 2p^4 (^3P) 3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	25.19	20		$2p^5 - 2p^4 (^3P) 3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	C10
Sc XIII	25.23	20		$2p^5 - 2p^4 (^3P) 3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	25.33	10		$2p^5 - 2p^4 (^3P) 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	C10
Sc XIII	25.43	10		$2p^5 - 2p^4 (^3P) 3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	C10
Sc XIII	27.63	20		$2p^5 - 2p^4 (^1D) 3s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	C10

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XIII	27.90	30		$2p^6 - 2p^4(^1D)3s$	$g^2P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	C10
Sc XIII	27.97	10		$2p^6 - 2p^4(^3P)3s$	$g^2P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	C10
Sc XIII	28.13	40		$2p^6 - 2p^4(^3P)3s$	$g^2P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	C10
Sc XIII	28.27	10		$2p^6 - 2p^4(^3P)3s$	$g^2P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	C10
Sc XIII	28.32	10		$2p^6 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	28.45	20		$2p^6 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	C10
Sc XIII	28.75	20		$2s2p^6 - 2s2p^4(^3P^o)3s$	$^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	C10
Sc XIII	130.96	300		$2s^22p^6 - 2s2p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F9, B3
Sc XIII	137.80	300		$2s^22p^6 - 2s2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F9, B3

SCANDIUM XIV (Sc¹³⁺) Z = 21Ground State $1s^22s^22p^4\ ^3P_2$ (8 electrons)Ionization Potential $6\ 692\ 900\ \text{cm}^{-1}$; 829.79 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XIV	22.650	150		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3D^o$	2 - 3	G13
Sc XIV	22.825	50		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$	2 - 2	G13
Sc XIV	22.964	300		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$	2 - 2	G13
Sc XIV	23.274	250		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1F^o$	2 - 3	G13
Sc XIV	23.430	200		$2p^4 - 2p^3(^3D^o)3d$	$^1D - ^1D^o$	2 - 2	G13
Sc XIV	23.568	100		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	2 - 3	G13
Sc XIV	23.740	100		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^3D^o$	1 - 2	G13
Sc XIV	24.971	50		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$	2 - 2	G13
Sc XIV	25.441	300		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	2 - 3	G13
Sc XIV	25.647	150		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3D^o$	1 - 2	G13
Sc XIV	25.923	300		$2p^4 - 2p^3(^3D^o)3s$	$^1D - ^1D^o$	2 - 2	G13
Sc XIV	25.983	250		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 1	G13
Sc XIV	26.059	150		$2p^4 - 2p^3(^3P^o)3s$	$^1S - ^1P^o$	0 - 1	G13
Sc XIV	26.200	150		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3S^o$	1 - 1	G13
Sc XIV	26.226	100		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	0 - 1	G13
Sc XIV	111.937	40d		$2s^22p^4 - 2s2p^5$	$g^3P - ^1P^o$? 2 - 1	B3, K8
Sc XIV	122.66			$2s^22p^4 - 2s2p^5$	$g^1D - ^1P^o$	2 - 1	F5
Sc XIV	139.46			$2s^22p^4 - 2s2p^5$	$^1S - ^1P^o$	0 - 1	F5
Sc XIV	145.035	200		$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$? 2 - 1	B3, F5
Sc XIV	148.47			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 0	F5
Sc XIV	150.46			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	2 - 2	F5
Sc XIV	151.89			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 1	F5
Sc XIV	152.85			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	0 - 1	F5
Sc XIV	157.86			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	1 - 2	F5

SCANDIUM XV (Sc^{14+}), $Z = 21$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential 7 468 900 cm^{-1} ; 926.00 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XV	21.41			$2s^2 2p^2 - 2s^2 2p^2 (^2P) 3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F5
Sc XV	21.49			$2s^2 2p^2 - 2s^2 2p^2 (^4P) 3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F5
Sc XV	21.51			$2s^2 2p^2 - 2s^2 2p^2 (^1D) 3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F5
Sc XV	112.337	100		$2s 2p^4 - 2p^5$	$^4P - ^2P^o$? $\frac{1}{2} - \frac{1}{2}$	B3, K8
Sc XV	112.895	40		$2s 2p^4 - 2p^5$	$^4P - ^2P^o$? $\frac{1}{2} - \frac{1}{2}$	B3, K8
Sc XV	113.937	200		$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	B3, K8
Sc XV	118.99			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F5
Sc XV	124.14			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F5
Sc XV	125.83			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F5
Sc XV	130.42			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2F$	$\frac{1}{2} - \frac{1}{2}$	F5
Sc XV	133.12			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F5
Sc XV	136.62			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F5
Sc XV	138.68			$2s 2p^4 - 2p^5$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	F5
Sc XV	143.44			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F5
Sc XV	146.71			$2s 2p^4 - 2p^5$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F5
Sc XV	147.54			$2s 2p^4 - 2p^5$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F5
Sc XV	153.80			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F5
Sc XV	154.89			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2D$? $\frac{3}{2} - \frac{3}{2}$	B3, K8
Sc XV	155.73			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F5
Sc XV	170.00			$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F5
Sc XV	173.27			$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F5
Sc XV	173.49			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F5
Sc XV	177.47			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F5
Sc XV	181.21			$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F5
Sc XV	190.49			$2s 2p^4 - 2p^5$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F5

SCANDIUM XVI (Sc^{15+}), $Z = 21$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential [8 138 300] cm^{-1} ; [1009] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XVI	20.200	80		$2s^2 2p^2 - 2s^2 2p 3d$	$^3P - ^2P^o$	1 - 2	G14
Sc XVI	20.224	20		$2s 2p^3 - 2s 2p^3 (^4P) 3d$	$^4S^o - ^5P$	2 - 3	G14
Sc XVI	20.291	40		$2s^2 2p^2 - 2s^2 2p 3d$	$g^2P - ^2P^o$	2 - 2	G14
Sc XVI	20.330	80		$2s^2 2p^2 - 2s^2 2p 3d$	$g^2P - ^2D^o$	2 - 3	G14
Sc XVI	20.392	80		$2s^2 2p^2 - 2s^2 2p 3d$	$^1D - ^1F^o$	2 - 3	G14
Sc XVI	20.458	80		$2s 2p^3 - 2s 2p^3 (^2D) 3d$	$^2D^o - ^2F$	3 - 4	G14
Sc XVI	20.831	40		$2s^2 2p^2 - 2s^2 2p 3d$	$^1S - ^1P^o$	0 - 1	G14
Sc XVI	21.114	20		$2s 2p^3 - 2s 2p^3 (^4P) 3d$	$^2D^o - ^2F$	2 - 3	G14
Sc XVI	21.637	40		$2s^2 2p^2 - 2s^2 2p 3s$	$g^2P - ^2P^o$	1 - 2	G14
Sc XVI	21.670	60		$2s 2p^3 - 2s 2p^3 (^4P) 3s$	$^4S^o - ^5P$	2 - 3	G14
Sc XVI	21.712	80		$2s^2 2p^2 - 2s^2 2p 3s$	$g^2P - ^2P^o$	2 - 2	G14
Sc XVI	21.716	40		$2s 2p^3 - 2s 2p^3 (^2D) 3s$	$^2D^o - ^2D$	2 - 2	G14
Sc XVI	21.927	40		$2s^2 2p^2 - 2s^2 2p 3s$	$g^2P - ^2P^o$	2 - 1	G14
Sc XVI	22.015	20		$2s^2 2p^2 - 2s^2 2p 3s$	$^1D - ^1P^o$	2 - 1	G14
Sc XVI	22.522	20		$2s^2 2p^2 - 2s^2 2p 3s$	$^1S - ^1P^o$	0 - 1	G14
Sc XVI	127.844	200		$2s^2 2p^2 - 2s 2p^3$	$g^2P - ^2S^o$? 0 - 1	B3, K8
Sc XVI	128.780	40		$2s^2 2p^2 - 2s 2p^3$	$g^2P - ^1P^o$? 2 - 1	B3, K8
Sc XVI	131.59			$2s^2 2p^2 - 2s 2p^3$	$g^2P - ^2S^o$	1 - 1	F5
Sc XVI	132.67			$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1P^o$	2 - 1	F5
Sc XVI	135.62			$2s^2 2p^2 - 2s 2p^3$	$g^2P - ^2S^o$	2 - 1	F5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XVI	139.60	100		$2s^2 2p^2 - 2s 2p^3$	$g^3 P - ^1 D^o$? 1 - 2	F5, K8
Sc XVI	143.487			$2s^2 2p^2 - 2s 2p^3$	$g^3 P - ^3 S^o$? 2 - 1	B3, K8
Sc XVI	150.94			$2s^2 2p^2 - 2s 2p^3$	$^1 D - ^1 D^o$	2 - 2	F5
Sc XVI	157.94 ?			$2s^2 2p^2 - 2s 2p^3$	$^1 S - ^1 P^o$	0 - 1	K8
Sc XVI	158.68			$2s^2 2p^2 - 2s 2p^3$	$g^3 P - ^3 P^o$	0 - 1	K8
Sc XVI	160.725	330		$2s^2 2p^2 - 2s 2p^2$	$^1 S - ^1 P^o$? 0 - 1	B3, K8
Sc XVI	163.44			$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^3 P^o$	1 - 2	F5
Sc XVI	164.67			$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^3 P^o$	1 - 1	F5
Sc XVI	165.11			$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^3 P^o$	1 - 0	F5
Sc XVI	169.65			$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^3 P^o$	2 - 2	F5
Sc XVI	188.50			$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^3 D^o$	0 - 1	F5
Sc XVI	194.72			$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^3 D^o$	1 - 2	F5
Sc XVI	201.25			$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^3 D^o$	2 - 3	F5

SCANDIUM XVII (Sc^{16+}), $Z = 21$ Ground State $1s^2 2s^2 2p^2 P_{1/2}^o$ (5 electrons)Ionization Potential [8 823 900] cm^{-1} ; [1094] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XVII	14.99 ?			$2p - 4s$	$g^2 P^o - ^3 S$	$\frac{3}{2} - \frac{1}{2}$	K8
Sc XVII	19.32 ?			$2p - 3d$	$g^2 P^o - ^3 D$	$\frac{3}{2} - \frac{5}{2}$	K8
Sc XVII	20.47 ?			$2p - 3s$	$g^2 P^o - ^3 S$	$\frac{3}{2} - \frac{1}{2}$	K8
Sc XVII	162.65 ?			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^3 S$	$\frac{1}{2} - \frac{1}{2}$	K8
Sc XVII	175.61 ?			$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^3 S$	$\frac{3}{2} - \frac{1}{2}$	K8

SCANDIUM XVIII (Sc^{17+}), $Z = 21$ Ground State $1s^2 2s^2 ^1 S_0$ (4 electrons)Ionization Potential [9 759 600] cm^{-1} ; [1210] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XVIII	12.03 ?			$2s^2 - 2s 5p$	$g^1 S - ^3 P^o$	0 - 1	K8
Sc XVIII	13.37 ?			$2s^2 - 2s 4p$	$g^1 S - ^3 P^o$	0 - 1	K8
Sc XVIII	16.76 ?			$2s^2 - 2p 3s$	$g^1 S - ^1 P^o$	0 - 1	K8
Sc XVIII	188.98 ?			$2s^2 - 2s 2p$	$g^1 S - ^1 P^o$	0 - 1	K8
Sc XVIII	361.36 ?			$2s^2 - 2s 2p$	$g^1 S - ^3 P^o$	0 - 1	K8

SCANDIUM XIX (Sc^{18+}), $Z = 21$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [10 389 000] cm^{-1} ; [1288] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XIX	11.14	P		2p - 6d	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
Sc XIX	11.20	P		2p - 6d	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
Sc XIX	11.37	P		2s - 5p	$g^2S - ^2P^\circ$		G15
Sc XIX	11.78	P		2p - 5d	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
Sc XIX	11.84	20		2p - 5d	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
Sc XIX	12.66	20		2s - 4p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	G15
Sc XIX	13.160	70		2p - 4d	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
Sc XIX	13.236	100		2p - 4d	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
Sc XIX	16.819	200		2s - 3p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	G15
Sc XIX	16.861	200		2s - 3p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	G15
Sc XIX	17.634	200		2p - 3d	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
Sc XIX	17.779	300		2p - 3d	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
Sc XIX	18.026			2p - 3s	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	G15
Sc XIX	18.182			2p - 3s	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	G15
Sc XIX	275.25	P		2s - 2p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	K8
Sc XIX	321.77	P		2s - 2p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{1}{2}$	K8

SCANDIUM XX (Sc^{19+}), $Z = 21$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential [45 773 000] cm^{-1} ; [5675] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XX	2.46			$1s^2 - 1s3p$	$g^1S - ^1P^\circ$	0 - 1	C11
Sc XX	2.87	P		$1s^2 - 1s2p$	$g^1S - ^1P^\circ$	0 - 1	K8, C11
Sc XX	2.88			$1s^2 - 1s2p$	$g^1S - ^1P^\circ$	0 - 1	C11
Sc XX	2.92	?	f	$1s^2 - 1s2s$	$g^1S - ^1S$	0 - 1	K8

SCANDIUM XXI (Sc^{20+}), $Z = 21$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential [48 665 500] cm^{-1} ; [6033.6] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Sc XXI	2.74	P		1s - 2f	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	K8

Ti

Ti

TITANIUM, Z = 22

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J · J	References
Ti	72.093	1					S30
Ti	72.772	1					S30
Ti	72.991	1					S30
Ti	76.030	1					S30
Ti	76.490	1					S30
Ti	77.435	1					S30
Ti	77.506	1					S30
Ti	77.541	1					S30
Ti	77.823	1					S30
Ti	77.935	1					S30
Ti	81.306	1					S30
Ti	87.972	6					S30
Ti	88.284	1					S30
Ti	88.642	1					S30
Ti	88.961	1					S30
Ti	89.181	1					S30
Ti	89.814	3					S30
Ti	92.272	1					S30
Ti	92.581	1					S30
Ti	93.909	10					S30
Ti	94.570	3					S30
Ti	95.293	3					S30
Ti	95.640	3					S30
Ti	95.929	3					S30
Ti	96.017	3					S30
Ti	96.170	1					S30
Ti	96.246	1					S30
Ti	96.731	3					S30
Ti	97.142	1					S30
Ti	99.377	6					S30
Ti	100.208	6					S30
Ti	100.359	3					S30
Ti	100.638	3					S30
Ti	100.835	20					S30
Ti	101.111	3					S30
Ti	102.576	6					S30
Ti	104.015	6					S30
Ti	104.348	6					S30
Ti	104.466	1					S30
Ti	104.659	3					S30
Ti	104.861	3					S30
Ti	107.801	3					S30
Ti	108.493	3					S30
Ti	108.886	3					S30
Ti	109.153	1					S30
Ti	109.509	3					S30
Ti	109.593	3					S30
Ti	109.904	6					S30
Ti	109.963	1					S30
Ti	110.019	1					S30
Ti	110.283	10					S30
Ti	111.345	20					S30
Ti	111.942	3					S30
Ti	112.002	1					S30
Ti	112.116	1					S30
Ti	112.153	1					S30
Ti	112.178	3					S30
Ti	113.289	3					S30
Ti	113.374	1					S30
Ti	113.643	1					S30

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti	114.053	3					S30
Ti	116.910	6					S30
Ti	118.131	6					S30
Ti	118.915	6					S30
Ti	119.050	6					S30
Ti	119.268	10					S30
Ti	120.226	1					S30
Ti	120.406	1					S30
Ti	120.559	20					S30
Ti	121.464	6					S30
Ti	121.622	3					S30
Ti	121.783	1					S30
Ti	121.922	3					S30
Ti	122.136	1					S30
Ti	122.376	6					S30
Ti	122.847	6					S30
Ti	122.894	10					S30
Ti	123.063	6					S30
Ti	123.196	2					S30
Ti	123.253	6					S30
Ti	124.104	3					S30
Ti	124.555	1					S30
Ti	124.632	1					S30
Ti	124.940	6					S30
Ti	125.195	1					S30
Ti	125.744	3					S30
Ti	126.276	1					S30
Ti	128.111	6					S30
Ti	128.591	3					S30
Ti	128.731	3					S30
Ti	128.871	3					S30
Ti	129.288	0					S30
Ti	129.418	1					G17
Ti	131.102	3					G17
Ti	131.474	1					S30
Ti	131.623	3					S30
Ti	132.924	1					S30
Ti	133.053	3					S30
Ti	133.170	1					G17
Ti	133.482	6					S30
Ti	133.568	1					S30
Ti	133.721	1					S30
Ti	133.866	0					G17
Ti	133.990	0					G17
Ti	134.287	1					S30
Ti	134.701	3					S30
Ti	134.894	3					S30
Ti	135.326	1					S30
Ti	135.458	1					S30
Ti	140.240	3					S30
Ti	141.208	1					S30
Ti	142.543	1					S30
Ti	144.092	1					S30
Ti	144.461	1					S30
Ti	147.316	1					S30
Ti	148.014	1					S30
Ti	149.842	3					S30
Ti	155.494	1					S30
Ti	155.545	1					S30
Ti	157.378	6					S30
Ti	158.042	3					S30
Ti	158.391	3					S30
Ti	158.952	3					S30
Ti	165.653	1					S30
Ti	166.566	1					S30

Ti

Ti

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti	167.625	1					S30
Ti	167.930	1					S30
Ti	168.162	10					S30
Ti	168.192	10					S30
Ti	169.036	1					S30
Ti	171.392	3					S30
Ti	171.723	3					S30
Ti	176.105	1					S30
Ti	176.538	1					S30
Ti	177.729	1					S30
Ti	179.842	1					S30
Ti	186.417	1					S30
Ti	187.671	1					S30
Ti	187.752	1					S30
Ti	187.819	1					S30
Ti	190.181	1					S30
Ti	190.762	1					S30
Ti	192.102	3					S30
Ti	192.272	3					S30
Ti	192.474	6					S30
Ti	193.501	1					S30
Ti	193.534	3					S30
Ti	193.585	6					S30
Ti	193.668	10					S30
Ti	193.737	1					S30
Ti	193.791	1					S30
Ti	194.039	1					S30
Ti	194.420	1					S30
Ti	194.490	3					S30
Ti	196.443	1					S30
Ti	196.785	1					S30
Ti	197.178	3					S30
Ti	197.629	3					S30
Ti	197.697	6					S30
Ti	197.843	3					S30
Ti	198.079	1					S30
Ti	198.137	3					S30
Ti	198.311	3					S30
Ti	198.540	3					S30
Ti	199.960	3					S30
Ti	199.993	1					S30
Ti	200.691	1					S30
Ti	202.303	1					S30
Ti	205.880	1					S30
Ti	220.045	1					S30
Ti	220.735	1					S30
Ti	221.497	1					S30
Ti	222.021	1					S30
Ti	224.169	1					S30
Ti	224.818	1					S30
Ti	225.033	1					S30
Ti	226.409	1					S30
Ti	226.462	1					S30
Ti	226.561	10					S30
Ti	226.629	1					S30
Ti	226.680	1					S30
Ti	226.722	1					S30
Ti	227.639	1					S30
Ti	228.135	1					S30
Ti	229.619	3					S30
Ti	230.155	1					S30
Ti	230.304	1					S30
Ti	230.425	1					S30
Ti	230.591	1					S30
Ti	231.553	1					S30

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Ti

Ti

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti	232.361	1					S30
Ti	232.466	1					S30
Ti	232.711	1					S30
Ti	232.847	1					S30
Ti	233.737	1					S30
Ti	234.184	3					S30
Ti	234.680	1					S30
Ti	234.902	1					S30
Ti	235.096	10					S30
Ti	235.316	3					S30
Ti	235.353	6					S30
Ti	235.450	6					S30
Ti	235.683	20					S30
Ti	235.887	10					S30
Ti	236.914	1					S30
Ti	237.059	3					S30
T ⁺	237.250	1					S30
Ti	237.519	1					S30
Ti	237.826	1					S30
T ⁺	238.054	6					S30
Ti	238.294	1					S30
Ti	238.680	3					S30
Ti	239.404	3					S30
Ti	239.913	1					S30
Ti	240.009	1					S30
Ti	240.321	3					S30
Ti	240.926	10					S30
Ti	241.013	1					S30
Ti	241.240	1					S30
Ti	241.271	1					S30
Ti	241.750	1					S30
Ti	241.917	3					S30
Ti	242.059	1					S30
Ti	242.403	1					S30
Ti	242.475	3					S30
Ti	242.604	1					S30
Ti	242.847	3					S30
Ti	243.035	3					S30
Ti	243.259	1					S30
Ti	243.503	1					S30
Ti	243.968	3					S30
Ti	244.291	1					S30
Ti	244.482	1					S30
Ti	244.779	1					S30
Ti	245.258	1					S30
Ti	245.535	1					S30
Ti	245.637	1					S30
Ti	245.894	1					S30
Ti	245.937	1					S30
Ti	246.198	6					S30
Ti	246.235	1					S30
Ti	246.395	3					S30
Ti	246.564	10					S30
Ti	246.699	1					S30
Ti	246.743	1					S30
Ti	247.135	1					S30
Ti	247.278	1					S30
Ti	247.385	1					S30
Ti	247.536	1					S30
Ti	247.719	3					S30
Ti	247.929	3					S30
Ti	248.150	1					S30
Ti	248.481	1					S30
Ti	248.592	1					S30
Ti	248.908	20					S30

Ti

Ti

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti	248.980	6					S30
Ti	249.229	1					S30
Ti	249.278	1					S30
Ti	249.471	1					S30
Ti	249.529	1					S30
Ti	249.589	3					S30
Ti	249.632	1					S30
Ti	249.688	1					S30
Ti	249.785	1					S30
Ti	249.920	20					S30
Ti	249.984	3					S30
Ti	250.050	1					S30
Ti	250.339						S30
Ti	250.790	3					S30
Ti	250.999	10					S30
Ti	251.266	6					S30
Ti	251.533	6					S30
Ti	251.622	35					S30
Ti	251.715	1					S30
Ti	251.800	6					S30
Ti	252.065	20					S30
Ti	252.874	3					S30
Ti	253.427	1					S30
Ti	253.518	1					S30
Ti	253.591	1					S30
Ti	253.674	1					S30
Ti	253.906	3					S30
Ti	254.188	3					S30
Ti	254.288	20					S30
Ti	254.485	6					S30
Ti	254.574	1					S30
Ti	254.859	1					S30
Ti	255.439	1					S30
Ti	255.628	3					S30
Ti	255.754	1					S30
Ti	255.813	10					S30
Ti	255.875	6					S30
Ti	256.149	6					S30
Ti	256.305	10					S30
Ti	256.338	3					S30
Ti	256.454	10					S30
Ti	256.525	1					S30
Ti	256.586	20					S30
Ti	256.685	3					S30
Ti	256.732	6					S30
Ti	256.815	1					S30
Ti	256.869	1					S30
Ti	257.003	10					S30
Ti	257.155	6					S30
Ti	257.382	1					S30
Ti	257.430	6					S30
Ti	257.645	6					S30
Ti	258.008	1					S30
Ti	258.056	1					S30
Ti	258.178	1					S30
Ti	258.267	1					S30
Ti	258.467	1					S30
Ti	258.868	3					S30
Ti	258.930	3					S30
Ti	258.969	3					S30
Ti	259.311	6					S30
Ti	259.448	35					S30
Ti	259.649	20					S30
Ti	259.835	10					S30
Ti	259.895	3					S30

Ti

Ti

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti	260.251	60					S30
Ti	260.408	1					S30
Ti	260.522	6					S30
Ti	260.566	1					S30
Ti	260.829	1					S30
Ti	260.986	3					S30
Ti	261.026	10					S30
Ti	261.224	1					S30
Ti	261.280	1					S30
Ti	261.365	1					S30
Ti	261.493	10					S30
Ti	261.578	1					S30
Ti	261.916	1					S30
Ti	262.300	3					S30
Ti	262.499	1					S30
Ti	262.651	10					S30
Ti	262.894	1					S30
Ti	262.967	1					S30
Ti	263.384	6					S30
Ti	263.658	6					S30
Ti	263.822	1					S30
Ti	264.272	20					S30
Ti	264.367	3					S30
Ti	264.650	1					S30
Ti	264.739	1					S30
Ti	264.958	1					S30
Ti	265.145	3					S30
Ti	265.255	1					S30
Ti	265.574	6					S30
Ti	265.666	1					S30
Ti	266.180	3					S30
Ti	266.670	3					S30
Ti	267.024	3					S30
Ti	267.187	1					S30
Ti	268.269	6					S30
Ti	268.566	1					S30
Ti	268.699	1					S30
Ti	268.748	1					S30
Ti	269.010	1					S30
Ti	269.314	1					S30
Ti	269.708	1					S30
Ti	269.939	10					S30
Ti	270.067	3					S30
Ti	270.281	10					S30
Ti	270.443	1					S30
Ti	270.675	10					S30
Ti	270.913	6					S30
Ti	271.030	6					S30
Ti	271.234	6					S30
Ti	271.488	6					S30
Ti	271.892	1					S30
Ti	272.417	3					S30
Ti	272.569	3					S30
Ti	272.707	1					S30
Ti	273.562	6					S30
Ti	273.916	3					S30
Ti	274.028	6					S30
Ti	275.128	3					S30
Ti	275.979	1					S30
Ti	276.565	35					S30
Ti	276.909	1					S30
Ti	277.034	1					S30
Ti	277.111	3					S30
Ti	277.168	1					S30
Ti	277.760	1					S30

Ti

Ti

Ekment	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti	277.866	3					S30
Ti	277.984	3					S30
Ti	278.065	35					S30
Ti	278.331	60					S30
Ti	278.627	10					S30
Ti	278.926	6					S30
Ti	279.140	35					S30
Ti	279.195	3					S30
Ti	279.654	6					S30
Ti	280.284	20					S30
Ti	281.193	1					S30
Ti	282.086	6					S30
Ti	282.520	1					S30
Ti	283.204	1					S30
Ti	283.316	1					S30
Ti	284.349	20					S30
Ti	284.829	1					S30
Ti	285.417	90					S30
Ti	285.543	35					S30
Ti	285.672	6					S30
Ti	285.726	3					S30
Ti	285.860	10					S30
Ti	286.233	1					S30
Ti	286.333	1					S30
Ti	286.532	20					S30
Ti	287.041	10					S30
Ti	287.355	6					S30
Ti	287.400	6					S30
Ti	288.125	6					S30
Ti	288.232	6					S30
Ti	289.019	3					S30
Ti	289.178	1					S30
Ti	289.318	10					S30
Ti	289.456	1					S30
Ti	289.731	1					S30
Ti	289.992	1					S30
Ti	290.215	10					S30
Ti	290.344	3					S30
Ti	290.385	20					S30
Ti	290.506	1					S30
Ti	290.601	6					S30
Ti	290.726	3					S30
Ti	291.186	60					S30
Ti	291.403	6					S30
Ti	291.585	3					S30
Ti	291.958	1					S30
Ti	292.401	1					S30
Ti	293.033	1					S30
Ti	293.240	1					S30
Ti	293.549	1					S30
Ti	293.640	1					S30
Ti	293.944	20					S30
Ti	294.239	1					S30
Ti	294.302	3					S30
Ti	295.070	6					S30
Ti	295.207	6					S30
Ti	297.106	3					S30
Ti	297.312	1					S30
Ti	297.418	1					S30
Ti	297.527	6					S30
Ti	297.858	1					S30
Ti	298.014	3					S30
Ti	298.380	1					S30
Ti	299.563	3					S30
Ti	299.839	1					S30

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti	300.416	1					S30
Ti	301.244	1					S30
Ti	302.007	1					S30
Ti	302.558	1					S30
Ti	302.906	1					S30
Ti	303.791	1					S30
Ti	303.891	35					S30
Ti	306.083	1					S30
Ti	307.493	1					S30
Ti	308.408	3					S30
Ti	310.518	1					S30
Ti	314.940	3					S30
Ti	315.670	1					S30
Ti	315.779	3					S30
Ti	316.987	1					S30
Ti	318.543	1					S30
Ti	319.887	1					S30
Ti	324.047	1					S30
Ti	325.767	1					S30
Ti	326.259	1					S30
Ti	328.248	1					S30
Ti	331.074	1					S30
Ti	332.554	1					S30
Ti	334.859	1					S30
Ti	343.668	1					S30
Ti	349.299	1					S30
Ti	351.126	6					S30
Ti	351.351	1					S30
Ti	352.348	1					S30
Ti	352.574	1					S30
Ti	353.757	1					S30
Ti	354.843	1					S30
Ti	368.818	3					S30
Ti	370.408	1					S30
Ti	371.332	1					S30
Ti	371.410	6					S30
Ti	375.508	1					S30
Ti	385.211	1					S30
Ti	394.153	1					S30
Ti	396.288	1					S30

TITANIUM I (Ti^{0+}), $Z = 22$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 4s^2 \ ^3F_2$ (22 electrons)Ionization Potential $55\ 010\ cm^{-1}$; 6.82 eV

TITANIUM II (Ti¹⁺), Z = 22
 Ground State 1s²2s²2p⁶3s²3p⁶3d²4s ⁴F_{3/2} (21 electrons)
 Ionization Potential 109 506 cm⁻¹; 13.58 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti II	1906.30	200	3	3d ² (a ³ F)4s - 3d4s(a ³ D)4p	g ⁴ F - ⁴ D°	3/2 - 3/2	M23
Ti II	1908.29	300	3	3d ² (a ³ F)4s - 3d4s(a ³ D)4p	g ⁴ F - ⁴ D°	3/2 - 3/2	M23
Ti II	1909.33	200	3	3d ² (a ³ F)4s - 3d4s(a ³ D)4p	g ⁴ F - ⁴ D°	3/2 - 3/2	M23
Ti II	1909.74	200	3	3d ² (a ³ F)4s - 3d4s(a ³ D)4p	g ⁴ F - ⁴ D°	3/2 - 3/2	M23
Ti II	1911.01	50	3	3d ² (a ³ F)4s - 3d4s(a ³ D)4p	g ⁴ F - ⁴ D°	3/2 - 3/2	M23
Ti II	1914.11	25	3	3d ² (a ³ F)4s - 3d4s(a ³ D)4p	g ⁴ F - ⁴ D°	3/2 - 3/2	M23
Ti II	1914.32	P	3	3d ² (a ³ F)4s - 3d4s(a ³ D)4p	g ⁴ F - ⁴ D°	3/2 - 3/2	M23

TITANIUM III (Ti²⁺), Z = 22
 Ground State 1s²2s²2p⁶3s²3p⁶3d² ³F₂ (20 electrons)
 Ionization Potential 221 735 cm⁻¹; 27.491 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti III	1002.38	5		3d4s - 4s4p	³ D - ³ P°	2 - 2	R26
Ti III	1004.68	40		3d4s - 4s4p	³ D - ³ F°	3 - 2	R26
Ti III	1005.75	10		3d4s - 4s4p	³ D - ³ P°	1 - 1	R26
Ti III	1007.15	20		3d4s - 4s4p	³ D - ³ P°	2 - 1	R26
Ti III	1008.08	10		3d4s - 4s4p	³ D - ³ P°	1 - 0	R26
Ti III	1235.461	2		3d ² - 3d4p	g ³ F - ³ P°	2 - 1	M9
Ti III	1237.028	4		3d ² - 3d4p	g ³ F - ³ P°	3 - 2	M9
Ti III	1282.484	125	2	3d ² - 3d4p	g ³ F - ³ F°	3 - 4	M9
Ti III	1286.228	90	2	3d ² - 3d4p	g ³ F - ³ F°	2 - 3	M9
Ti III	1286.365	700	2	3d ² - 3d4p	g ³ F - ³ F°	4 - 4	M9
Ti III	1289.299	500	2	3d ² - 3d4p	g ³ F - ³ F°	3 - 3	M9
Ti III	1291.622	450	2	3d ² - 3d4p	g ³ F - ³ F°	2 - 2	M9
Ti III	1293.228	400	2	3d ² - 3d4p	g ³ F - ³ F°	4 - 3	M9
Ti III	1294.698	600b	1	3d ² - 3d4p	g ³ F - ³ D°	3 - 3	M9
Ti III	1295.883	400	1	3d ² - 3d4p	g ³ F - ³ D°	2 - 2	M9
Ti III	1298.659	1000b	1	3d ² - 3d4p	g ³ F - ³ D°	4 - 2	M9
Ti III	1298.970	800	1	3d ² - 3d4p	g ³ F - ³ D°	3 - 1	M9
Ti III	1327.592	550	4	3d ² - 3d4p	¹ D - ¹ P°	2 - 1	M9
Ti III	1329.837	40		3d ² - 3d4p	g ³ F - ¹ D°	2 - 2	M9
Ti III	1339.691	170		3d ² - 3d4p	¹ D - ¹ F°	2 - 3	M9
Ti III	1365.021	6		3d ² - 3d4p	³ P - ¹ P°	0 - 1	M9
Ti III	1368.442	25		3d ² - 3d4p	³ P - ¹ P°	2 - 1	M9
Ti III	1379.960	25		3d ² - 3d4p	¹ D - ³ P°	2 - 1	M9
Ti III	1420.036	300		3d ² - 3d4p	³ P - ³ P°	1 - 2	M9
Ti III	1420.440	280		3d ² - 3d4p	³ P - ³ F°	0 - 1	M9
Ti III	1421.631	280		3d ² - 3d4p	³ P - ³ P°	1 - 0	M9
Ti III	1421.767	250		3d ² - 3d4p	³ P - ³ P°	1 - 1	M9
Ti III	1422.405	650		3d ² - 3d4p	³ P - ³ P°	2 - 2	M9
Ti III	1424.140	300		3d ² - 3d4p	³ P - ³ P°	2 - 1	M9
Ti III	1433.85	40		3d ² - 3d4p	¹ S - ¹ P°	? 0 - 1	R26
Ti III	1450.358	25		3d ² - 3d4p	¹ D - ³ F°	2 - 2	M9
Ti III	1455.194	1000	5	3d ² - 3d4p	¹ G - ¹ F°	4 - 3	M9
Ti III	1455.734	8		3d ² - 3d4p	¹ D - ³ D°	2 - 2	M9
Ti III	1491.978	35		3d ² - 3d4p	³ P - ³ F°	2 - 3	M9
Ti III	1495.08	20		3d ² - 3d4p	¹ S - ³ P°	? 0 - 1	R26

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti III	1496.597	30	3	3d ² - 3d4p	³ P - ³ F°	1 - 2	M9
Ti III	1498.697	600		3d ² - 3d4p	¹ D - ¹ D°	2 - 2	M9
Ti III	1499.173	300		3d ² - 3d4p	³ P - ³ D°	2 - 3	M9
Ti III	1502.311	200		3d ² - 3d4p	³ P - ³ D°	1 - 2	M9
Ti III	1504.621	120		3d ² - 3d4p	³ P - ³ D°	0 - 1	M9
Ti III	1504.974	70		3d ² - 3d4p	³ P - ³ D°	2 - 2	M9
Ti III	1506.084	80		3d ² - 3d4p	³ P - ³ D°	1 - 1	M9
Ti III	1733.24	5		3d4p - 3d4d	³ D° - ³ P	3 - 2	R26
Ti III	1733.58	20		3d4p - 3d4d	³ D° - ³ F	1 - 2	R26
Ti III	1734.36	20		3d4p - 3d4d	³ D° - ³ F	2 - 3	R26
Ti III	1787.32	40		3d4p - 3d4d	³ D° - ³ F	3 - 4	R26
Ti III	1788.86	20		3d4p - 3d4d	³ D° - ³ F	2 - 2	R26
Ti III	1792.56	40		3d4p - 3d4d	³ D° - ³ F	3 - 3	R26
Ti III	1797.10	10		3d4p - 3d4d	³ F° - ³ F	2 - 2	R26
Ti III	1797.69	20		3d4p - 3d4d	³ F° - ³ F	3 - 4	R26
Ti III	1811.09	40		3d4p - 3d4d	³ F° - ³ F	4 - 4	R26
Ti III	1825.30	10		3d4p - 3d4d	³ P° - ³ P	1 - 2	R26
Ti III	1828.14	20		3d4p - 3d4d	³ P° - ³ P	2 - 2	R26
Ti III	1829.42	10		3d4p - 3d4d	³ P° - ³ P	1 - 1	R26
Ti III	1831.31	10		3d4p - 3d4d	³ P° - ³ P	1 - 0	R26
Ti III	1832.21	10		3d4p - 3d4d	³ P° - ³ P	2 - 1	R26
Ti III	1897.27	10		3d4p - 3d4d	³ D° - ³ D	2 - 2	R26
Ti III	1901.31	60		3d4p - 3d4d	³ D° - ³ D	3 - 3	R26
Ti III	1926.18	5		3d4p - 3d4d	³ P° - ³ S	1 - 1	R26
Ti III	1929.34	20		3d4p - 3d4d	³ P° - ³ S	2 - 1	R26
Ti III	1935.18	60		3d4p - 3d4d	³ F° - ³ G	2 - 3	R26
Ti III	1941.40	80		3d4p - 3d4d	³ F° - ³ G	3 - 4	R26
Ti III	1948.79	100		3d4p - 3d4d	³ F° - ³ G	4 - 5	R26
Ti III	1957.02	5		3d4p - 3d4d	³ F° - ³ G	4 - 4	R26

TITANIUM IV (Ti³⁺), Z = 22Ground State 1s²2s²2p⁶3s²3p⁶3d²D_{3/2} (19 electrons)Ionization Potential 348 973 cm⁻¹; 43.266 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti IV	362.520	1					S30
Ti IV	363.003	1					S30
Ti IV	423.487	6		3d - 4f	<i>g</i> ² D - ² F°	½ - ½	S30, R26
Ti IV	424.160	6		3d - 4f	<i>g</i> ² D - ² F°	½ - ½	S30, R26
Ti IV	729.39	10		4p - 6s	³ P° - ³ S	½ - ½	R26
Ti IV	776.82	200	1	3d - 4p	<i>g</i> ² D - ² P°	½ - ½	M23, R26
Ti IV	779.14	400	1	3d - 4p	<i>g</i> ² D - ² P°	½ - ½	M23, R26
Ti IV	781.78	400	1	3d - 4p	<i>g</i> ² D - ² P°	½ - ½	M23, R26
Ti IV	1183.63	100		4p - 5s	³ P° - ³ S	½ - ½	R26
Ti IV	1195.25	100		4p - 5s	³ P° - ³ S	½ - ½	R26
Ti IV	1451.75	600	3	4p - 4d	³ P° - ³ D	½ - ½	M23, R26
Ti IV	1467.35	600	3	4p - 4d	³ P° - ³ D	½ - ½	M23, R26
Ti IV	1469.21	300	3	4p - 4d	³ P° - ³ D	½ - ½	M23, R26

TITANIUM V (Ti⁴⁺), Z = 22
Ground State 1s²2s²2p⁶3s²3p⁶ 1S₀ (18 electrons)
Ionization Potential 800 300 cm⁻¹; 99.20 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti V	144.551	6		3s ² 3p ⁶ - 3s3p ⁶ 4p	g ¹ S - 1P ^o	0 - 1	S29
Ti V	145.79	1		3p ⁶ - 3p ⁵ (² P ^o)6s	g ¹ S - 1P ^o	0 - 1	S29
Ti V	146.897	3		3p ⁶ - 3p ⁵ (² P ^o)6s	g ¹ S - 2P ^o	0 - 1	S29
Ti V	162.984	20		3p ⁶ - 3p ⁵ (² P ^o)5s	g ¹ S - 1P ^o	0 - 1	S29
Ti V	164.446	35		3p ⁶ - 3p ⁵ (² P ^o)5s	g ¹ S - 2P ^o	0 - 1	S29
Ti V	225.347	400		3p ⁶ - 3p ⁵ (² P ^o)4s	g ¹ S - 1P ^o	0 - 1	S29
Ti V	228.909	250		3p ⁶ - 3p ⁵ (² P ^o)4s	g ¹ S - 2P ^o	0 - 1	S29
Ti V	252.956	900		3p ⁶ - 3p ⁵ (² P ^o)3d	g ¹ S - 1P ^o	0 - 1	S29
Ti V	323.365	85		3p ⁶ - 3p ⁵ (² P ^o)3d	g ¹ S - 2D ^o	0 - 1	S29
Ti V	363.145	1		3p ⁶ - 3p ⁵ (² P ^o)3d	g ¹ S - 2F ^o	0 - 1	S29

TITANIUM VI (Ti⁵⁺), Z = 22
Ground State 1s²2s²2p⁶3s²3p⁵ 2P^o_{3/2} (17 electrons)
Ionization Potential 962 700 cm⁻¹; 119.36 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti VI	125.456	10		3p ⁵ - 3p ⁴ (¹ D)5d	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	125.689	6		3p ⁵ - 3p ⁴ (¹ D)5d	g ² P ^o - 2P	3/2 - 5/2	S29
Ti VI	126.330	3		3p ⁵ - 3p ⁴ (¹ D)5d	g ² P ^o - 2D	1/2 - 3/2	S29
Ti VI	126.566	1		3p ⁵ - 3p ⁴ (¹ D)5d	g ² P ^o - 2P	1/2 - 3/2	S30, K8
Ti VI	128.450	1		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 4F	3/2 - 5/2	S29
Ti VI	129.148	3		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	129.249	6		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	130.113	3		3p ⁵ - 3p ⁴ (² P)5d	g ² P ^o - 2D	1/2 - 3/2	S30, K8
Ti VI	136.714	6		3p ⁵ - 3p ⁴ (¹ D)5s	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	137.813	3		3p ⁵ - 3p ⁴ (¹ D)5s	g ² P ^o - 2D	1/2 - 3/2	S29
Ti VI	139.911	3		3p ⁵ - 3p ⁴ (² P)5s	g ² P ^o - 2P	3/2 - 5/2	S29
Ti VI	140.443	20		3p ⁵ - 3p ⁴ (² P)5s	g ² P ^o - 2P	3/2 - 5/2	S29
Ti VI	141.061	3		3p ⁵ - 3p ⁴ (² P)5s	g ² P ^o - 2P	1/2 - 3/2	S29
Ti VI	141.113	10		3p ⁵ - 3p ⁴ (² P)5s	g ² P ^o - 4P	3/2 - 5/2	S29
Ti VI	141.988	3		3p ⁵ - 3p ⁴ (¹ S)4d	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	143.176	1		3p ⁵ - 3p ⁴ (¹ S)4d	g ² P ^o - 2D	1/2 - 3/2	S29
Ti VI	148.104	3		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	148.303	20		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	149.010	20		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P ^o - 2P	3/2 - 5/2	S29
Ti VI	149.392	10		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P ^o - 2D	1/2 - 3/2	S29
Ti VI	149.560	10		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P ^o - 2S	3/2 - 5/2	S29
Ti VI	150.213	3		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P ^o - 2P	1/2 - 3/2	S29
Ti VI	150.315	3		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P ^o - 2P	1/2 - 3/2	S29
Ti VI	151.897	1		3p ⁵ - 3p ⁴ (² P)4d	g ² P ^o - 2P	3/2 - 5/2	S29
Ti VI	152.338	10		3p ⁵ - 3p ⁴ (² P)4d	g ² P ^o - 2F	3/2 - 5/2	S29
Ti VI	152.960	10		3p ⁵ - 3p ⁴ (² P)4d	g ² P ^o - 4F	3/2 - 5/2	S29
Ti VI	153.255	3		3p ⁵ - 3p ⁴ (² P)4d	g ² P ^o - 2P	1/2 - 3/2	S29
Ti VI	153.384	3		3p ⁵ - 3p ⁴ (² P)4d	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	153.550	35		3p ⁵ - 3p ⁴ (² P)4d	g ² P ^o - 2D	3/2 - 5/2	S29
Ti VI	154.161	1		3p ⁵ - 3p ⁴ (² P)4d	g ² P ^o - 4F	1/2 - 3/2	S29
Ti VI	154.768	6		3p ⁵ - 3p ⁴ (² P)4d	g ² P ^o - 2D	1/2 - 3/2	S29
Ti VI	182.151	90		3p ⁵ - 3p ⁴ (¹ S)4s	g ² P ^o - 2S	3/2 - 5/2	S29
Ti VI	184.106	35		3p ⁵ - 3p ⁴ (¹ S)4s	g ² P ^o - 2S	1/2 - 3/2	S29
Ti VI	192.710	20		3p ⁵ - 3p ⁴ (¹ D)4s	g ² F ^o - 2D	3/2 - 5/2	E20
Ti VI	192.754	250		3p ⁵ - 3p ⁴ (¹ D)4s	g ² P ^o - 2D	3/2 - 5/2	S29

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti VI	194.900	200		$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S29
Ti VI	197.460	200		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S29
Ti VI	198.977	400		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S29
Ti VI	199.759	200		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S29
Ti VI	201.311	90		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S29
Ti VI	201.865	125		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	203.200	6		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	203.434	3		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	S29
Ti VI	247.450	250		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	250.482	1000		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	251.071	700		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S29
Ti VI	254.03	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F11, K8
Ti VI	255.375	300		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	257.855	250		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S29
Ti VI	259.232	250		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S29
Ti VI	263.246	250		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S29
Ti VI	267.343	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	S29
Ti VI	282.215	1		$3p^5 - 3p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	283.586	20		$3p^5 - 3p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	288.355	60		$3p^5 - 3p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S29
Ti VI	301.913	20		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	330.703	60		$3p^5 - 3p^4(^3P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	331.767	6		$3p^5 - 3p^4(^3P)3d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	S29
Ti VI	334.457	20		$3p^5 - 3p^4(^3P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	341.109	20		$3p^5 - 3p^4(^3P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S29
Ti VI	342.595	35		$3p^5 - 3p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S29
Ti VI	346.728	1		$3p^5 - 3p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S29
Ti VI	349.574	6		$3p^5 - 3p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S29
Ti VI	353.877	6		$3p^5 - 3p^4(^3P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S29
Ti VI	508.575	1000		$3s^2 3p^3 - 3s 3p^4$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S27
Ti VI	524.113	900		$3s^2 3p^3 - 3s 3p^4$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	S27

TITANIUM VII (Ti^{6+}), $Z = 22$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
 Ionization Potential $1\ 136\ 000\ cm^{-1}$; $140.8\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti VII	128.269	1		$3p^4 - 3p^3(^2P^o)4d$	$g^3P - ^3D^o$	2 - 3	G17, S29
Ti VII	129.603	1		$3p^4 - 3p^3(^2P^o)4d$	$g^3P - ^3D^o$	1 - 1	S29
Ti VII	129.722	3		$3p^4 - 3p^3(^2P^o)4d$	$g^3P - ^3D^o$	1 - 2	S29
Ti VII	131.284	1		$3p^4 - 3p^3(^2P^o)4d$	$^1D - ^1P^o$? 2 - 1	S30, K8
Ti VII	131.937	6		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^1D^o$? 2 - 2	S30, K8
Ti VII	132.093	1		$3p^4 - 3p^3(^2P^o)4d$	$^1D - ^1F^o$	2 - 3	S29
Ti VII	132.149	3		$3p^4 - 3p^3(^2P^o)4d$	$^1D - ^1D^o$	2 - 2	S29
Ti VII	132.322	1		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3P^o$	2 - 1	S29
Ti VII	132.351	1		$3p^4 - 3p^3(^2P^o)4d$	$^1D - ^3D^o$	2 - 3	S29
Ti VII	132.522	6		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3D^o$	2 - 2	S29
Ti VII	132.733	10		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3D^o$	2 - 3	S29
Ti VII	132.837	3		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3P^o$? 2 - 2	S30, K8
Ti VII	132.982	1		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^2S^o$	1 - 1	S29
Ti VII	133.218	6		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3S^o$? 0 - 1	S30, K8
Ti VII	133.385	1		$3p^4 - 3p^3(^2D^o)4d$	$g^3P - ^3P^o$? 0 - 1	S30, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti VII	133.633	3		$3p^4 - 3p^3(^3D^o)4d$	$g^3P - ^3P^o$	1-2	S29
Ti VII	135.801	20		$3p^4 - 3p^3(^1F^o)4d$	$^1D - ^1F^o$	2-3	S29
Ti VII	136.267	6		$3p^4 - 3p^3(^3F^o)4d$	$^1D - ^1D^o$	2-2	S29
Ti VII	136.815	3		$3p^4 - 3p^3(^3P^o)4d$	$^1S - ^1P^o$	0-1	S29
Ti VII	137.661	20		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	2-3	S29
Ti VII	138.548	10		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	1-2	S29
Ti VII	138.814	1		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	0-1	S29
Ti VII	164.173	10		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	2-2	S29
Ti VII	164.478	3		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	2-1	S29
Ti VII	165.403	6		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	i-2	S29
Ti VII	165.716	1		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	1-1	S29
Ti VII	165.816	3		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	1-0	S29
Ti VII	166.617	10		$3p^4 - 3p^3(^3F^o)4s$	$g^3P - ^3P^o$	0-1	S29
Ti VII	168.652	10		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^1D^o$	2-2	S29
Ti VII	169.301	20		$3p^4 - 3p^3(^3P^o)4s$	$^1D - ^1P^o$	2-1	S29
Ti VII	170.358	125		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2-3	S29
Ti VII	170.559	20		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2-2	S29
Ti VII	170.938	3		$3p^4 - 3p^3(^3P^o)4s$	$^1D - ^3P^o$	2-2	S29
Ti VII	171.888	20		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	1-2	S29
Ti VII	171.952	6		$3p^4 - 3p^3(^3D^o)4d$	$g^3P - ^3D^o$	1-1	S29
Ti VII	172.353	6		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	0-1	S29
Ti VII	175.812	90		$3p^4 - 3p^3(^3D^o)4s$	$^1D - ^1D^o$	2-2	S29
Ti VII	177.238	60		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	2-1	S29
Ti VII	178.572	10		$3p^4 - 3p^3(^3P^o)4s$	$^1S - ^1P^o$	0-1	S29
Ti VII	178.673	20		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	1-1	S29
Ti VII	179.107	10		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	0-1	S29
Ti VII	243.037	3		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^1D^o$	1-2	S29
Ti VII	250.913	3		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-1	S29
Ti VII	252.162	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-2	S29
Ti VII	252.275	800		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^1F^o$	2-3	S29
Ti VII	252.371	60		$3p^4 - 3p^3(^3P^o)3d$	$^1S - ^1P^o$	0-1	S29
Ti VII	253.811	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^1D^o$	1-1	S29
Ti VII	254.022	800		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2-3	S29
Ti VII	254.687	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	0-1	S29
Ti VII	255.076	250		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	1-2	S29
Ti VII	260.704	250		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^1D^o$	2-2	S29
Ti VII	261.851	60		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^1P^o$	2-1	S29
Ti VII	263.944	35		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-1	S29
Ti VII	264.823	250		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	2-2	S29
Ti VII	264.997	35		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^1P^o$	1-1	S29
Ti VII	265.059	90		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-0	S29
Ti VII	265.951	60		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^1P^o$	0-1	S29
Ti VII	266.502	200		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3S^o$	2-1	S29
Ti VII	267.136	60		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-1	S29
Ti VII	268.035	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	1-2	S29
Ti VII	268.106	35		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	0-1	S29
Ti VII	268.493	1		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^3D^o$	2-2	S29
Ti VII	269.759	50		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3S^o$	1-1	S29
Ti VII	270.748	10		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3S^o$	0-1	S29
Ti VII	279.516	200		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1P^o$	2-1	S29
Ti VII	281.898	200		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^3P^o$	2-1	S29
Ti VII	282.898	1		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^3P^o$	2-2	S29
Ti VII	296.056	35		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1F^o$	2-3	S29
Ti VII	305.730	1		$3p^4 - 3p^3(^3D^o)3d$	$^1S - ^1P^o$	0-1	S29
Ti VII	332.081	6		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1D^o$	2-2	S29
Ti VII	440.361	125		$3s^2 3p^4 - 3s 3p^5$	$^1D - ^1P^o$	2-1	S27
Ti VII	499.853	125		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	2-1	S27
Ti VII	505.899	100		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1-0	S27
Ti VII	509.127	60		$3s^2 3p^4 - 3s 3p^5$	$^1S - ^1P^o$	0-1	S27
Ti VII	509.511	550		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	2-2	S27
Ti VII	511.442	125		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1-1	S27
Ti VII	515.008	125		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	0-1	S27
Ti VII	521.561	250		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1-2	S27

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

TITANIUM VIII (Ti⁷⁺), Z = 22
Ground State 1s²2s²2p⁶3s²3p³ ⁴S_{3/2} (15 electrons)
Ionization Potential 1 359 000 cm⁻¹; 168.5 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti VIII	148.498	1					S30
Ti VIII	148.820	3					S30
Ti VIII	149.653	3		3p ² - 3p ² (² P)4s	² P° - ² S	½ - ½	E27
Ti VIII	149.981	1		3p ² - 3p ² (² P)4s	² P° - ² S	½ - ½	E27
Ti VIII	150.039	60		3p ² - 3p ² (² P)4s	g ⁴ S° - ⁴ P	¾ - ¾	E27
Ti VIII	150.867	35		3p ² - 3p ² (² P)4s	g ⁴ S° - ⁴ P	¾ - ¾	E27
Ti VIII	151.484	10		3p ² - 3p ² (² P)4s	g ⁴ S° - ⁴ P	¾ - ¾	E27
Ti VIII	151.864	10		3p ² - 3p ² (² P)4s	² D° - ² D	¾ - ¾	E27
Ti VIII	151.915	1		3p ² - 3p ² (² P)4s	² D° - ² D	¾ - ¾	E27
Ti VIII	152.164	20		3p ² - 3p ² (² P)4s	² D° - ² D	¾ - ¾	E27
Ti VIII	155.456	1		3p ² - 3p ² (² P)4s	² D° - ² P	? ¾ - ¾	S30, K8
Ti VIII	155.675	20		3p ² - 3p ² (² P)4s	² D° - ² P	¾ - ¾	E27
Ti VIII	156.444	10		3p ² - 3p ² (² F)4s	² D° - ² P	¾ - ¾	E27
Ti VIII	157.112	3		3p ² - 3p ² (² P)4s	² P° - ² D	½ - ½	E27
Ti VIII	157.472	3		3p ² - 3p ² (² P)4s	² P° - ² D	½ - ½	E27
Ti VIII	157.528	3		3p ² - 3p ² (² P)4s	² P° - ² D	¾ - ¾	E27
Ti VIII	160.914	1		3p ² - 3p ² (² P)4s	² P° - ² P	½ - ½	E27
Ti VIII	161.290	6		3p ² - 3p ² (² P)4s	² P° - ² P	¾ - ¾	E27
Ti VIII	162.016	1		3p ² - 3p ² (² P)4s	² P° - ² P	½ - ½	E27
Ti VIII	162.401	1		3p ² - 3p ² (² P)4s	² P° - ² P	¾ - ¾	K22
Ti VIII	258.610	700		3p ² - 3p ² (¹ D)3d	² D° - ² F	¾ - ¾	E27
Ti VIII	261.725	60		3p ² - 3p ² (¹ S)3d	² P° - ² D	½ - ¾	E27
Ti VIII	262.718	10		3p ² - 3p ² (¹ S)3d	² P° - ² D	¾ - ¾	E27
Ti VIII	263.564	120		3p ² - 3p ² (¹ S)3d	² P° - ² D	¾ - ¾	E27
Ti VIII	267.401	60		3p ² - 3p ² (² P)3d	g ⁴ S° - ⁴ P	¾ - ¾	E27
Ti VIII	268.178	120		3p ² - 3p ² (² P)3d	g ⁴ S° - ⁴ P	¾ - ¾	E27
Ti VIII	269.533	175		3p ² - 3p ² (² F)3d	g ⁴ S° - ⁴ P	¾ - ¾	E27
Ti VIII	270.530	1		3p ² - 3p ² (¹ D)3d	² P° - ² S	½ - ½	E27
Ti VIII	271.591	3		3p ² - 3p ² (¹ D)3d	² P° - ² S	¾ - ¾	E27
Ti VIII	272.037	90		3p ² - 3p ² (¹ D)3d	² D° - ² D	¾ - ¾	E27
Ti VIII	272.369	10		3p ² - 3p ² (¹ D)3d	² D° - ² D	¾ - ¾	E27
Ti VIII	272.843	6		3p ² - 3p ² (¹ D)3d	² D° - ² D	¾ - ¾	E27
Ti VIII	273.178	90		3p ² - 3p ² (¹ D)3d	² D° - ² D	¾ - ¾	E27
Ti VIII	274.514	3					S30
Ti VIII	276.701	10		3p ² - 3p ² (¹ D)3d	² P° - ² P	½ - ¾	E27
Ti VIII	277.815	35		3p ² - 3p ² (¹ D)3d	² P° - ² P	¾ - ¾	E27
Ti VIII	278.806	20		3p ² - 3p ² (¹ D)3d	² P° - ² P	½ - ½	E27
Ti VIII	279.940	20		3p ² - 3p ² (¹ D)3d	² P° - ² P	¾ - ¾	E27
Ti VIII	289.375	1		3p ² - 3p ² (¹ D)3d	² P° - ² D	½ - ¾	E27
Ti VIII	290.971	35		3p ² - 3p ² (¹ D)3d	² P° - ² D	¾ - ¾	E27
Ti VIII	297.197	20		3p ² - 3p ² (² P)3d	² D° - ² P	¾ - ¾	E27
Ti VIII	301.297	6		3p ² - 3p ² (² P)3d	² D° - ² P	¾ - ¾	E27
Ti VIII	302.272	60		3p ² - 3p ² (² P)3d	² D° - ² P	¾ - ¾	E27
Ti VIII	317.992	1		3p ² - 3p ² (² P)3d	² P° - ² P	½ - ½	E27
Ti VIII	319.463	1		3p ² - 3p ² (² P)3d	² P° - ² P	¾ - ¾	E27
Ti VIII	322.698	1		3p ² - 3p ² (² P)3d	² P° - ² P	½ - ¾	E27
Ti VIII	324.207	1		3p ² - 3p ² (² P)3d	² P° - ² P	¾ - ¾	E27
Ti VIII	401.739	1		3s ² 3p ² - 3s3p ⁴	² D° - ² P	¾ - ¾	E27
Ti VIII	408.535	3		3s ² 3p ² - 3s3p ⁴	² D° - ² P	¾ - ¾	E27
Ti VIII	479.01			3s ² 3p ² - 3s3p ⁴	² D° - ² P	¾ - ¾	E27
Ti VIII	480.35			3s ² 3p ² - 3s3p ⁴	² D° - ² D	¾ - ¾	E27
Ti VIII	499.86			3s ² 3p ² - 3s3p ⁴	g ⁴ S° - ⁴ P	¾ - ¾	F4
Ti VIII	504.70			3s ² 3p ² - 3s3p ⁴	g ⁴ S° - ⁴ P	¾ - ¾	F4
Ti VIII	514.17			3s ² 3p ² - 3s3p ⁴	g ⁴ S° - ⁴ P	¾ - ¾	E27

TITANIUM IX (Ti^{8+}), $Z = 22$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [1 556 700] cm^{-1} ; [193] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti IX	136.595	6		$3p^2 - 3p4s$	$g^3P - ^3P^o$	1 - 2	S30,E27
Ti IX	137.153	3		$3p^2 - 3p4s$	$g^3P - ^3P^o$	0 - 1	S30,E27
Ti IX	137.377	20		$3p^2 - 3p4s$	$g^3P - ^3P^o$	2 - 2	S30,E27
Ti IX	137.743	1		$3p^2 - 3p4s$	$g^3P - ^3P^o$	1 - 1	S30,E27
Ti IX	137.991	3		$3p^2 - 3p4s$	$g^3P - ^3P^o$	1 - 0	S30,E27
Ti IX	138.548	10		$3p^2 - 3p4s$	$g^3P - ^3P^o$	2 - 1	S30,E27
Ti IX	140.443	35		$3p^2 - 3p4s$	$^1D - ^1P^o$	2 - 1	S30,E27
Ti IX	147.157	1		$3p^2 - 3p4s$	$^1S - ^1P^o$	0 - 1	S30,E27
Ti IX	260.916	6		$3p^2 - 3p3d$	$^1D - ^1P^o$	2 - 1	S30,E27
Ti IX	267.941	120		$3p^2 - 3p3d$	$^1D - ^1F^o$	2 - 3	S30,E27
Ti IX	274.411	10		$3p^2 - 3p3d$	$g^3P - ^3D^o$	0 - 1	S30,E27
Ti IX	275.867	60		$3p^2 - 3p3d$	$g^3P - ^3D^o$	1 - 2	S30,E27
Ti IX	276.785	20		$3p^2 - 3p3d$	$g^3P - ^3D^o$	1 - 1	S30,E27
Ti IX	278.713	225		$3p^2 - 3p3d$	$g^3P - ^3D^o$	2 - 3	S30,E27
Ti IX	279.074	20		$3p^2 - 3p3d$	$g^3P - ^3D^o$	2 - 2	S30,E27
Ti IX	280.027	20		$3p^2 - 3p3d$	$g^3F - ^3D^o$? 2 - 1	S30,E27
Ti IX	280.141	3		$3p^2 - 3p3d$	$g^3P - ^3P^o$	0 - 1	S30,E27
Ti IX	281.446	6		$3p^2 - 3p3d$	$g^3P - ^3P^o$	1 - 0	S30,E27
Ti IX	282.613			$3p^2 - 3p3d$	$g^3P - ^3P^o$	1 - 1	S30,E27
Ti IX?	282.720	40					P16
Ti IX	285.128	20		$3p^2 - 3p3d$	$^1S - ^1P^o$	0 - 1	S30,E27
Ti IX	285.981			$3p^2 - 3p3d$	$g^3P - ^3P^o$	2 - 1	E27
Ti IX	286.112	20		$3p^2 - 3p3d$	$g^3P - ^3P^o$	1 - 2	S30,E27
Ti IX	289.579	90		$3p^2 - 3p3d$	$g^3P - ^3P^o$	2 - 2	S30,E27
Ti IX	304.498	1		$3p^2 - 3p3d$	$^1D - ^3P^o$	2 - 1	E27
Ti IX	308.568	35		$3p^2 - 3p3d$	$^1D - ^3P^o$	2 - 2	S30,E27
Ti IX	324.712	1		$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^1P^o$	1 - 1	S30,E27
Ti IX	333.385	3		$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3S^o$	0 - 1	S30,E27
Ti IX	336.895	6		$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3S^o$	1 - 1	S30,E27
Ti IX	341.691	10		$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3S^o$	2 - 1	S30,E27
Ti IX	353.939	6		$3s^2 3p^2 - 3s 3p^2$	$^1D - ^1P^o$	2 - 1	S30,E27
Ti IX	400.009	1		$3s^2 3p^2 - 3s 3p^2$	$^1S - ^1P^o$	0 - 1	S30,E27
Ti IX	433.54			$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3P^o$	0 - 1	K8
Ti IX	439.30			$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3P^o$	1 - 2	K8
Ti IX	439.60			$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3P^o$	1 - 0	K8
Ti IX	447.49			$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3P^o$	2 - 2	E27
Ti IX	447.69			$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3P^o$	2 - 1	K8
Ti IX	507.12			$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3D^o$	1 - 2	E27
Ti IX	516.14			$3s^2 3p^2 - 3s 3p^2$	$g^3P - ^3D^o$	2 - 3	E27,K8

TITANIUM X (Ti^{9+}), $Z = 22$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}$ (13 electrons)
 Ionization Potential 1 741 500 cm^{-1} ; 215.91 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti X	70.265	0		$3p - 6d$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	E27
Ti X	70.625	1		$3p - 6d$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	S30,E27
Ti X	78.655	1		$3p - 5d$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S30,E27
Ti X	79.110	3		$3p - 5d$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	S30,E27
Ti X	84.711	6		$3p - 5s$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	S30,E27

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti X	85.262	10		3p - 5s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S30, E27
Ti X	91.806	0		3d - 6f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ti X	91.855	0		3d - 6f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ti X	101.353	35		3p - 4d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S30, E27
Ti X	102.106	20		3p - 4d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	104.516	0		3d - 5f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ti X	104.568	0		3d - 5f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ti X	119.822	1		3s 3p ² - 3s ² 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	119.891	6		3s 3p ² - 3s ² 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	123.036	6		3s 3p ² - 3s 3p(² P ^o)4s	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	123.331	3		3s 3p ² - 3s 3p(² P ^o)4s	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S30, E27
Ti X	123.657	6		3s 3p ² - 3s 3p(² P ^o)4s	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	123.703	3		3s 3p ² - 3s 3p(² P ^o)4s	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S30, E27
Ti X	124.143	3		3s 3p ² - 3s 3p(² P ^o)4s	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S30, E27
Ti X	124.391	6		3s 3p ² - 3s 3p(² P ^o)4s	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	125.456	10		3p - 4s	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	S30, E27
Ti X	126.651	20		3p - 4s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S30, E27
Ti X	142.595	3		3d - 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	142.687	10		3d - 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	288.451	1		3s 3p ² - 3s 3p(² P ^o)3d	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S30, E27
Ti X	289.579	90		3p - 3d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S30, E27
Ti X	290.294	1		3s 3p ² - 3s 3p(² P ^o)3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	290.815	1		3s 3p ² - 3s 3p(² P ^o)3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	293.684	10		3s 3p ² - 3s 3p(² P ^o)3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	293.796	1		3s 3p ² - 3s 3p(² P ^o)3d	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	295.584	35		3p - 3d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	350.596	6		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S30, E27
Ti X	355.811	1		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S30, E27
Ti X	360.133	10		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S30, E27
Ti X	365.636	1		3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S30, E27
Ti X	378.09			3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E27
Ti X	379.74			3s 3p ² - 3p ²	$^4P - ^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E27
Ti X	383.83			3s 3p ² - 3p ²	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K 8
Ti X	389.25			3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E27
Ti X	389.99			3s 3p ² - 3p ²	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E27
Ti X	471.595			3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E27
Ti X	487.672			3s ² 3p - 3s 3p ²	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E27

TITANIUM XI (Ti¹⁰⁺), Z = 22Ground State 1s²2s²2p⁶3s² ¹S₀ (12 electrons)Ionization Potential 2 139 300 cm⁻¹; 265.23 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XI	52.218	1					S30
Ti XI	54.322	1					S30
Ti XI	57.891	1					S30
Ti XI	65.403	3					S30
Ti XI	71.201	1					S30
Ti XI	71.323	3					S30
Ti XI	71.603	6		3s 3p - 3s 5d	$^2P^{\circ} - ^2D$	2 - 3	S30, K 8
Ti XI	73.281	1					S30
Ti XI	75.415	1					S30
Ti XI	76.403	1					S30

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
Ti XI	76.731	1					S30
Ti XI	79.028	1					S30
Ti XI	79.076	1					S30
Ti XI	81.119	1					S30
Ti XI	84.835	6					S30
Ti XI	85.290	3					S30
Ti XI	87.725	35		3s ³ - 3s4p	g ¹ S - ¹ P ^o	0 - 1	S30, E18
Ti XI	90.908	1					S30
Ti XI	90.927	3					S30
Ti XI	90.966	3		3s3d - 3s5f	³ D - ³ F ^o	3 - 4	S30, E18
Ti XI	93.395	6		3s3p - 3s4d	³ P ^o - ³ D	0 - 1	S30, E18
Ti XI	93.589	20		3s3p - 3s4d	³ P ^o - ³ D	1 - 2	S30, E18
Ti XI	93.626	10		3s3p - 3s4d	³ P ^o - ³ D	1 - 1	S30, E18
Ti XI	94.053	35		3s3p - 3s4d	³ P ^o - ³ D	2 - 3	S30, E18
Ti XI	94.085	3		3s3p - 3s4d	³ P ^o - ³ D	2 - 2	S30, E18
Ti XI	100.591	6					S30
Ti XI	111.664	6					S30
Ti XI	113.151	3		3s3d - 3s4f	¹ D - ³ F ^o	? 2 - 3	S30, K8
Ti XI	113.940	6		3s3p - 3s4s	³ P ^o - ³ S	0 - 1	S30, E18
Ti XI	114.272	10		3s3p - 3s4s	³ P ^o - ³ S	1 - 1	S30, E18
Ti XI	115.015	20		3s3p - 3s4s	³ P ^o - ³ S	2 - 1	S30, E18
Ti XI	123.946	6					S30
Ti XI	125.940	6		3s3d - 3s4f	³ D - ³ F ^o	1 - 2	S30, E18
Ti XI	125.979	20		3s3d - 3s4f	³ D - ³ F ^o	2 - 3	S30, E18
Ti XI	126.042	35		3s3d - 3s4f	³ D - ³ F ^o	3 - 4	S30, E18
Ti XI	135.179	10					S30
Ti XI	292.901	1		3s3d - 3p3d	¹ D - ¹ P ^o	? 2 - 1	S30, K8
Ti XI	306.144	1		3s3p - 3s3d	³ P ^o - ³ D	0 - 1	S30, F4
Ti XI	308.250	10		3s3p - 3s3d	³ P ^o - ³ D	1 - 2	S30, F22
Ti XI	308.568	35		3s3p - 3s3d	³ P ^o - ³ D	? 1 - 1	S30, K8
Ti XI	311.559	1		3s3d - 3p3d	¹ D - ³ D ^o	? 2 - 3	S30, K8
Ti XI	313.229	10		3s3p - 3s3d	³ P ^o - ³ D	2 - 3	S30, F4
Ti XI	313.710	1		3s3p - 3s3d	³ P ^o - ³ D	2 - 2	S30, F4
Ti XI	315.844	3		3s3d - 3p3d	¹ D - ³ P ^o	? 2 - 2	S30, K8
Ti XI	322.75			3p ³ - 3n3d	³ P - ³ D ^o	2 - 3	F4
Ti XI	327.192	3		3p ² - 3p3d	³ P - ³ P ^o	2 - 2	S30, F4
Ti XI	349.91			3p ² - 3p3d	D - ¹ D ^o	2 - 2	F4
Ti XI	350.732			3p ³ - 3p3d	¹ D - ³ F ^o	? 2 - 3	S30, K8
Ti XI	370.789			3s3p - 3p ²	³ P ^o - ¹ D	? 1 - 2	S30, K8
Ti XI	374.00			3p ² - 3p3d	¹ S - ¹ P ^o	0 - 1	F4
Ti XI	378.630	1		3s3p - 3p ³	³ P ^o - ¹ D	? 2 - 2	S30, K8
Ti XI	386.140	3		3s ³ - 3s3p	g ¹ S - ¹ P ^o	0 - 1	S30, F22
Ti XI	408.28			3s3p - 3p ³	³ P ^o - ³ P	1 - 2	F22
Ti XI	415.07			3s3p - 3p ²	³ P ^o - ³ P	0 - 1	F22
Ti XI	417.85			3s3p - 3p ²	³ P ^o - ³ P	2 - 2	F22
Ti XI	419.45			3s3p - 3p ³	³ P ^o - ³ P	1 - 1	F22
Ti XI	425.74			3s3p - 3p ³	³ P ^o - ³ P	1 - 0	F22
Ti XI	429.60			3s3p - 3p ³	³ P ^o - ³ P	2 - 1	F22
Ti XI	434.94			3s3d - 3p3d	³ D - ³ D ^o	3 - 3	F4
Ti XI	446.69			3s3p - 3p ²	¹ P ^o - ¹ S	1 - 0	F4
Ti XI	522.66			3s3d - 3p3d	³ D - ³ F ^o	3 - 4	F4
Ti XI	533.55			3s3d - 3p3d	³ D - ³ F ^o	2 - 3	F4
Ti XI	543.23			3s3d - 3p3d	³ D - ³ F ^o	1 - 2	F4
Ti XI	568.44	?		3s ² - 3s3p	¹ S - ³ P ^o	0 - 1	K ⁸
Ti XI	667.12			3s3p - 3s3d	¹ P ^o - ¹ D	1 - 2	F4

TITANIUM XII (Ti¹¹⁺), Z = 22
 Ground State 1s²2s²2p⁶3s²S_{1/2} (11 electrons)
 Ionization Potential 2 251 140 cm⁻¹; 291.497 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XII	26.86	0					
Ti XII	27.20	20					F27
Ti XII	27.306	20					F27
Ti XII	27.489						F27
Ti XII	27.590	20	-A	2p ⁶ 3s - 2p ⁶ 3s ²	g ² S - ² P ^o	1/2 - 1/2	F27
Ti XII	27.818						F27
Ti XII	28.000	0	-A	2p ⁶ 3s - 2p ⁶ 3s ²	g ² S - ² P ^o	1/2 - 3/2	F27
Ti XII	28.120	0					F27
Ti XII	52.896	1					F27
Ti XII	53.140	1					S30
Ti XII	53.433	3					S30
Ti XII	53.457	1		3s - 6p	g ² S - ² P ^o	1/2 - 3/2	S30, K8
Ti XII	55.181	1		3s - 6p	g ² S - ² P ^o	1/2 - 1/2	S30, K8
Ti XII	55.443	3					S30
Ti XII	59.133	6					S30
Ti XII	59.435	10					S30
Ti XII	60.701	10					S30
Ti XII	60.762	3		3s - 5p	g ² S - ² P ^o	1/2 - 3/2	S30, E16
Ti XII	60.971	1		3s - 5p	g ² S - ² P ^o	1/2 - 1/2	S30, E16
Ti XII	61.286	1		3p - 6s	² P ^o - ² S	1/2 - 1/2	S30, K8
Ti XII	61.286	1		3p - 6s	² P ^o - ² S	3/2 - 1/2	S30, K8
Ti XII	62.433	1					S30
Ti XII	62.470	1					S30
Ti XII	65.540	1					S30
Ti XII	65.577	3					S30
Ti XII	67.171	10					S30
Ti XII	67.171	10		3p - 5d	² P ^o - ² D	1/2 - 3/2	S30, E16
Ti XII	67.555	35					S30, E16
Ti XII	70.986	3		3p - 5d	² P ^o - ² D	3/2 - 3/2	S30, E16
Ti XII	71.031	6		3d - 6f	² D - ² F ^o	3/2 - 7/2	S30, E16
Ti XII	71.545	1					S30
Ti XII	71.987	3					S30
Ti XII	71.987	3					S30
Ti XII	72.234	1					S30
Ti XII	82.121	90		3p - 5s	² P ^o - ² S	? 3/2 - 1/2	S30, K8
Ti XII	82.307	6		3s - 4p	g ² S - ² P ^o	1/2 - 3/2	S30, E16
Ti XII	82.344	20		3d - 5f	² D - ² F ^o	3/2 - 3/2	S30, E16
Ti XII	82.368	6		3s - 4p	g ² S - ² P ^o	1/2 - 1/2	S30, E16
Ti XII	82.368	6		3d - 5f	² D - ² F ^o	3/2 - 7/2	S30, E16
Ti XII	89.844	60					S30, E16
Ti XII	90.512	90		3p - 4d	² P ^o - ² D	1/2 - 3/2	S30, E16
Ti XII	90.547	6		3p - 4d	² P ^o - ² D	3/2 - 3/2	S30, E16
Ti XII	108.086	10		3p - 4d	² P ^o - ² D	3/2 - 3/2	S30, E16
Ti XII	109.107	35		3p - 4s	² P ^o - ² S	1/2 - 1/2	S30, E16
Ti XII	109.107	35		3p - 4s	² P ^o - ² S	3/2 - 1/2	S30, E16
Ti XII	116.497	60					S30, E16
Ti XII	116.597	90		3d - 4f	² D - ² F ^o	3/2 - 3/2	S30, E16
Ti XII	139.884	3		3d - 4f	² D - ² F ^o	3/2 - 7/2	S30, E16
Ti XII	140.361	1		3d - 4p	² D - ² P ^o	3/2 - 3/2	S30, K8
Ti XII	253.142	35		3d - 4p	² D - ² P ^o	3/2 - 1/2	S30, K8
Ti XII	253.142	35		4d - 5f	² D - ² F ^o	? 3/2 - 7/2	S30, K8
Ti XII	260.145	1					S30, K8
Ti XII	340.66			4p - 5s	² P ^o - ² S	? 3/2 - 1/2	S30, K8
Ti XII	349.933	1		3p - 3d	² P ^o - ² D	1/2 - 3/2	F22
Ti XII	351.06			3p - 3d	² P ^o - ² D	3/2 - 3/2	S30, F22
Ti XII	460.69			3p - 3d	² P ^o - ² D	3/2 - 3/2	F22
Ti XII	460.69			3s - 3p	g ² S - ² P ^o	1/2 - 3/2	F22
Ti XII	479.86			3s - 3p	g ² S - ² P ^o	1/2 - 1/2	F22

TITANIUM XIII (Ti¹²⁺), Z = 22
 Ground State 1s²2s²2p⁸ 1S₀ (10 electrons)
 Ionization Potential 6 350 400 cm⁻¹; 787.33 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XIII	17.727	100		2p ⁶ - 2p ⁵ 5d	g ¹ S - 1P ^o	0 - 1	F24
Ti XIII	17.869	50		2p ⁶ - 2p ⁵ 5d	g ¹ S - 3D ^o	0 - 1	F24
Ti XIII	19.204	250		2p ⁶ - 2p ⁵ 4d	g ¹ S - 1P ^o	0 - 1	F24
Ti XIII	19.366	200		2p ⁶ - 2p ⁵ 4d	g ¹ S - 3D ^o	0 - 1	F24
Ti XIII	19.943	50		2p ⁶ - 2p ⁵ 4s	g ¹ S - 1P ^o	0 - 1	F24
Ti XIII	20.135	50		2p ⁶ - 2p ⁵ 4s	g ¹ S - 3P ^o	0 - 1	F24
Ti XIII	21.035	350		2s ² 2p ⁶ - 2s 2p ⁶ 3p	g ¹ S - 1P ^o	0 - 1	F24
Ti XIII	21.127	100		2s ² 2p ⁶ - 2s 2p ⁶ 3p	g ¹ S - 3P ^o	0 - 1	F24
Ti XIII	23.355			2p ⁶ - 2p ⁵ 3d	g ¹ S - 1/2 [3/2] ^o	0 - 1	E26
Ti XIII	23.698			2p ⁶ - 2p ⁵ 3d	g ¹ S - 3/2 [3/2] ^o	0 - 1	E26
Ti XIII	23.991			2p ⁶ - 2p ⁵ 3d	g ¹ S - 3/2 [1/2] ^o	0 - 1	E26
Ti XIII	26.641			2p ⁶ - 2p ⁵ 3s	g ¹ S - 1/2 [1/2] ^o	0 - 1	E26
Ti XIII	26.960			2p ⁶ - 2p ⁵ 3s	g ¹ S - 3/2 [3/2] ^o	0 - 1	E26

TITANIUM XIV (Ti¹³⁺), Z = 22
 Ground State 1s²2s²2p⁵ 2P_{3/2}^o (9 electrons)
 Ionization Potential 6 947 300 cm⁻¹; 861.33 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XIV	17.58			2p ⁵ - 2p ⁴ 4d			F5
Ti XIV	17.73			2p ⁵ - 2p ⁴ 4d			F5
Ti XIV	17.80			2p ⁵ - 2p ⁴ 4d			F5
Ti XIV	17.88			2p ⁵ - 2p ⁴ 4d			F5
Ti XIV	22.28	20		2p ⁵ - 2p ⁴ (3P)3d	g ³ P ^o - 2P	3/2 - 1/2	C10
Ti XIV	24.32	60		2p ⁵ - 2p ⁴ (1D)3s	g ³ P ^o - 3D	3/2 - 1/2	C10
Ti XIV	24.73	50		2p ⁵ - 2p ⁴ (3P)3s	g ³ P ^o - 2P	3/2 - 1/2	C10
Ti XIV	121.994	1		2s ² 2p ⁵ - 2s 2p ⁵	g ³ P ^o - 2S	?	S30, F9
Ti XIV	129.384	1		2s ² 2p ⁵ - 2s 2p ⁵	g ³ P ^o - 2S	?	S30, F9

TITANIUM XV (Ti¹⁴⁺), Z = 22
 Ground State 1s²2s²2p⁴ 3P₂ (8 electrons)
 Ionization Potential 7 584 700 cm⁻¹; 940.36 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XV	20.169	100		2p ⁴ - 2p ³ (3P ^o)3d	g ³ P ^o - 3D ^o	2 - 3	G13
Ti XV	20.317	300		2p ⁴ - 2p ³ (3P ^o)3d	g ³ P ^o - 3P ^o	2 - 2	G13
Ti XV	20.422	450		2p ⁴ - 2p ³ (3D ^o)3d	g ³ P ^o - 3P ^o	2 - 2	G13
Ti XV	20.704	200		2p ⁴ - 2p ³ (3D ^o)3d	1D - 1F ^o	2 - 3	G13
Ti XV	20.829	300		2p ⁴ - 2p ³ (3D ^o)3d	1D - 1D ^o	2 - 2	G13

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XV	21.932	50		$2p^4 - 2p^3(^4S^o)3d$	$g^3P - ^2D^o$	2 - 3	G13
Ti XV	21.994	50		$2p^4 - 2p^2(^4S^o)3d$	$g^2P - ^2D^o$	1 - 2	G13
Ti XV	22.109	100		$2p^4 - 2p^2(^2P^o)3s$	$g^2P - ^2P^o$	2 - 2	G13
Ti XV	22.471	500		$2p^4 - 2p^2(^2D^o)3s$	$g^2P - ^2D^o$	2 - 3	G13
Ti XV	22.688	200		$2p^4 - 2p^2(^2D^o)3s$	$g^2P - ^2D^o$	1 - 2	G13
Ti XV	22.936	300		$2p^4 - 2p^2(^2D^o)3s$	$^1D - ^1D^o$	2 - 2	G13
Ti XV	22.967	200		$2p^4 - 2p^2(^4S^o)3s$	$g^2P - ^2S^o$	2 - 1	G13
Ti XV	23.640	150		$2p^4 - 2p^2(^2P^o)3s$	$^1S - ^1P^o$	0 - 1	G13
Ti XV	23.187	200		$2p^4 - 2p^2(^4S^o)3s$	$g^2P - ^2S^o$	1 - 1	G13
Ti XV	110.072	1		$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^1P^o$? 1 - 1	S30, K8
Ti XV	115.02			$2s^2 2p^4 - 2s 2p^5$	$^1D - ^1P^o$	2 - 1	F5
Ti XV	131.12			$2s^2 2p^4 - 2s 2p^5$	$^1S - ^1P^o$	0 - 1	F5
Ti XV	134.57			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	2 - 1	F5
Ti XV	138.33			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	1 - 0	F5
Ti XV	140.34			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	2 - 2	F5
Ti XV	142.09			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	1 - 1	F5
Ti XV	147.72			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	0 - 1	F5
Ti XV	148.54			$2s^2 2p^4 - 2s 2p^5$	$g^2P - ^2P^o$	1 - 2	F5

TITANIUM XVI (Ti¹⁵⁺), Z = 22Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}^o$ (7 electrons)Ionization Potential [8 494 500] cm⁻¹; [1042] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XVI	19.1			$2s^2 2p^2 - 2s^2 2p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	F5
Ti XVI	19.26			$2s^2 2p^2 - 2s^2 2p^2(^1D)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{7}{2}$	F5
Ti XVI	110.56			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F5
Ti XVI	116.21			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	118.21			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	124.82			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F5
Ti XVI	128.42			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F5
Ti XVI	129.07			$2s 2p^4 - 2p^5$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	F5
Ti XVI	132.04			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	138.76			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F5
Ti XVI	138.79			$2s 2p^4 - 2p^5$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	143.42			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	145.62			$2s^2 2p^2 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	157.81			$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F5
Ti XVI	161.17			$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	162.51			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F5
Ti XVI	167.22			$2s^2 2p^2 - 2s 2p^4$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	169.74			$2s^2 2p^2 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F5
Ti XVI	178.23			$2s 2p^4 - 2p^5$	$^2P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F5

TITANIUM XVII (Ti¹⁶⁺), Z = 22
 Ground State 1s²2s²2p² ³P₀ (6 electrons)
 Ionization Potential [9 122 400] cm⁻¹; [1131] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XVII	18.091	80		2s ² 2p ² - 2s ² 2p3d	g ³ P - ³ P°	1 - 2	G14
Ti XVII	18.154	60		2s 2p ³ - 2s 2p ² (⁴ P)3d	⁴ S° - ⁴ P	2 - 3	G14
Ti XVII	18.172	40		2s ² 2p ² - 2s ² 2p3d	g ³ P - ³ P°	2 - 2	G14
Ti XVII	18.215	40		2s ² 2p ² - 2s ² 2p3d	g ³ P - ³ D°	2 - 3	G14
Ti XVII	18.268	100		2s ² 2p ² - 2s ² 2p3d	¹ D - ¹ F°	2 - 3	G14
Ti XVII	18.387	60		2s 2p ³ - 2s 2p ² (³ D)3d	³ D° - ³ F	3 - 4	G14
Ti XVII	18.665	20		2s ² 2p ³ - 2s ² 2p3d	¹ S - ¹ P°	0 - 1	G14
Ti XVII	18.939	20		2s 2p ² - 2s 2p ² (⁴ P)3d	³ D° - ³ F	2 - 3	G14
Ti XVII	19.369	180		2s ² 2p ³ - 2s ² 2p3s	g ³ P - ³ P°	1 - 2	G14
Ti XVII	19.415	40		2s 2p ² - 2s 2p ² (⁴ P)3s	⁴ S° - ⁴ P	2 - 3	G14
Ti XVII	19.459	60		2s ² 2p ³ - 2s ² 2p3s	g ³ P - ³ P°	2 - 2	G14
Ti XVII	19.501	40		2s 2p ³ - 2s 2p ² (³ D)3s	³ D° - ³ D	2 - 2	G14
Ti XVII	19.651	20		2s ² 2p ³ - 2s ² 2p3s	g ³ P - ³ P°	2 - 1	G14
Ti XVII	19.718	40		2s ² 2p ³ - 2s ² 2p3s	¹ D - ¹ P°	2 - 1	G14
Ti XVII	20.183	20		2s ² 2p ² - 2s ² 2p3s	¹ S - ¹ P°	0 - 1	G14
Ti XVII	130.87	?		2s ² 2p ² - 2s 2p ³	¹ D - ¹ P°	2 - 1	K8
Ti XVII	137.31	?		2s ² 2p ³ - 2s 2p ³	g ³ P - ³ S°	2 - 1	K8
Ti XVII	147.78	?		2s ² 2p ² - 2s 2p ³	¹ D - ¹ D°	2 - 2	K8
Ti XVII	149.66	?		2s ² 2p ³ - 2s 2p ³	¹ S - ¹ P°	0 - 1	K8
Ti XVII	170.48	?		2s ² 2p ³ - 2s 2p ³	g ³ P - ³ P°	1 - 2	K8
Ti XVII	178.57	?		2s ² 2p ² - 2s 2p ³	g ³ P - ³ P°	2 - 2	K8
Ti XVII	181.65	?		2s ² 2p ³ - 2s 2p ³	g ³ P - ³ P°	2 - 1	K8
Ti XVII	215.31	?		2s ² 2p ² - 2s 2p ³	g ³ P - ³ D°	2 - 3	K8

TITANIUM XVIII (Ti¹⁷⁺), Z = 22
 Ground State 1s²2s²2p ²P_{1/2} (5 electrons)
 Ionization Potential [9 840 200] cm⁻¹; [1220] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XVIII	13.45	?		2p - 4s	g ³ P° - ² S	³ / ₂ - ¹ / ₂	K8
Ti XVIII	17.37	?		2p - 3d	g ³ P° - ³ D	³ / ₂ - ⁵ / ₂	K8
Ti XVIII	18.38	?		2p - 3s	g ³ P° - ³ S	³ / ₂ - ¹ / ₂	K8
Ti XVIII	153.64	?		2s ² 2p - 2s 2p ²	g ² P° - ² S	¹ / ₂ - ¹ / ₂	K8
Ti XVIII	168.13	?		2s ² 2p - 2s 2p ²	g ² P° - ³ S	³ / ₂ - ¹ / ₂	K8

TITANIUM XIX (Ti^{18+}), $Z = 22$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential [10 824 000] cm^{-1} ; [1342] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XIX	10.85 ?			$2s^2 - 2s 5p$	$g^1S - ^3P^o$	0 - 1	K8
Ti XIX	12.97 ?			$2s^2 - 2s 4p$	$g^1S - ^3P^o$	0 - 1	K8
Ti XIX	15.18 ?			$2s^2 - 2p 3s$	$g^1S - ^1P^o$	0 - 1	K8
Ti XIX	179.31 ?			$2s^2 - 2s 2p$	$g^1S - ^1P^o$	0 - 1	K8
Ti XIX	342.82 ?			$2s^2 - 2s 2p$	$g^1S - ^3P^o$	0 - 1	K8

TITANIUM XX (Ti^{19+}), $Z = 22$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [11 494 000] cm^{-1} ; [1425] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XX	10.04 P			$2p - 6d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	G15
Ti XX	10.11 P			$2p - 6d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	G15
Ti XX	10.27 P			$2s - 5p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G15
Ti XX	10.62 P			$2p - 5d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	G15
Ti XX	10.68 P			$2p - 5d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	G15
Ti XX	11.45 P			$2s - 4p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G15
Ti XX	11.87 P			$2p - 4d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	G15
Ti XX	11.94 P			$2p - 4d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	G15
Ti XX	15.217	200		$2s - 3p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	G15
Ti XX	15.252	200		$2s - 3p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	G15
Ti XX	15.914	200		$2p - 3d$	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	G15
Ti XX	16.059	300		$2p - 3d$	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	G15
Ti XX	16.218			$2p - 3s$	$^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	G15
Ti XX	16.379			$2p - 3s$	$^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	G15
Ti XX	254.91 P			$2s - 2p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	K8
Ti XX	303.75 P			$2s - 2p$	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	K8

TITANIUM XXI (Ti^{20+}), $Z = 22$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential [50 403 000] cm^{-1} ; [6249] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XXI	2.23			$1s^2 - 1s 3p$	$g^1S - ^3P^o$	0 - 1	C11
Ti XXI	2.62 P			$1s^2 - 1s 2p$	$g^1S - ^3P^o$	0 - 1	K8, C11
Ti XXI	2.63 P			$1s^2 - 1s 2p$	$g^1S - ^3P^o$	0 - 1	K8, C11
Ti XXI	2.66 ?	f		$1s^2 - 1s 2s$	$g^1S - ^3S$	0 - 1	K8

TITANIUM XXII (Ti^{21+}), $Z = 22$
 Ground State $1s^2S_{1/2}$ (1 electron)
 Ionization Potential [53 443 400] cm^{-1} ; [6625.6] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ti XXII	2.50 P			$1s - 2p$	$g^2S - ^2p^2$	$\frac{1}{2} - \frac{3}{2}$	K8

VANADIUM, Z = 23

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V	239.44	300					F11
V	241.14	200					F11
V	245.89	200					F11
V	251.87	100					F11
V	612.99	10h					I1
V	951.35	50					I1
V	953.70	25					I1
V	955.20	5					I1
V	1623.73	15					I1
V	1625.92	50					I1
V	1666.76	10					I1
V	1675.75	100					I1
V	1681.91	10					I1
V	1702.01	10					I1
V	1713.40	50					I1
V	1740.30	100					I1
V	1742.72	150					I1
V	1747.84	400					I1
V	1755.30	100					I1
V	1756.57	10					I1
V	1769.13	15					I1
V	1803.76	75					I1
V	1807.74	50					I1
V	1814.05	5					I1
V	1821.33	10					I1
V	1838.10	10					I1
V	1895.44	5					I1
V	1898.42	10					I1

VANADIUM I (V⁰⁺), Z = 23Ground State 1s²2s²2p⁶3s²3p⁶3d³4s² ⁴F_{3/2} (23 electrons)Ionization Potential 54 400 cm⁻¹; 6.74 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V I	1872.66	25					M24
V I	1890.82	15					M24
V I	1894.47	40					M24
V I	1897.90	10					M24
V I	1898.78	25					M24
V I	1900.00	30					M24
V I	1957.90	250	55	3d ³ 4s ² -	ga ⁴ F - m ⁴ D ^o	3/2 - 3/2	M24
V I	1958.18	60	55	3d ³ 4s ² -	ga ⁴ F - m ⁴ D ^o	3/2 - 3/2	M24
V I	1958.60	0		3d ³ 4s ² -	ga ⁴ F - 31 ^o	3/2 - 3/2	M24
V I	1959.12	150	59	3d ³ 4s ² -	ga ⁴ F - n ⁴ F ^o	7/2 - 3/2	M24
V I	1959.36	150	54	3d ³ 4s ² -	ga ⁴ F - n ⁴ F ^o	3/2 - 7/2	M24
V I	1959.97	200	54	3d ³ 4s ² -	ga ⁴ F - n ⁴ F ^o	3/2 - 3/2	M24
V I	1961.69	300	55	3d ³ 4s ² -	ga ⁴ F - m ⁴ D ^o	3/2 - 1/2	M24
V I	1963.47	350	55	3d ³ 4s ² -	ga ⁴ F - m ⁴ D ^o	3/2 - 3/2	M24
V I	1964.27	300	54	3d ³ 4s ² -	ga ⁴ F - n ⁴ F ^o	3/2 - 3/2	M24

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V I	1965.07	300	55	$3d^3 4s^2 -$	$g^4 F - m^4 D^\circ$	$\frac{7}{2} - \frac{5}{2}$	M24
V I	1965.26	300	54	$3d^3 4s^2 -$	$g^4 F - n^4 F^\circ$	$\frac{7}{2} - \frac{5}{2}$	M24
V I	1966.52	300	54	$3d^3 4s^2 -$	$g^4 F - n^4 F^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1966.76	300	55	$3d^3 4s^2 -$	$g^4 F - m^4 D^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1967.98	400	54	$3d^3 4s^2 -$	$g^4 F - n^4 F^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1969.57	75	54	$3d^3 4s^2 -$	$g^4 F - n^4 F^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1972.48	75	54	$3d^3 4s^2 -$	$g^4 F - n^4 F^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1975.42	100	54	$3d^3 4s^2 -$	$g^4 F - n^4 F^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1981.85	5		$3d^3 4s^2 -$	$g^4 F - 30^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1982.06	200	53	$3d^3 4s^2 -$	$g^4 F - p^4 G^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1982.45	200	53	$3d^3 4s^2 -$	$g^4 F - p^4 G^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1983.37	250	53	$3d^3 4s^2 -$	$g^4 F - p^4 G^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1984.43	30		$3d^3 4s^2 -$	$g^4 F - 29^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1984.91	250	53	$3d^3 4s^2 -$	$g^4 F - p^4 G^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I?	1987.25	100					M24
V I	1989.17	1		$3d^3 4s^2 -$	$g^4 F - 30^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1989.82	60	53	$3d^3 4s^2 -$	$g^4 F - p^4 G^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1991.31	0		$3d^3 4s^2 -$	$g^4 F - 27^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1991.75	10		$3d^3 4s^2 -$	$g^4 F - 29^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1992.46	1	53	$3d^3 4s^2 -$	$g^4 F - p^4 G^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24
V I	1995.43	1		$3d^3 4s^2 -$	$g^4 F - 28^\circ$	$\frac{7}{2} - \frac{7}{2}$	M24

VANADIUM II (V^{2+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 3d^4 \ ^5D_0$ (22 electrons)
 Ionization Potential $118\ 200\ \text{cm}^{-1}$; 14.65 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V II	1313.82	5		$3d^4 -$	$g^4 D - u^3 F^\circ$	2 - 2	M7
V II	1358.44	50b		$3d^3(a^4 F)4s -$	$a^3 F - u^3 F^\circ$	1 - 2	M7
V II	1358.769	0		$3d^3(a^4 F)4s -$	$a^3 F - 2^\circ$	3 - 3	V3
V II	1360.896	3		$3d^3(a^4 F)4s -$	$a^3 F - u^3 F^\circ$	5 - 4	V3
V II	1372.115	2		$3d^3(a^4 F)4s - 3d^3(c^2 D)4p$	$a^3 F - t^3 D^\circ$	4 - 3	V3
V II	1372.547	3		$3d^3(a^4 F)4s -$	$a^3 F - 5^\circ$	4 - 5	V3
V II	1374.279	10		$3d^3(a^4 F)4s -$	$a^3 F - 4^\circ$	3 - 4	V3
V II	1376.220	15		$3d^3(a^4 F)4s -$	$a^3 F - 5^\circ$	5 - 5	V3
V II	1377.295	10		$3d^3(a^4 F)4s -$	$a^3 F - 4^\circ$	4 - 4	V3
V II	1449.262	5		$3d^3(a^4 F)4s -$	$a^3 F - t^3 D^\circ$	2 - 2	V3
V II	1453.515	2		$3d^3(a^4 F)4s -$	$a^3 F - t^3 D^\circ$	3 - 2	V3
V II	1474.876	0		$3d^3(a^4 F)4s -$	$a^3 F - u^3 F^\circ$	3 - 4	V3
V II	1476.116	0		$3d^3(a^4 F)4s -$	$a^3 F - u^3 F^\circ$	2 - 3	V3
V II	1479.720	5		$3d^3(a^4 F)4s -$	$a^3 F - u^3 F^\circ$	2 - 2	V3
V II	1480.487	10		$3d^3(a^4 F)4s -$	$a^3 F - u^3 F^\circ$	4 - 4	V3
V II	1484.135	1		$3d^3(a^4 F)4s -$	$a^3 F - u^3 F^\circ$	3 - 2	V3
V II	1486.153	1		$3d^3(a^4 F)4s -$	$a^3 F - u^3 F^\circ$	4 - 2	V3
V II	1489.620	10		$3d^4 -$	$a^3 P - t^3 F^\circ$	2 - 3	V3
V II	1490.837	4h		$3d^3(a^4 F)4s - 3d^3(c^2 D)4p$	$a^3 F - t^3 D^\circ$	2 - 1	V3
V II	1498.114	6		$3d^3(a^4 F)4s - 3d^3(c^2 D)4p$	$a^3 F - t^3 D^\circ$	4 - 3	V3
V II	1498.604	4h		$3d^3(a^4 F)4s -$	$a^3 F - 5^\circ$	4 - 5	V3
V II?	1508.078	10					V3
V II	1511.606	2		$3d^3(a^4 F)4s - 3d^2 4s(b^4 F)4p$	$a^3 F - u^3 D^\circ$	1 - 1	V3
V II	1512.018	2		$3d^3(a^4 F)4s - 3d^2 4s(b^4 F)4p$	$a^3 F - u^3 D^\circ$	3 - 3	V3
V II	1515.675	1		$3d^3(a^4 F)4s - 3d^2 4s(b^4 F)4p$	$a^3 F - u^3 D^\circ$	4 - 3	V3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V II	1520.241	1		$3d^4 - 3d^3 4s(b^4F)4p$	$ga^5D - x^5D^o$	2-2	V3
V II	1531.405	2		$3d^3(a^4P)4s -$	$a^5P - 1^5F^o$	3-3	V3
V II	1538.818	4		$3d^3(r^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - v^5F^o$	5-4	V3
V II	1547.20	150	20	$3d^3(a^4F)4s - 3d^2 4s(b^2F)4p$	$a^5F - y^5G^o$	5-6	M7
V II	1550.47	5		$3d^4 - 3d^3(a^2F)4p$	$ga^5D - v^5D^o$	2-3	M7
V II	1550.858	3		$3d^4 - 2d^3(a^2F)4p$	$ga^5D - x^5D^o$	2-2	V3
V II	1552.268	1h		$3d^4 - 3d^3(c^2D)4p$	$a^5P - t^5D^o$	0-1	V3
V II	1553.09	150	20	$3d^3(a^4F)4s - 3d^2 4s(b^2F)4p$	$a^5F - y^5G^o$	4-5	M7
V II	1556.05	5		$3d^4 - 3d^3(a^2F)4p$	$ga^5D - v^5D^o$	4-3	M7
V II	1556.561	2		$3d^4 - 3d^3(c^2D)4p$	$a^5P - t^5D^o$	1-2	V3
V II	1557.569	1		$3d^4 - 3d^3(c^2D)4p$	$a^5P - t^5D^o$	1-1	V3
V II	1558.76	150	20	$3d^3(a^4F)4s - 3d^2 4s(b^2F)4p$	$a^5F - y^5G^o$	3-4	M7
V II	1559.347	2		$3d^3(a^4P)4s -$	$a^5F - 1^5D^o$	1-2	V3
V II	1562.98	100	20	$3d^3(a^4F)4s - 3d^2 4s(b^2F)4p$	$a^5F - y^5G^o$	2-3	M7
V II	1563.954	2		$3d^4 - 3d^3(c^2D)4p$	$a^5P - t^5D^o$	2-3	V3
V II	1564.999	2h		$3d^3(a^4P)4s -$	$a^5P - 1^5D^o$	3-2	V3
V II	1565.98	80	20	$3d^3(a^4F)4s - 3d^2 4s(b^2F)4p$	$a^5F - y^5G^o$	3-3	M7
V II	1566.166	1h		$3d^4 - 3d^3(c^2D)4p$	$a^5P - t^5D^o$	2-2	V3
V II	1571.74	20	20	$3d^3(a^4F)4s - 3d^2 4s(b^2F)4p$	$a^5F - y^5G^o$	1-2	M7
V II	1573.78	5	20	$3d^3(a^4F)4s - 3d^2 4s(b^2F)4p$	$a^5F - y^5G^o$	2-2	M7
V II	1576.805	0		$3d^3(a^4F)4s - 3d^2 4s(b^2F)4p$	$a^5F - y^5G^o$	3-2	V3
V II	1578.542	4		$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	3-4	V3
V II	1579.550	4		$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	2-3	V3
V II	1580.261	5		$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	1-2	V3
V II	1581.99	80	19	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	1-1	M7
V II	1582.32	80	19	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	2-2	M7
V II	1582.57	150	19	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	3-3	M7
V II	1582.80	80	19	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	1-0	M7
V II	1584.06	150	19	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	2-1	M7
V II	1585.361	300	19	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	3-2	M7
V II	1586.58	400	19	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	4-3	M7
V II	1587.40	500	19	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - x^5D^o$	5-4	M7
V II	1589.761	3		$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5P - u^5F^o$	3-4	V3
V II	1594.129	1h		$3d^3(a^4P)4s -$	$b^3F - u^3F^o$	2-2	V3
V II	1606.685	6		$3d^4 - 3d^3(c^2D)4p$	$b^3F - t^3D^o$	4-3	V3
V II	1607.046	4		$3d^4 - 3d^3(c^2D)4p$	$b^3F - t^3D^o$	2-1	V3
V II	1607.294	5		$3d^4 - 3d^3(c^2D)4p$	$b^3F - t^3D^o$	3-2	V3
V II	1610.487	2		$3d^3(a^4F)4s -$	$a^3F - 1^3F^o$	3-3	V3
V II	1610.615	2		$3d^4 -$	$a^3G - u^3F^o$	4-4	V3
V II	1613.016	0		$3d^3(a^4F)4s - 3d^2 4s(a^2F)4p$	$a^5F - v^5D^o$	3-2	V3
V II	1613.20	150	99	$3d^4 -$	$a^2G - u^2F^o$	5-4	M7
V II	1613.40	5		$3d^4 - 3d^3(a^2F)4p$	$ga^5D - w^5F^o$	2-2	M7, K8
V II	1614.871	5		$3d^4 - 3d^3(a^2F)4p$	$ga^5D - w^5F^o$	3-3	V3
V II	1617.35	100	99	$3d^4 -$	$a^3G - u^3F^o$	4-3	M7
V II	1619.18	100	99	$3d^4 -$	$a^3G - u^3F^o$	3-2	M7
V II	1622.432	3		$3d^3(a^4F)4s - 3d^2 4s(a^2F)4p$	$a^5F - v^5D^o$	4-3	V3
V II	1630.717	5		$3d^3(a^4F)4s - 3d^2 4s(a^2F)4p$	$a^5F - w^5G^o$	3-4	V3
V II	1630.82	200	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	4-5	M7
V II	1632.135	0		$3d^4 -$	$a^2G - 5^o$	4-5	V3
V II	1632.343	5		$3d^3(a^4F)4s - 3d^2 4s(a^2F)4p$	$a^5F - w^5G^o$	4-5	V3
V II	1633.51	250	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	3-4	M7
V II	1634.783	6		$3d^4 -$	$a^2G - 5^o$	5-5	V3
V II	1634.98	0		$3d^3(a^4F)4s - 3d^2 4s(a^2F)4p$	$a^5F - w^5G^o$	4-4	M7
V II	1635.86	200	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	2-3	M7
V II	1636.02	400	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	5-5	M7
V II	1637.439	10		$3d^3(a^4F)4s - 3d^2 4s(b^4G)4p$	$a^3F - v^3G^o$	3-4	V3
V II	1637.55	50		$3d^3(a^4F)4s - 3d^2 4s(a^2F)4p$	$a^3F - w^3G^o$	5-5	M7
V II	1637.77	500	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	4-4	M7
V II	1637.93	100	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	1-2	M7
V II	1638.858	3h		$3d^4 -$	$a^2G - 4^o$	4-4	V3
V II	1639.13	400	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	3-3	M7
V II	1640.15	350	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	2-2	M7
V II	1640.86	300	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	1-1	M7
V II	1643.03	300b	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	5-4	M7
V II	1643.43	300	18	$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^5F - y^5F^o$	3-2	M7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	Reference
V II	1644.334	4		$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2G^{\circ}$	4-4	V3
V II	1644.665	5		$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2G^{\circ}$	3-3	V3
V II	1660.53	80	109	$3d^2(a^2G)4s -$	$b^2G - v^2F^{\circ}$	4-4	M7
V II?	1661.27	600					M7
V II	1662.28	5	34	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - u^2D^{\circ}$	2-2	M7
V II	1663.34	30	34	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - u^2D^{\circ}$	2-1	M7
V II	1663.60	150	109	$3d^2(a^2G)4s -$	$b^2G - u^2F^{\circ}$	5-4	M7
V II	1664.87	5		$3d^2(a^2G)4s -$	$b^2G - 2^{\circ}$	3-3	M7
V II	1667.084	1		$3d^2(a^2G)4s -$	$b^2G - 2^{\circ}$	4-5	V3
V II	1667.66	100	109	$3d^2(a^2G)4s -$	$b^2G - u^2F^{\circ}$	4-3	M7
V II	1667.88	50	34	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - u^2D^{\circ}$	3-2	M7
V II	1668.03	300b	17	$3d^2(a^4F)4s -$	$a^2F - 1^{\circ}$	3-4	11, K8
V II	1670.01	100	109	$3d^2(a^2G)4s -$	$b^2G - u^2F^{\circ}$	3-2	M7
V II	1670.90	50	34	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - u^2D^{\circ}$	4-3	M7
V II	1672.44	150	17	$3d^2(a^4F)4s -$	$a^2F - 1^{\circ}$	4-4	M7
V II?	1674.09	80					M7
V II	1677.88	30	17	$3d^2(a^4F)4s -$	$a^2F - 1^{\circ}$	5-4	M7
V II	1681.22	50		$3d^2(a^4F)4s - 3d^2(a^2F)4p$	$a^2F - w^2F^{\circ}$	1-2	M7
V II	1682.17	5		$3d^2(a^4F)4s - 3d^2(a^2F)4p$	$a^2F - w^2F^{\circ}$	2-3	M7
V II	1682.997	2		$3d^2(a^2G)4s - 3d^2(c^2D)4p$	$b^2G - t^2D^{\circ}$	3-2	V3
V II	1683.392	1		$3d^2(a^2G)4s -$	$b^2G - 5^{\circ}$	4-5	V3
V II	1683.548	2		$3d^2(a^4F)4s - 3d^2(a^2F)4p$	$a^2F - w^2F^{\circ}$	2-2	V3
V II	1685.014	5		$3d^4 -$	$a^2D - 1^{\circ}D^{\circ}$	2-2	V3
V II	1686.19	10	33	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2F^{\circ}$	3-4	M7
V II	1686.550	10		$3d^2(a^2G)4s -$	$b^2G - 5^{\circ}$	5-5	V3
V II	1686.748	15		$3d^4 -$	$t^2D - 1^{\circ}D^{\circ}$	3-2	V3
V II	1687.40	25b	33	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2F^{\circ}$	2-3	M7
V II	1692.11	100	33	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2F^{\circ}$	2-2	M7
V II	1693.09	100	33	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2F^{\circ}$	3-3	M7
V II	1693.49	120	33	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2F^{\circ}$	4-4	M7
V II	1693.756	15		$3d^2(a^2G)4s -$	$b^2G - 4^{\circ}$	5-4	V3
V II	1697.90	20	33	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2F^{\circ}$	3-2	M7
V II	1700.47	30	33	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - v^2F^{\circ}$	4-3	M7
V II	1710.147	2		$3d^4 -$	$a^1G - u^2F^{\circ}$	4-3	V3
V II	1715.57	20		$3d^4 -$	$a^2D - u^2F^{\circ}$	3-4	M7
V II	1721.422	3		$3d^4 -$	$a^2D - u^2F^{\circ}$	2-3	V3
V II	1722.62	200b	129	$3d^4 -$	$a^2D - 2^{\circ}$	3-3	M7
V II	1725.397	3		$3d^4 -$	$a^2D - u^2F^{\circ}$	1-2	V3
V II	1729.74	100b	182	$3d^4 -$	$a^1D - w^1D^{\circ}$	2-2	M7
V II	1732.035	3		$3d^4 - 3d^24s(b^2G)4p$	$a^2G - w^1G^{\circ}$	4-4	V3
V II	1736.498	0		$3d^2(a^4F)4s - 3d^24s(b^2F)4p$	$a^2F - y^2G^{\circ}$	2-2	V3
V II	1737.02	5h		$3d^2(a^4F)4s - 3d^24s(b^2F)4p$	$a^2F - y^2G^{\circ}$	4-3	M7
V II	1737.479	10		$3d^4 - 3d^2(c^2D)4p$	$a^2D - t^2D^{\circ}$	2-3	V3
V II	1737.577	10		$3d^2(a^4F)4s -$	$c^2P - 1^{\circ}D^{\circ}$	1-2	V3
V II	1739.25	150b	128	$3d^4 - 3d^2(c^2D)4p$	$a^2D - t^2D^{\circ}$	3-3	M7
V II?	1740.024	10h					V3
V II	1740.291	3h		$3d^2(a^4F)4s - 3d^2(a^2F)4p$	$a^2F - x^1F^{\circ}$	3-3	V3
V II	1740.741	4		$3d^4 - 3d^2(c^2D)4p$	$a^2D - t^2D^{\circ}$	1-1	V3
V II	1742.334	1f		$3d^4 -$	$b^2F - 1^{\circ}F^{\circ}$	3-3	V3
V II	1745.264			$3d^2(a^4F)4s -$	$c^2P - 1^{\circ}D^{\circ}$	2-2	V3
V II	1747.640	2		$3d^4 -$	$a^2D - 4^{\circ}$	3-4	V3
V II	1748.99	50	32	$3d^2(a^4F)4s - 3d^24s(b^4F)4p$	$a^2F - x^2D^{\circ}$	2-1	M7
V II	1753.665	8		$3d^2(a^2D)4s -$	$b^2D - 1^{\circ}D^{\circ}$	2-2	V3
V II	1753.852	8		$3d^2(a^2D)4s -$	$b^2D - 1^{\circ}D^{\circ}$	3-2	V3
V II	1763.20	5		$3d^2(a^2P)4s - 3d^2(c^2D)4p$	$b^2P - t^2D^{\circ}$	2-3	M7
V II	1764.916	4		$3d^4 -$	$a^1D - 1^{\circ}D^{\circ}$	2-2	V3
V II	1767.02	5		$3d^2(a^2P)4s - 3d^2(c^2D)4p$	$b^2P - t^2D^{\circ}$	1-2	M7
V II	1768.175	2		$3d^2(a^2P)4s - 3d^2(c^2D)4p$	$b^2P - t^2D^{\circ}$	0-1	V3
V II	1768.334	3		$3d^2(a^2P)4s - 3d^2(c^2D)4p$	$b^2P - t^2D^{\circ}$	1-1	V3
V II	1770.698	3		$3d^4 -$	$a^2G - 1^{\circ}F^{\circ}$	3-3	V3
V II	1773.985	2		$3d^4 - 3d^24s(b^2G)4p$	$a^2D - w^1F^{\circ}$	2-3	V3
V II	1774.209	3h		$3d^2(a^2H)4s -$	$b^2H - u^2F^{\circ}$	5-4	V3
V II	1776.104	3		$3d^4 - 3d^24s(b^4F)4p$	$b^2F - v^2G^{\circ}$	4-4	V3
V II	1776.48	0		$3d^2(a^4F)4s - 3d^2(a^2F)4p$	$a^2F - v^2D^{\circ}$	2-1	M7
V II	1780.52	100b		$3d^2(a^4F)4s - 3d^2(a^2F)4p$	$a^2F - v^2D^{\circ}$	2-2	M7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V II	1780.829	2		$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - v^2G^{\circ}$	2-3	V3
V II	1782.454	3		$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - v^2G^{\circ}$	3-3	V3
V II	1783.744	10		$3d^3(a^4P)4s -$	$c^3P - 2^{\circ}$	2-3	V3
V II	1784.128	8		$3d^3(a^4P)4s - 3d^2 4s(b^4F)4p$	$a^3P - v^2G^{\circ}$	2-3	V3
V II	1785.07	50	175	$3d^3(a^2D)4s -$	$b^3D - u^3F^{\circ}$	3-4	M7
V II	1786.91	5		$3d^3(a^4F)4s - 3d^2(a^3F)4p$	$a^3F - v^3D^{\circ}$	3-2	M7, M23
V II	1789.62	75b		$3d^3(a^4P)4s -$	$c^3P - u^3F^{\circ}$	2-2	M7
V II	1792.49	50	176	$3d^3(a^2D)4s -$	$b^3D - 2^{\circ}$	2-3	M7
V II	1793.13	30	175	$3d^3(a^2D)4s -$	$b^3D - u^3F^{\circ}$	2-3	M7
V II	1795.38	5	175	$3d^3(a^2D)4s -$	$b^3D - u^3F^{\circ}$	1-2	M7
V II	1796.26	5		$3d^4 - 3d^2 4s(b^4F)4p$	$a^2G - v^2G^{\circ}$	4-5	M7
V II	1796.52	30h	98	$3d^4 - 3d^2 4s(b^4F)4p$	$ga^3D - y^3S^{\circ}$	0-1	M7
V II	1799.47	120	98	$3d^4 - 3d^2 4s(b^4F)4p$	$a^2G - v^2G^{\circ}$	5-5	M7
V II	1799.97	30		$3d^4 - 3d^2 4s(b^4F)4p$	$ga^3D - y^3S^{\circ}$	2-1	M7
V I?	1800.962	0		$3d^4 - 3d^2 4s(b^4F)4p$	$a^2H - v^3F^{\circ}$	5-4	V3
V II	1801.61	5		$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - v^3D^{\circ}$	4-3	M7
V II	1803.279	1		$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - u^3D^{\circ}$	2-3	V3
V II	1803.401	4		$3d^4 - 3d^2 4s(b^4F)4p$	$a^2G - v^2G^{\circ}$	3-4	V3
V II	1804.979	2		$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - u^3D^{\circ}$	3-3	V3
V I?	1805.932	20		$3d^3(a^4P)4s - 3d^2(c^2D)4p$	$c^3P - t^3D^{\circ}$	2-1	V3
V II	1806.49	80h	98	$3d^4 - 3d^2 4s(b^4F)4p$	$a^2G - v^2G^{\circ}$	4-4	M7
V II	1807.15	10	76	$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - u^3D^{\circ}$	4-3	M7
V II	1808.097	3h		$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - u^3D^{\circ}$	2-2	V3
V II	1808.66	5	31	$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^2G^{\circ}$	3-4	M7
V II	1809.81	80d	76	$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - u^3D^{\circ}$	3-2	M7
V II	1810.60	60b	174	$3d^3(a^2D)4s - 3d^2(c^2D)4p$	$b^3D - t^3D^{\circ}$	2-3	M7
V II	1811.51	0		$3d^3(a^4P)4s - 3d^2 4s(b^4F)4p$	$a^3P - u^3D^{\circ}$	2-2	M7
V II	1812.195	100b		$3d^4 - 3d^2 4s(b^4F)4p$	$a^2G - v^2G^{\circ}$	3-3	V3
V II	1813.87	80	31	$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^2G^{\circ}$	4-5	M7
V II	1814.900	10		$3d^3(a^2D)4s - 3d^2(c^2D)4p$	$b^3D - t^3D^{\circ}$	2-1	V3
V II	1817.09	0	31	$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^2G^{\circ}$	4-4	M7
V II	1822.593	10		$3d^4 - 3d^2 4s(b^4F)4p$	$a^1D - t^3D^{\circ}$	2-3	V3
V II	1824.328	6		$3d^3(a^4F)4s - 3d^2 4s(b^4F)4p$	$a^3F - y^3S^{\circ}$	3-2	V3
V II	1825.571	8		$3d^4 - 3d^2 4s(b^4F)4p$	$a^1D - t^3D^{\circ}$	2-2	V3
V II	1828.84	500b		$3d^4 - 3d^2 4s(b^4F)4p$	$ga^3D - x^3P^{\circ}$	1-2	M7
V II	1831.349	2		$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - v^3F^{\circ}$	3-4	V3
V II	1833.58	100	75	$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - v^3F^{\circ}$	4-4	M7
V II	1834.165	0		$3d^4 - 3d^2 4s(b^4F)4p$	$a^3P - x^3D^{\circ}$	0-1	V3
V II	1834.371	0		$3d^3(a^2G)4s - 3d^2 4s(b^2G)4p$	$b^3G - x^1H^{\circ}$	4-5	V3
V II	1837.76	0	75	$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - v^3F^{\circ}$	2-3	M7
V II	1838.606	0		$3d^4 - 3d^2 4s(b^4F)4p$	$a^2G - u^3D^{\circ}$	4-3	V3
V II	1838.86	250	117	$3d^4 - 3d^2 4s(b^4F)4p$	$a^1G - w^1G^{\circ}$	4-4	M7
V II	1839.54	200	75	$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - v^3F^{\circ}$	3-3	M7
V II	1840.438	10h		$3d^4 - 3d^2 4s(b^4F)4p$	$a^2G - u^3D^{\circ}$	3-2	V3
V II	1841.781	100b		$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - v^3F^{\circ}$	4-3	V3
V II	1843.43	50	75	$3d^4 - 3d^2 4s(b^4F)4p$	$b^3F - v^3F^{\circ}$	2-2	M7
V II	1846.268	1		$3d^3(a^4P)4s - 3d^2 4s(b^4F)4p$	$a^3P - v^3F^{\circ}$	3-3	V3
V II	1846.965	0		$3d^3(a^4P)4s - 3d^2 4s(b^4F)4p$	$a^3P - v^3F^{\circ}$	2-2	V3
V II	1848.80	5		$3d^4 - 3d^2 4s(b^4F)4p$	$a^3P - x^3D^{\circ}$	2-3	M7
V II	1852.017	75b		$3d^3(a^4P)4s - 3d^2 4s(b^4F)4p$	$a^3P - v^3F^{\circ}$	3-2	V3
V II	1854.064	2h		$3d^4 - 3d^2 4s(b^4F)4p$	$ga^3D - y^1G^{\circ}$	3-4	V3
V II	1858.50	20	108	$3d^3(a^2G)4s - 3d^2 4s(b^4F)4p$	$b^3G - v^3G^{\circ}$	4-5	M7
V II	1862.37	300	108	$3d^3(a^2G)4s - 3d^2 4s(b^4F)4p$	$b^3G - v^3G^{\circ}$	5-5	M7
V II	1862.76	250	181	$3d^4 - 3d^2 4s(b^2G)4p$	$a^1D - w^1F^{\circ}$	2-3	M7
V II	1863.44	5		$3d^3(a^4F)4s -$	$a^3F - 1^{\circ}$	4-4	II, K8
V II	1865.68	20h		$3d^3(a^2D)4s -$	$b^1D - w^1D^{\circ}$	2-2	M7
V II	1865.99	30	97	$3d^4 - 3d^2 4s(b^4F)4p$	$a^2G - v^3F^{\circ}$	4-4	M7
V II	1866.080	1		$3d^4 - 3d^2 4s(b^4F)4p$	$ga^3D - w^3D^{\circ}$	4-3	V3
V II	1866.68	50	108	$3d^3(a^2G)4s - 3d^2 4s(b^4F)4p$	$b^3G - v^2G^{\circ}$	3-4	M7
V II?	1867.47	200					M7
V II	1869.47	500	97	$3d^4 - 3d^2 4s(b^4F)4p$	$a^3G - v^3F^{\circ}$	5-4	M7
V II	1871.08	120	30	$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^3F^{\circ}$	2-2	M7
V II	1873.39	100	108	$3d^3(a^2G)4s - 3d^2 4s(b^4F)4p$	$b^3G - v^2G^{\circ}$	5-4	M7
V II	1874.45	120	97	$3d^4 - 3d^2 4s(b^4F)4p$	$a^3G - v^3F^{\circ}$	4-3	M7
V II	1874.97	10	30	$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^3F^{\circ}$	3-4	M7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V II	1875.06	200	108	$3d^3(a^2G)4s - 3d^24s(b^4F)4p$	$b^3G - v^2G^{\circ}$	3 - 3	M7
V II	1876.47	100	30	$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^3F^{\circ}$	3 - 3	M7
V II	1877.00	100	97	$3d^4 - 3d^24s(b^4F)4p$	$a^3G - v^3F^{\circ}$	3 - 2	M7
V II	1877.85	0	?	$3d^3(a^2H)4s -$	$a^1H - u^3F^{\circ}$	5 - 4	M7
V II	1878.19	5	30	$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^3F^{\circ}$	3 - 2	M7
V II	1878.90	100	158	$3d^3(a^2G)4s - 3d^24s(b^4F)4p$	$b^3G - v^3G^{\circ}$	4 - 3	M7
V II	1880.811	1h		$3d^4 - 3d^2(a^2F)4p$	$a^3H - x^1G^{\circ}$	5 - 4	V3
V II	1883.98	200	30	$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^3F^{\circ}$	4 - 4	M7
V II	1884.254	5h		$3d^4 - 3d^2(a^2F)4p$	$a^3P - x^1D^{\circ}$	1 - 2	V3
V II	1885.520	3		$3d^3(a^4F)4s - 3d^2(a^2F)4p$	$a^3F - w^3F^{\circ}$	4 - 3	V3
V II	1885.90	100	116	$3d^4 - 3d^24s(b^2G)4p$	$a^1G - x^1H^{\circ}$	4 - 5	M7
V II	1890.50	20		$3d^4 - 3d^2(a^2F)4p$	$e^3P - v^2D^{\circ}$	2 - 2	M24, K8
V II	1897.70	10		$3d^4 - 3d^2(a^2F)4p$	$a^3P - v^3D^{\circ}$	2 - 3	M7
V II	1904.54	6		$3d^4 - 3d^24s(b^4F)4p$	$b^3F - x^3D^{\circ}$	2 - 3	M7
V II	1906.451	1		$3d^4 - 3d^24s(b^4F)4p$	$b^3F - x^3D^{\circ}$	3 - 3	V3
V II	1906.618	1		$3d^4 - 3d^2(a^2D)4p$	$ga^3D - x^3F^{\circ}$	3 - 4	V3
V II	1907.361	1d		$3d^4 - 3d^2(a^2P)4p$	$ga^3D - x^3D^{\circ}$	4 - 3	V3
V II	1907.80	300h	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	3 - 4	M7
V II	1908.32	400h	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	2 - 3	M7
V II	1909.36	400	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	1 - 2	M7
V II	1911.108	4		$3d^4 - 3d^24s(b^4F)4p$	$b^3F - x^3D^{\circ}$	2 - 1	V3
V II	1911.88	400	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	1 - 1	M7
V II	1912.39	400	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	2 - 2	M7
V II	1913.10	200	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	1 - 0	M7
V II	1913.70	350h	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	3 - 3	M7
V II	1914.295	1h		$3d^3(a^4F)4s - 3d^2(a^2H)4p$	$a^3F - x^3G^{\circ}$	4 - 5	V3
V II	1914.91	150	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	2 - 1	M7
V II	1915.71	0		$3d^4$	$a^1F - 3$	3 - 3	M7
V II	1916.404	6		$3d^4 - 3d^2(a^2F)4p$	$b^3F - x^1G^{\circ}$	4 - 4	V3
V II	1917.79	150	80	$3d^3(a^4P)4s - 3d^24s(b^4F)4p$	$a^3P - x^3D^{\circ}$	3 - 2	M7
V II ²	1919.35	260					M7
V II	1924.87	300	195	$3d^4 -$	$a^1F - w^1D^{\circ}$	3 - 2	M7
V II	1929.61	660	139	$3d^3(a^2G)4s - 3d^24s(b^2G)4p$	$b^1G - x^1H$	4 - 5	M7
V II	1932.55	5h		$3d^4 - 3d^24s(b^2G)4p$	$a^1I - x^1H$	6 - 5	M7
V II	1932.99	30		$3d^4 - 3d^24s(b^4F)4p$	$a^1G - v^3G^{\circ}$	4 - 3	M7
V II	1933.28	100	106	$3d^3(a^2G)4s - 3d^24s(b^4F)4p$	$b^3G - v^3F^{\circ}$	4 - 4	M7
V II	1935.531	1		$3d^4 - 3d^24s(b^4F)4p$	$a^3H - v^5F^{\circ}$	5 - 5	V3
V II	1937.44	600	106	$3d^3(a^2G)4s - 3d^24s(b^4F)4p$	$b^3G - v^3F^{\circ}$	5 - 4	M7
V II	1937.68	70	59	$3d^4 - 3d^2(a^2F)4p$	$a^3H - w^3G^{\circ}$	5 - 5	M7
V II	1938.50	100	59	$3d^4 - 3d^2(a^2F)4p$	$a^3H - w^3G^{\circ}$	4 - 4	M7
V II	1938.70	80	58	$3d^4 - 3d^24s(b^4F)4p$	$a^3H - v^5F^{\circ}$	6 - 5	M7
V II	1939.52	80	106	$3d^3(a^2G)4s - 3d^24s(b^4F)4p$	$b^3G - v^3F^{\circ}$	3 - 3	M7
V II	1940.86	400	59	$3d^4 - 3d^2(a^2F)4p$	$a^3H - w^3G^{\circ}$	6 - 5	M7
V II	1941.27	300	59	$3d^4 - 3d^2(a^2F)4p$	$a^3H - w^3G^{\circ}$	4 - 3	M7
V II	1941.40	300	59	$3d^4 - 3d^2(a^2F)4p$	$a^3H - w^3G^{\circ}$	5 - 4	M7
V II	1942.35	400	106	$3d^3(a^2G)4s - 3d^24s(b^4F)4p$	$b^3G - v^3F^{\circ}$	4 - 3	M7
V II	1943.99	0		$3d^4 - 3d^2(a^2F)4p$	$b^3F - v^3D^{\circ}$	2 - 1	M7
V II	1945.35	300	58	$3d^4 - 3d^24s(b^4F)4p$	$a^3H - v^5F^{\circ}$	5 - 4	M7
V II	1945.64	3(6)	106	$3d^3(a^2G)4s - 3d^24s(b^4F)4p$	$b^3G - v^3F^{\circ}$	3 - 2	M7
V II	1950.77	5		$3d^4 - 3d^2(a^2F)4p$	$b^3F - v^3D^{\circ}$	3 - 2	M7
V II	1954.061	2h		$3d^3(a^4F)4s - 3d^2(a^2H)4p$	$a^3F - v^1G^{\circ}$	4 - 4	V3
V II	1958.446	1		$3d^4 - 3d^2(a^2F)4p$	$b^3F - v^3D^{\circ}$	3 - 3	V3
V II	1960.137	3		$3d^4 - 3d^2(a^2P)4p$	$ga^3D - v^3P^{\circ}$	2 - 2	V3
V II	1960.445	0		$3d^3(a^4P)4s - 3d^2(a^2F)4p$	$a^3P - v^3D^{\circ}$	2 - 3	V3
V II	1960.98	20		$3d^4 - 3d^2(a^2F)4p$	$b^3F - v^3D^{\circ}$	4 - 3	M7
V II	1964.091	1		$3d^4 - 3d^2(a^2P)4p$	$ga^3D - v^3P^{\circ}$	3 - 2	V3
V II	1966.752	3h		$3d^3(a^4P)4s - 3d^2(a^2F)4p$	$a^3P - x^1D^{\circ}$	3 - 2	V3
V II	1967.185	4		$3d^3(a^4P)4s -$	$e^3P - 1D^{\circ}$	1 - 2	V3
V II	1970.877	0		$3d^4 - 3d^2(a^4P)4p$	$ga^3D - v^3D^{\circ}$	1 - 2	V3
V II	1972.278	1		$3d^4 - 3d^2(a^2P)4p$	$ga^3D - v^3P^{\circ}$	1 - 1	V3
V II	1972.62	200	163	$3d^3(a^2H)4s - 3d^24s(b^2G)4p$	$b^3H - x^1H^{\circ}$	4 - 5	M7
V II	1974.278	1		$3d^4 - 3d^24s(b^4F)4p$	$a^3D - u^3D^{\circ}$	2 - 3	V3
V II	1975.021	1		$3d^4 - 3d^2(a^2P)4p$	$ga^3D - v^3P^{\circ}$	2 - 1	V3
V II	1975.489	1		$3d^4 - 3d^2(a^2F)4p$	$b^3F - w^3G^{\circ}$	4 - 5	V3
V II	1976.62	600	127	$3d^4 - 3d^24s(b^4F)4p$	$a^3D - u^3D^{\circ}$	3 - 3	M7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V II	1977.60	5		$3d^4 - 3d^3(a^2F)4p$	$b^2F - w^2G^{\circ}$	7-3	M7
V II	1978.96	200	138	$3d^3(a^2G)4s - 3d^34s(b^4F)4p$	$b^1G - v^2G^{\circ}$	4-3	M7
V II	1979.087	5		$3d^4 - 3d^34s(b^4F)4p$	$a^2D - u^2D^{\circ}$	1-2	V3
V II	1979.618	1		$3d^4 - 3d^3(a^2F)4p$	$b^2F - w^2G^{\circ}$	3-3	V3
V II	1980.04	400	127	$3d^4 - 3d^34s(b^4F)4p$	$a^2D - u^2D^{\circ}$	2-2	M7
V II	1980.59	250	127	$3d^4 - 3d^34s(b^4F)4p$	$a^2D - u^2D^{\circ}$	1-1	M7
V II	1981.245	0		$3d^4 - 3d^3(a^4P)4p$	$ga^2D - y^2D^{\circ}$	0-1	V3
V II	1981.53	80	127	$3d^4 - 3d^34s(b^4F)4p$	$a^2D - u^2D^{\circ}$	2-1	M7
V II	1982.21	5		$3d^4 - 3d^3(a^2F)4p$	$b^2F - w^2G^{\circ}$	4-3	M7
V II	1982.41	80	127	$3d^4 - 3d^34s(b^4F)4p$	$a^2D - u^2D^{\circ}$	3-2	M7
V II	1984.05	100b		$3d^3(a^2D)4s -$	$b^2D - ^1D$	1-2	V3
V II	1987.314	10		$3d^3(a^2D)4s -$	$b^2D - ^1F^{\circ}$	2-3	V3
V II	1987.547	4		$3d^3(a^2D)4s -$	$b^2D - ^1F^{\circ}$	3-3	V3
V II	1987.82	3		$3d^3(a^2D)4s -$	$b^2D - ^1D$	2-2	V3
V II	1988.031	8		$3d^3(a^2D)4s -$	$b^2D - ^1D^{\circ}$	3-2	V3
V II	1988.674	0		$3d^3(a^4P)4s - 3d^34s(b^4F)4p$	$a^2P - y^2F^{\circ}$	3-1	V3
V II	1991.31	0		$3d^4 -$	$a^2H - ^1^{\circ}$? 4-4	M24, K8
V II	1994.34	100		$3d^4 -$	$a^2H - ^1^{\circ}$? 5-4	M24, K8
V II	1995.02	5		$3d^4 - 3d^3(a^2F)4p$	$a^2G - x^1D^{\circ}$	3-2	M7

VANADIUM III (V^{2+}), $Z = 23$
 Ground State $1s^22s^22p^63s^23p^63d^3\ ^4F_{3/2}$ (21 electrons)
 Ionization Potential $236\ 411\ \text{cm}^{-1}$; $29.310\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	612.85	10h		$3d^3 - 3d^2(^2P)5p$	$a^4P - y^4P^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	11,13
V III	614.63	0		$3d^3 - 3d^2(^2F)4f$	$a^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	614.94	0		$3d^3 - 3d^2(^2F)4f$	$a^4P - ^5G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	615.48	0		$3d^3 - 3d^2(^2F)4f$	$a^4P - ^5S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	615.90	0		$3d^3 - 3d^2(^2F)4f$	$a^4P - ^5D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	616.09	25		$3d^3 - 3d^2(^2F)4f$	$a^2G - ^2H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	13
V III	617.05	10		$3d^3 - 3d^2(^2F)4f$	$a^2G - ^4G^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	13
V III	617.34	0		$3d^3 - 3d^2(^2F)4f$	$a^2G - ^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	618.02	0		$3d^3 - 3d^2(^2F)5p$	$ga^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	618.41	0		$3d^3 - 3d^2(^2F)4f$	$a^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	618.89	0		$3d^3 - 3d^2(^2F)5p$	$ga^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	619.29	5		$3d^3 - 3d^2(^2F)4f$	$a^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	620.17	5		$3d^3 - 3d^2(^1G)5p$	$a^2H - w^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	620.69	0		$3d^3 - 3d^2(^1G)5p$	$a^2H - w^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	13
V III	622.92	0		$3d^3 - 3d^2(^2F)5p$	$ga^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	623.27	5		$3d^3 - 3d^2(^2F)5p$	$ga^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	623.67	5		$3d^3 - 3d^2(^2F)5p$	$ga^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	624.08	0		$3d^3 - 3d^2(^2F)5p$	$ga^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	624.42	0		$3d^3 - 3d^2(^2F)5p$	$ga^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	627.90	10		$3d^3 - 3d^2(^2P)4f$	$a^2F - ^2G^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	11,13
V III	628.86	5		$3d^3 - 3d^2(^2P)4f$	$a^2F - ^2G^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	11,13
V III	633.37	0		$3d^3 - 3d^2(^2F)4f$	$a^2D - ^5F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	633.94	50		$3d^3 - 3d^2(^2F)4f$	$a^2H - ^2I^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	13
V III	634.16	5		$3d^3 - 3d^2(^2F)4f$	$a^2H - ^2H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	13
V III	634.81	25		$3d^3 - 3d^2(^2F)4f$	$a^2H - ^2H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	13
V III	635.22	10		$3d^3 - 3d^2(^2F)4f$	$a^2H - ^4G^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	13
V III	635.41	40		$3d^3 - 3d^2(^2F)4f$	$a^2H - ^2I^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	13
V III	635.97	0		$3d^3 - 3d^2(^2F)4f$	$a^2D - ^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	636.21	0		$3d^3 - 3d^2(^2F)4f$	$a^2H - ^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	637.08	0		$3d^3 - 3d^2(^2F)4f$	$a^2H - ^4I^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	13

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	637.49	5		$3d^2 - 3d^2(^1D)4f$	$a^2F - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,3
V III	637.73	0		$3d^2 - 3d^2(^3F)4f$	$a^2H - ^4H^{\circ}$	$\frac{4}{2} - \frac{6}{2}$	I,3
V III	638.13	10		$3d^2 - 3d^2(^1D)4f$	$a^2F - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,3
V III	641.91	0		$3d^2 - 3d^2(^1D)5p$	$a^2D - v^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,3
V III	663.15	0		$3d^2 - 3d^2(^3F)5p$	$a^2G - x^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,3
V III	664.12	0		$3d^2 - 3d^2(^3F)5p$	$a^2G - x^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,3
V III	665.00	0		$3d^2 - 3d^2(^3F)5p$	$a^2G - x^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,3
V III	669.33	5		$3d^2 - 3d^2(^3F)5p$	$a^2G - w^2F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,3
V III	670.25	5		$3d^2 - 3d^2(^3F)5p$	$a^2G - w^2F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,3
V III	685.96	5		$3d^2 - 3d^2(^3F)5p$	$a^2H - x^2G^{\circ}$	$\frac{4}{2} - \frac{6}{2}$	I,3
V III	848.15	15		$3d^2(^3P)4s - 3d^2(^3P)5p$	$b^4P - y^4P^{\circ}$?	I,1,3
V III	849.32	0		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - w^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,3
V III	850.49	0		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - w^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,3
V III	851.36	0		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - w^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,3
V III	859.24	15		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	859.57	5		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	860.06	0		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	860.55	0		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	861.81	40b		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	862.02	15		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	862.92	25		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	863.22	10		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	863.99	25		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	864.27	100		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	864.47	40		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	864.68	50		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	879.76	0		$3d^2 - 3d^2(^1S)4p$	$a^2D - x^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	I,3
V III	880.08	50		$3d^2 - 3d^2(^1S)4p$	$a^2D - x^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	I,3
V III	884.42	0		$3d^2 - 3d^2(^1S)4p$	$a^2D - x^2P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	I,3
V III	894.13	0		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^2F - w^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	894.59	0		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^2F - w^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	895.88	5		$3d^2(^1G)4s - 3d^2(^3P)5p$	$b^2G - y^4P^{\circ}$?	I,1,3
V III	899.18	5		$3d^2(^3F)4p - 3d^2(^3F)5g$	$z^4G^{\circ} - 4$?	I,1,3
V III	948.84	75		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4F - w^2D^{\circ}$?	I,1,3
V III	967.81	0		$3d^2(^3F)4s - 3d^2(^3F)5p$	$b^4P - x^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	968.41	0		$3d^2(^3P)4s - 3d^2(^3P)5p$	$b^4P - x^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	969.77	0		$3d^2(^3P)4s - 3d^2(^3P)5p$	$b^4P - x^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1003.42	25		$3d^2 - 3d^2(^1D)4p$	$g^4F - y^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1004.02	50		$3d^2 - 3d^2(^1D)4p$	$g^4F - y^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1004.96	10		$3d^2 - 3d^2(^1D)4p$	$g^4F - y^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1005.41	40		$3d^2 - 3d^2(^1D)4p$	$g^4F - y^2D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1005.64	0		$3d^2 - 3d^2(^3P)4p$	$g^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1006.46	500		$3d^2 - 3d^2(^3P)4p$	$g^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1007.10	50		$3d^2 - 3d^2(^3P)4p$	$g^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1008.26	40		$3d^2 - 3d^2(^3P)4p$	$g^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1009.10	100		$3d^2 - 3d^2(^3P)4p$	$g^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1009.36	50		$3d^2 - 3d^2(^3P)4p$	$g^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1009.73	75		$3d^2 - 3d^2(^3P)4p$	$g^4F - y^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1015.40	5		$3d^2 - 3d^2(^1D)4p$	$g^4F - y^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1018.18	50		$3d^2 - 3d^2(^1G)4p$	$a^2G - x^2F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,3
V III	1019.97	10		$3d^2 - 3d^2(^1D)4p$	$g^4F - y^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1023.87	50		$3d^2 - 3d^2(^1G)4p$	$a^2G - x^2F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	1040.04	0h		$3d^2(^3F)4p - 3d^2(^3F)6s$	$z^2F^{\circ} - j^2F$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	1040.37	0h		$3d^2(^3F)4p - 3d^2(^3F)6s$	$z^2F^{\circ} - j^2F$	$\frac{7}{2} - \frac{9}{2}$	I,1,3
V III	1044.19	0h		$3d^2(^3F)4p - 3d^2(^3F)5d$	$z^4G^{\circ} - f^4H$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1044.60	0		$3d^2(^3F)4p - 3d^2(^3F)5d$	$z^4G^{\circ} - f^4G$	$\frac{5}{2} - \frac{7}{2}$	I,3
V III	1045.64	5h		$3d^2(^3F)4p - 3d^2(^3F)5d$	$z^4G^{\circ} - f^4H$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1048.83	0		$3d^2(^3F)4p - 3d^2(^3F)5d$	$z^4G^{\circ} - f^4H$	$\frac{5}{2} - \frac{7}{2}$	I,3
V III	1055.79	50		$3d^2 - 3d^2(^1G)4p$	$a^2G - z^2H^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1056.75	5		$3d^2(^3F)4p - 3d^2(^3F)6s$	$z^4D^{\circ} - h^4F$?	I,1,3
V III	1058.48	50		$3d^2 - 3d^2(^1G)4p$	$a^2G - z^2H^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1065.51	10		$3d^2 - 3d^2(^1G)4p$	$a^2D - x^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1069.74	50		$3d^2 - 3d^2(^1G)4p$	$a^2D - x^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1074.76	0		$3d^2 - 3d^2(^1G)4p$	$a^2H - x^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I,1,3
V III	1079.72	5		$3d^2(^3F)4p - 3d^2(^3F)5d$	$z^4D^{\circ} - f^4G$	$\frac{7}{2} - \frac{9}{2}$	I,3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	1081.98	0		$3d^3(3F)4p - 3d^3(3F)6s$	$z^2G^\circ - j^2F$	$\frac{3}{2} - \frac{1}{2}$	I3
V III	1086.53	0		$3d^3(3F)4p - 3d^3(3F)5d$	$z^2G^\circ - j^2G$	$\frac{3}{2} - \frac{3}{2}$	I3
V III	1091.53	5		$3d^3 - 3d^2(3P)4p$	$a^3P - y^3P^\circ$	$\frac{1}{2} - \frac{3}{2}$	I1, I3
V III	1091.86	5		$3d^3 - 3d^2(3P)4p$	$a^3P - y^3P^\circ$	$\frac{3}{2} - \frac{3}{2}$	I1, I3
V III	1093.15	0		$3d^2 - 3d^2(3P)4p$	$a^3P - y^3P^\circ$	$\frac{3}{2} - \frac{1}{2}$	I1, I3
V III	1098.96	75		$3d^3 - 3d^2(1G)4p$	$a^2G - y^2G^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1, I3
V III	1100.75	100		$3d^3 - 3d^2(1G)4p$	$a^2G - y^2G^\circ$	$\frac{5}{2} - \frac{5}{2}$	I1, I3
V III	1100.87	5		$3d^3 - 3d^2(3P)4p$	$a^2D - y^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	I1, I3
V III	1101.42	25		$3d^2 - 3d^3(3P)4p$	$a^2D - y^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$	I1, I3
V III	1102.19	5		$3a^2 - 3d^2(3P)4p$	$a^3D - y^3P^\circ$	$\frac{7}{2} - \frac{1}{2}$	I1, I3
V III	1105.17	25		$3d^3 - 3d^2(3P)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	I1, I3
V III	1107.36	100		$3d^2 - 3d^2(3P)4p$	$a^4P - z^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$	I1, I3
V III	1107.76	25		$3d^2 - 3d^2(3P)4p$	$a^4P - z^4P^\circ$	$\frac{1}{2} - \frac{3}{2}$	I1, I3
V III	1108.71	5		$3d^3 - 3d^2(3P)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	I1, I3
V III	1109.49	5		$3d^2 - 3d^2(3P)4p$	$a^4P - z^4P^\circ$	$\frac{1}{2} - \frac{1}{2}$	I1, I3
V II,	1110.45	25		$3d^3 - 3d^2(3F)4p$	$a^4P - z^4P^\circ$	$\frac{3}{2} - \frac{1}{2}$	I1, I3
V III	1110.92	25		$3d^3 - 3d^2(3P)4p$	$a^4P - z^4P^\circ$	$\frac{5}{2} - \frac{3}{2}$	I1, I3
V III	1112.03	100		$3d^2 - 3d^2(1G)4p$	$a^2H - z^2H^\circ$	$\frac{11}{2} - \frac{11}{2}$	I1, I3
V III	1115.71	50		$3d^3 - 3d^3(1G)4p$	$a^2H - z^2H^\circ$	$\frac{9}{2} - \frac{9}{2}$	I1, I3
V III	1117.78	5		$3d^2 - 3d^2(1G)4p$	$a^2H - z^2H^\circ$	$\frac{11}{2} - \frac{9}{2}$	I1, I3
V III	1119.66	50	3	$3d^3 - 3d^3(3F)4p$	$ga^4F - z^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$	I1, I3
V III	1121.16	15	3	$3d^3 - 3d^3(3F)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	I1, I3
V III	1122.13	75		$3d^3 - 3d^3(3F)4p$	$ga^4F - z^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1, I3
V III	1122.62	5	3	$3d^3 - 3d^3(3F)4p$	$ga^4F - z^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1, I3
V III	1123.00	75	3	$3d^3 - 3d^3(3F)4p$	$ga^4F - z^4D^\circ$	$\frac{5}{2} - \frac{3}{2}$	I1, I3
V III	1123.53	50	3	$3d^3 - 3d^3(3F)4p$	$ga^4F - z^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$	I1, I3
V III	1124.76	5		$3d^3 - 3d^2(3P)4p$	$a^2D - x^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$	I3
V III	1125.70	200	3	$3d^3 - 3d^2(3F)4p$	$ga^4F - z^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$	I1, I3
V III	1126.13	0		$3d^2 - 3d^2(3F)4p$	$ga^4F - z^2D^\circ$	$\frac{5}{2} - \frac{5}{2}$	I1, I3
V III	1128.63	75		$3d^2 - 3d^2(3F)4p$	$ga^4F - z^2D^\circ$	$\frac{7}{2} - \frac{5}{2}$	I1, I3
V III	1131.05	60		$3d^2 - 3d^2(3F)4p$	$ga^4F - z^2D^\circ$	$\frac{5}{2} - \frac{3}{2}$	I1, I3
V III	1134.16	50		$3d^2 - 3d^2(3P)4p$	$a^4P - y^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$	I1, I3
V III	1135.92	0		$3d^3 - 3d^3(1D)4p$	$a^4P - y^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$	I1, I3
V III	1136.54	0		$3d^2 - 3d^2(3F)4p$	$ga^4F - z^3F^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1, I3
V III	1138.32	15		$3d^3 - 3d^3(3P)4p$	$a^4P - y^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	I1, I3
V III	1139.54	15		$3d^3 - 3d^2(3P)4p$	$a^4G - y^4D^\circ$	$\frac{9}{2} - \frac{7}{2}$	I1, I3
V III	1139.67	25		$3d^3 - 3d^2(3F)4p$	$ga^4F - z^2F^\circ$	$\frac{9}{2} - \frac{7}{2}$	I1, I3
V III	1139.85	75		$3d^3 - 3d^2(1S)4p$	$b^2D - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	I3
V III	1140.66	10		$3d^2 - 3d^2(3P)4p$	$a^3P - y^3P^\circ$	$\frac{1}{2} - \frac{3}{2}$	I1, I3
V III	1141.20	5		$3d^3 - 3d^2(1S)4p$	$b^2D - x^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	I3
V III	1141.58	25		$3d^3 - 3d^2(3P)4p$	$a^4P - y^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	I3
V III	1142.08	5		$3d^2 - 3d^2(3P)4p$	$a^4P - y^4D^\circ$	$\frac{1}{2} - \frac{1}{2}$	I1, I3
V III	1142.34	10		$3d^3 - 3d^2(3F)4p$	$ga^4F - z^3F^\circ$	$\frac{7}{2} - \frac{5}{2}$	I1, I3
V III	1143.19	15		$3d^3 - 3d^2(3P)4p$	$a^2G - y^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$	I1, I3
V III	1146.75	75	2	$3d^3 - 3d^2(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$	I1, I3
V III	1148.46	100	2	$3d^3 - 3d^2(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$	I1, I3
V III	1149.08	25		$3d^3 - 3d^3(1S)4p$	$b^2D - x^2P^\circ$	$\frac{7}{2} - \frac{1}{2}$	I3
V III	1149.94	500	2	$3d^3 - 3d^2(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$	I1, I3
V III	1150.25	60	2	$3d^3 - 3d^2(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{5}{2}$	I1, I3
V III	1151.05	150	2	$3d^2 - 3d^2(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1, I3
V III	1151.30	25		$3d^3 - 3d^2(1D)4p$	$a^2G - y^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1152.17	150	2	$3d^2 - 3d^3(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$	I1, I3
V III	1153.18	25	2	$3d^2 - 3d^2(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	I1, I3
V III	1154.23	250	2	$3d^2 - 3d^3(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{9}{2} - \frac{7}{2}$	I1, I3
V III	1154.77	75	2	$3d^3 - 3d^2(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$	I1, I3
V III	1155.11	75	2	$3d^3 - 3d^2(3F)4p$	$ga^4F - z^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$	I1, I3
V III	1155.41	5		$3d^2 - 3d^2(1D)4p$	$a^4P - z^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	I1, I3
V III	1156.47	15		$3d^3 - 3d^2(1D)4p$	$a^4P - z^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	I1, I3
V III	1157.18	400		$3d^3 - 3d^2(1D)4p$	$a^2G - y^2F^\circ$	$\frac{7}{2} - \frac{5}{2}$	I1, I3
V III	1158.86	50		$3d^3 - 3d^2(1D)4p$	$a^4P - z^2P^\circ$	$\frac{5}{2} - \frac{3}{2}$	I1, I3
V III	1159.75	200	1	$3d^2 - 3d^3(3F)4p$	$ga^4F - z^4G^\circ$	$\frac{9}{2} - \frac{11}{2}$	I1, I3
V III	1160.77	300		$3d^3 - 3d^2(1G)4p$	$a^2H - y^2G^\circ$	$\frac{9}{2} - \frac{7}{2}$	I1, I3
V III	1162.02	250		$3d^3 - 3d^2(1G)4p$	$a^2H - y^2G^\circ$	$\frac{11}{2} - \frac{9}{2}$	I1, I3
V III	1162.81	50		$3d^3 - 3d^2(3P)4p$	$a^4P - z^4S^\circ$	$\frac{1}{2} - \frac{3}{2}$	I1, I3
V III	1163.26	75	1	$3d^2 - 3d^2(3F)4p$	$ga^4F - z^4G^\circ$	$\frac{7}{2} - \frac{5}{2}$	I1, I3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	1163.87	60		$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1166.29	75		$3d^3 - 3d^2(^3P)4p$	$a^4P - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1166.45	75	1	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1166.58	75	1	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	W4,13
V III	1166.86	0		$3d^2 - 3d^2(^3P)4p$	$a^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1169.11	75	1	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	W4,13
V III	1169.26	100	1	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1171.27	20	1	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	W4,13
V III	1172.47	5	1	$3d^3 - 3d^2(^3F)4p$	$ga^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	W4,13
V III	1186.89	25		$3d^2(^3P)4p - 3d^2(^3F)6s$	$y^4D^{\circ} - h^4F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1191.07	0		$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1191.50	0		$3d^3 - 3d^2(^1D)4p$	$a^2P - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1196.63	0		$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	13
V III	1198.61	100		$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1202.25	50		$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1202.87	5		$3d^3 - 3d^2(^1D)4p$	$a^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1203.86	0		$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1206.99	200		$3d^3 - 3d^2(^1D)4p$	$a^2P - z^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	11,13
V III	1207.45	100		$3d^3 - 3d^2(^1D)4p$	$a^2P - z^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	11,13
V III	1207.63	50		$3d^3 - 3d^2(^3P)4p$	$a^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1212.38	100		$3d^3 - 3d^2(^1D)4p$	$a^2P - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1212.82	10		$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	11,13
V III	1214.56	100		$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1217.64	150		$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	11,13
V III	1218.50	125		$3d^3 - 3d^2(^1D)4p$	$a^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	11,13
V III	1219.38	5		$3d^3 - 3d^2(^1G)4p$	$a^2F - x^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	11,13
V III	1220.09	15		$3d^3 - 3d^2(^3P)4p$	$a^2P - z^4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1220.54	0		$3d^3 - 3d^2(^3P)4p$	$a^2P - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1224.19	125		$3d^3 - 3d^2(^1D)4p$	$a^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1232.49	50		$3d^3 - 3d^2(^3P)4p$	$a^2D - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1248.65	10	7	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	11,13
V III	1252.11	500	7	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1254.01	400	7	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	11,13
V III	1257.50	75	7	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	11,13
V III	1263.20	150		$3d^3 - 3d^2(^3P)4p$	$a^2P - z^2S^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	11,13
V III	1263.68	125		$3d^3 - 3d^2(^3P)4p$	$a^2P - z^2S^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	11,13
V III	1275.78	75		$3d^3 - 3d^2(^3P)4p$	$a^2D - z^2S^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	11,13
V III	1284.27	150	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1287.19	50	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1287.34	75	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1287.87	500	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	11,13
V III	1288.63	100	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1289.42	400		$3d^3 - 3d^2(^3P)4p$	$a^2F - x^2D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	11,13
V III	1290.46	100	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	11,13
V III	1290.77	300		$3d^3 - 3d^2(^3P)4p$	$a^2F - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1291.40	15		$3d^3 - 3d^2(^3P)4p$	$a^2F - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1291.59	5	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1291.76	25	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	11,13
V III	1292.79	250	5	$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1294.82	50		$3d^3 - 3d^2(^3F)4p$	$a^2G - z^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	11,13
V III	1295.76	150		$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1297.94	50		$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1299.07	50		$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1299.25	50		$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1306.21	50		$3d^3 - 3d^2(^3F)4p$	$a^4P - z^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	11,13
V III	1313.35	400	6	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	11,13
V III	1317.27	300	6	$3d^3 - 3d^2(^3F)4p$	$a^2G - z^2F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	11,13
V III	1327.87	150		$3d^3 - 3d^2(^1G)4p$	$a^2F - y^2G^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	11,13
V III	1329.65	25	9	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1331.30	100		$3d^3 - 3d^2(^1G)4p$	$a^2F - y^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	11,13
V III	1331.99	500	9	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1335.12	500	9	$3d^3 - 3d^2(^3F)4p$	$a^2H - z^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	11,13
V III	1353.05	100		$3d^2(^3G)4p - 3d^2(^3F)5d$	$x^2F^{\circ} - i^2G$	$\frac{7}{2} - \frac{7}{2}$	11,13
V III	1357.90	40		$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1358.44	50h		$3d^3 - 3d^2(^3F)4p$	$a^2P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	1359.45	5		$3d^2 - 3d^2(^2F)4p$	$a^2G - z^4G^o$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1362.51	50	4	$3d^2 - 3d^2(^2F)4p$	$a^2P - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1367.48	100		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1368.31	100		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1369.06	50		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1369.70	100	4	$3d^2 - 3d^2(^2F)4p$	$a^2P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	I1,13
V III	1370.26	100	4	$3d^2 - 3d^2(^2F)4p$	$a^2P - z^2D^o$	$\frac{3}{2} - \frac{1}{2}$	I1,13
V III	1372.43	10		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$	I1,13
V III	1373.34	5d		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1375.98	5		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^4D^o$	$\frac{5}{2} - \frac{1}{2}$	I1,13
V III	1377.15	125		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1377.99	100		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1382.45	100		$3d^2(^2G)4p - 3d^2(^2F)5d$	$x^2F^o - j^2F$?	I1,13
V III	1384.49	75		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1385.34	15		$3d^2 - 3d^2(^2F)4p$	$a^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1387.40	15		$3d^2 - 3d^2(^1D)4p$	$a^2F - y^2D^o$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1388.79	200	9	$3d^2 - 3d^2(^2F)4p$	$a^2D - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1394.46	5		$3d^2 - 3d^2(^2P)4p$	$a^2F - y^4D^o$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1395.44	0		$3d^2 - 3d^2(^1D)4p$	$a^2F - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1397.62	60	8	$3d^2 - 3d^2(^2F)4p$	$a^2D - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1398.47	75	8	$3d^2 - 3d^2(^2F)4p$	$a^2D - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1401.38	10		$3d^2 - 3d^2(^2F)4p$	$a^2P - z^4F^o$?	I1,13
V III	1405.14	5		$3d^2 - 3d^2(^2F)4p$	$a^2P - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	I1,13
V III	1405.74	5		$3d^2 - 3d^2(^2F)4p$	$a^2P - z^4F^o$	$\frac{3}{2} - \frac{1}{2}$	I1,13
V III	1406.52	50		$3d^2 - 3d^2(^1D)4p$	$a^2F - y^2F^o$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1417.71	50		$3d^2 - 3d^2(^1D)4p$	$a^2F - y^2F^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1442.85	5		$3d^2(^2F)4p - 3d^2(^1G)4d$	$z^2G^o - g^2G$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1448.58	10		$3d^2(^2F)4p - 3d^2(^1G)4d$	$z^2G^o - g^2G$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1453.00	5		$3d^2(^2F)4p - 3d^2(^2P)4d$	$z^4D^o - f^4P$	$\frac{7}{2} - \frac{5}{2}$	I3
V III	1460.64	15		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^2F^o - f^2D$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1463.21	5		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^2F^o - f^2D$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1472.45	5		$3d^2 - 3d^2(^1G)4p$	$b^2D - x^2F^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1474.71	125		$3d^2 - 3d^2(^1G)4p$	$b^2D - x^2F^o$	$\frac{3}{2} - \frac{1}{2}$	I1,13
V III	1479.57	150		$3d^2 - 3d^2(^1G)4p$	$b^2D - x^2F^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1498.39	10		$3d^2(^2F)4p - 3d^2(^2P)4d$	$z^2D^o - g^4F$	$\frac{5}{2} - \frac{3}{2}$	I3
V III	1503.95	0		$3d^2(^2F)4p - 3d^2(^2P)4d$	$z^4D^o - g^4F$	$\frac{1}{2} - \frac{3}{2}$	I3
V III	1505.02	25		$3d^2(^2F)4p - 3d^2(^2P)4d$	$z^4D^o - g^4F$	$\frac{3}{2} - \frac{1}{2}$	I3
V III	1506.57	15		$3d^2(^2F)4p - 3d^2(^2P)4d$	$z^4D^o - g^4F$	$\frac{5}{2} - \frac{3}{2}$	I3
V III	1510.02	15		$3d^2(^2F)4p - 3d^2(^2P)4d$	$z^4D^o - g^4F$	$\frac{3}{2} - \frac{1}{2}$	I3
V III	1524.52	60		$3d^2(^2P)4p - 3d^2(^2P)5s$	$z^2S^o - h^2P$	$\frac{1}{2} - \frac{3}{2}$	I3
V III	1537.07	0		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^2F^o - g^2F$	$\frac{5}{2} - \frac{3}{2}$	I3
V III	1540.87	250		$3d^2 - 3d^2(^2P)4p$	$b^2D - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1543.33	25		$3d^2 - 3d^2(^2P)4p$	$b^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$	I1,13
V III	1545.86	150		$3d^2 - 3d^2(^2P)4p$	$b^2D - y^2P^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1555.25	0		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^2D^o - g^2F$	$\frac{3}{2} - \frac{1}{2}$	I3
V III	1554.61	0		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^2G^o$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1556.17	75		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^4D^o - f^2P$	$\frac{1}{2} - \frac{3}{2}$	I3
V III	1558.40	10		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^2D^o - g^2F$	$\frac{5}{2} - \frac{3}{2}$	I3
V III	1570.96	10		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^4D^o - g^2F$	$\frac{5}{2} - \frac{3}{2}$	I3
V III	1585.97	25		$3d^2 - 3d^2(^2P)4p$	$b^2D - x^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1586.92	250		$3d^2 - 3d^2(^2P)4p$	$b^2D - x^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1588.59	150		$3d^2 - 3d^2(^2P)4p$	$b^2D - x^2D^o$	$\frac{3}{2} - \frac{1}{2}$	I1,13
V III	1589.53	15		$3d^2 - 3d^2(^2P)4p$	$b^2D - x^2D^o$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1590.77	10		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^2G^o - f^2G$	$\frac{7}{2} - \frac{5}{2}$	I3
V III	1596.58	15		$3d^2(^1D)4p - 3d^2(^1G)4d$	$y^2F^o - g^2G$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1600.11	10		$3d^2(^2F)4p - 3d^2(^1D)4d$	$z^2G^o - f^2G$	$\frac{5}{2} - \frac{3}{2}$	I3
V III	1604.99	50		$3d^2(^1G)4p - 3d^2(^1G)4d$	$y^2G^o - i^2F$	$\frac{7}{2} - \frac{5}{2}$	I3
V III	1606.17	25		$3d^2(^1D)4p - 3d^2(^1G)4d$	$y^2F^o - g^2G$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1608.39	60		$3d^2(^1G)4p - 3d^2(^1G)4d$	$y^2G^o - i^2F$	$\frac{5}{2} - \frac{3}{2}$	I3
V III	1619.95	5		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^4D^o$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1621.01	40		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^4D^o$	$\frac{7}{2} - \frac{3}{2}$	I1,13
V III	1622.45	10		$3d^2(^2P)4p - 3d^2(^2P)5s$	$z^4S^o - g^4P$	$\frac{5}{2} - \frac{3}{2}$	I1,13
V III	1624.53	0		$3d^2(^2P)4p - 3d^2(^2P)4d$	$z^4S^o - h^2D$	$\frac{3}{2} - \frac{1}{2}$	I3
V III	1627.67	150		$3d^2(^1G)4p - 3d^2(^1G)5s$	$y^2G^o - h^2G$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1629.64	125		$3d^2(^1G)4p - 3d^2(^1G)5s$	$y^2G^o - h^2G$	$\frac{5}{2} - \frac{3}{2}$	I1,13

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	1630.72	10		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4G^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1636.45	50		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4G^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1636.72	25		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^2D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1636.77	5		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4G^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1637.05	16		$3d^2(^1D)4p - 3d^2(^2P)5s$	$z^2P^{\circ} - g^4P$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1641.64	50		$3d^2(^1D)4p - 3d^2(^2P)4d$	$z^2P^{\circ} - g^2P$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1643.03	1000b		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4G^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1646.69	200		$3d^2(^2P)4p - 3d^2(^2P)4d$	$z^4S^{\circ} - f^4P$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1648.10	75		$3d^2(^2P)4p - 3d^2(^2P)4d$	$z^4S^{\circ} - f^4P$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1648.99	100		$3d^2(^2P)4p - 3d^2(^2P)4d$	$z^4S^{\circ} - f^4P$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1650.14	1000		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^2F^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1650.40	75		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4G^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1653.41	25		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^2F^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1654.14	25		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4G^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1658.42	200		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4G^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1659.27	50		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1659.94	25		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4G^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1660.25	50		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1661.62	15		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1661.73	15		$3d^2(^1D)4p - 3d^2(^2P)4d$	$z^2P^{\circ} - f^4P$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1662.41	15		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^2F^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1663.07	200		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1663.82	150		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4G^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1665.40	200		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1665.71	250		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^2F^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1668.03	300b		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1668.72	50		$3d^2(^2P)4p - 3d^2(^1G)4d$	$x^2D^{\circ} - i^2F$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1668.98	100		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4G^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1669.20	15		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1670.66	300		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1673.23	10		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1673.91	150		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4G^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1674.85	10		$3d^2(^2P)4p - 3d^2(^2P)5s$	$y^4D^{\circ} - g^4P$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1676.08	5		$3d^2(^2P)4p - 3d^2(^2P)5s$	$y^4D^{\circ} - g^4P$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1677.18	25d		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^4F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1679.19	300		$3d^2(^1G)4p - 3d^2(^1G)4d$	$y^2G^{\circ} - f^2H$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1679.64	5		$3d^2(^2P)4p - 3d^2(^2P)4d$	$y^4D^{\circ} - g^2P$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1680.44	250		$3d^2(^1G)4p - 3d^2(^1G)4d$	$y^2G^{\circ} - f^2H$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1681.05	5		$3d^2(^2P)4p - 3d^2(^2P)5s$	$y^4D^{\circ} - g^4P$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1681.56	5		$3d^2(^1D)4p - 3d^2(^2P)4d$	$y^2D^{\circ} - g^2P$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1685.47	50		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1686.74	50		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1686.95	150		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^2F^{\circ} - f^2F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1687.40	25b		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1687.87	200		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^2F^{\circ} - f^2F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1689.04	150		$3d^2(^2P)4p - 3d^2(^2P)5s$	$y^4D^{\circ} - g^4P$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1690.35	15		$3d^2(^2P)4p - 3d^2(^1D)4d$	$z^4S^{\circ} - f^2D$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1691.90	75		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1692.82	10		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^2F^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1693.76	75		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1694.78	1000b		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1698.24	50		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1698.68	10		$3d^2 - 3d^2(^2F)4p$	$a^2F - z^2F^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1699.75	5		$3d^2(^2P)4p - 3d^2(^1D)4d$	$z^4S^{\circ} - f^2D$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1701.86	50		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1703.12	5		$3d^2(^2P)4p - 3d^2(^2P)4d$	$y^4D^{\circ} - f^4P$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1703.70	50		$3d^2(^1D)4p - 3d^2(^1D)5s$	$y^2F^{\circ} - g^2D$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1704.17	100d		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^4F^{\circ} - e^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1704.68	50		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^2D^{\circ} - f^2F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1705.19	40		$3d^2(^1D)4p - 3d^2(^2P)4d$	$y^2F^{\circ} - h^2F$	$\frac{1}{2} - \frac{1}{2}$	I3
V III	1706.22	100		$3d^2(^1D)4p - 3d^2(^1D)4d$	$z^2P^{\circ} - f^2D$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1707.43	150		$3d^2(^2F)4p - 3d^2(^2F)5s$	$z^2D^{\circ} - f^2F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1707.89	150		$3d^2(^2P)4p - 3d^2(^1D)4d$	$z^2S^{\circ} - f^2P$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1711.61	100		$3d^2(^2F)4p - 3d^2(^2F)4d$	$z^2D^{\circ} - f^4F$	$\frac{1}{2} - \frac{1}{2}$	I1,13
V III	1714.04	50		$3d^2(^2P)4p - 3d^2(^2P)4d$	$z^4S^{\circ} - f^4D$	$\frac{1}{2} - \frac{1}{2}$	I1,13

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	1715.32	15		$3d^2(^2P)4p - 3d^2(^2P)4d$	$y^4D^\circ - f^4P$	$\frac{7}{2} - \frac{5}{2}$	I1,13
V III	1715.79	25		$3d^2(^1D)4p - 3d^2(^1D)4d$	$z^2P^\circ - f^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1716.47	50		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2F^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1717.01	150		$3d^2(^1D)4p - 3d^2(^1D)5s$	$y^2F^\circ - g^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1717.47	100		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1719.77	100		$3d^2(^2P)4p - 3d^2(^1D)4d$	$z^2S^\circ - f^2P$? $\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1721.98	400		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2F^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1722.46	150		$3d^2(^1G)4p - 3d^2(^1G)4d$	$y^2G^\circ - g^2G$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1722.62	200b		$3d^2(^1G)4p - 3d^2(^1G)4d$	$y^2G^\circ - g^2G$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1724.63	300		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1725.37	200		$3d^2(^1G)4p - 3d^2(^1G)5s$	$z^2H^\circ - h^2G$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1725.78	15		$3d^2(^1D)4p - 3d^2(^1D)4d$	$z^2P^\circ - f^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1726.11	10		$3d^2(^3F)4p - 3d^2(^3F)5s$	$z^4D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1728.66	15		$3d^2(^1D)4p - 3d^2(^1D)4d$	$y^2F^\circ - f^2D$? $\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1728.87	50		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1729.74	100b		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2F^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1730.40	100		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1731.54	15		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1732.75	150		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1734.52	50		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1736.99	40		$3d^2(^1D)4p - 3d^2(^1D)5s$	$y^2D^\circ - g^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1738.00	25		$3d^2(^1D)4p - 3d^2(^1D)4p$	$b^2D - y^2D^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1738.33	25		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - f^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1738.93	25		$3d^2(^1D)4p - 3d^2(^2P)4d$	$z^2P^\circ - g^4F$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1739.25	150b		$3d^2(^1G)4p - 3d^2(^1G)5s$	$z^2H^\circ - h^2G$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1742.15	25		$3d^2(^1D)4p - 3d^2(^3P)4d$	$z^2P^\circ - f^4D$? $\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1742.35	150		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2D^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1746.36	25		$3d^2(^1D)4p - 3d^2(^1D)5s$	$y^2D^\circ - g^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1747.31	10		$3d^2(^2P)4p - 3d^2(^1D)4d$	$y^4D^\circ - f^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1748.39	150		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2D^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1749.39	5		$3d^2(^3F)4p - 3d^2(^1D)4d$	$y^4D^\circ - f^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1750.17	50		$3d^2(^1D)4p - 3d^2(^1D)4p$	$b^2D - y^2D^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1750.34	100		$3d^2(^3F)4p - 3d^2(^3F)5s$	$z^4D^\circ - e^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1751.68	500d		$3d^2(^3F)4p - 3d^2(^3P)4d$	$y^4D^\circ - h^2F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1752.19	50		$3d^2(^2P)4p - 3d^2(^2P)5s$	$z^4P^\circ - g^4P$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1752.62	10		$3d^2(^2P)4p - 3d^2(^2P)5s$	$z^4P^\circ - g^4P$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1754.11	50		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2D^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1756.02	25		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1757.73	500		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2F^\circ - e^2G$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1758.50	150		$3d^2(^1D)4p - 3d^2(^1D)4d$	$y^2D^\circ - f^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1758.96	50		$3d^2(^2P)4p - 3d^2(^2P)5s$	$z^4P^\circ - g^4P$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1759.46	100		$3d^2(^1D)4p - 3d^2(^1D)4d$	$y^2D^\circ - f^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1760.07	1000		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2F^\circ - e^2G$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1760.41	10		$3d^2(^3F)4p - 3d^2(^3F)5s$	$z^4D^\circ - e^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1761.04	50		$3d^2(^3F)4p - 3d^2(^3F)5s$	$z^4D^\circ - e^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1761.63	50		$3d^2(^3F)4p - 3d^2(^3F)5s$	$z^4D^\circ - e^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1761.84	50		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1762.27	75		$3d^2(^1D)4p - 3d^2(^2P)4d$	$y^2F^\circ - g^4F$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1762.78	10		$3d^2(^2P)4p - 3d^2(^2P)4d$	$y^4D^\circ - f^4D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1762.99	25		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1763.59	10d		$3d^2 - 3d^2(^2P)4p$	$b^2D - y^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1764.23	250		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1765.28	15		$3d^2(^2P)4p - 3d^2(^2P)4d$	$y^4D^\circ - f^4D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1765.92	15		$3d^2(^3F)4p - 3d^2(^3F)5s$	$z^4D^\circ - e^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1766.16	50		$3d^2(^2P)4p - 3d^2(^2P)4d$	$y^4D^\circ - f^4D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1768.09	100		$3d^2 - 3d^2(^1D)4p$	$b^2D - y^2F^\circ$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1768.66	5		$3d^2(^1D)4p - 3d^2(^1D)4d$	$y^2D^\circ - f^2D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1769.22	10		$3d^2(^3F)4p - 3d^2(^3F)5s$	$z^4D^\circ - e^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1769.60	25		$3d^2(^2P)4p - 3d^2(^2P)4d$	$z^4P^\circ - f^4P$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1770.06	25		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^4D^\circ - e^2D$	$\frac{7}{2} - \frac{7}{2}$	I3
V III	1771.35	75		$3d^2(^2P)4p - 3d^2(^2P)4d$	$z^4P^\circ - f^4P$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1771.67	50		$3d^2(^3F)4p - 3d^2(^3F)4d$	$z^2F^\circ - e^2G$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1772.31	200		$3d^2(^2P)4p - 3d^2(^2P)4d$	$y^4D^\circ - g^4F$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1772.63	100		$3d^2(^2P)4p - 3d^2(^2P)4d$	$y^4D^\circ - f^4D$	$\frac{7}{2} - \frac{7}{2}$	I1,13
V III	1772.99	50		$3d^2(^2P)4p - 3d^2(^2P)4d$	$z^4P^\circ - f^4P$	$\frac{7}{2} - \frac{7}{2}$	I1,13

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	1773.43	300		$3d^2(3P)4p - 3d^2(3P)4d$	$y^4D^{\circ} - g^4F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1774.02	10		$3d^2(3P)4p - 3d^2(3P)4d$	$z^4P^{\circ} - f^4P$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1774.25	25		$3d^2(3P)4p - 3d^2(3P)4d$	$y^4D^{\circ} - f^4D$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1775.72	75		$3d^2(3P)4p - 3d^2(3P)4d$	$y^4D^{\circ} - g^4F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1777.18	50		$3d^2(3F)4p - 3d^2(3F)4d$	$z^2D^{\circ} - c^4P$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1778.02	400		$3d^2(3P)4p - 3d^2(3P)4d$	$y^4D^{\circ} - g^4F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1779.72	500		$3d^2(1D)4p - 3d^2(1D)4d$	$y^2F^{\circ} - f^2G$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1780.48	1000b		$3d^2(3P)4p - 3d^2(3P)4d$	$z^4P^{\circ} - f^4P$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1781.61	200		$3d^2(3F)4p - 3d^2(3F)4d$	$z^2D^{\circ} - c^4P$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1782.64	5		$3d^2 - 3d^2(1D)4p$	$b^2D - y^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1783.16	20		$3d^2(3P)4p - 3d^2(3P)4d$	$z^4P^{\circ} - f^4P$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1783.41	200		$3d^2(1G)4p - 3d^2(1G)4d$	$z^2H^{\circ} - f^2H$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1783.77	50		$3d^2(1D)4p - 3d^2(3P)4d$	$y^2D^{\circ} - g^4F$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1784.44	400		$3d^2(3P)4p - 3d^2(3P)4d$	$y^4D^{\circ} - f^4D$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1785.33	50		$3d^2 - 3d^2(1D)4p$	$b^2D - y^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1785.97	150		$3d^2(3F)4s - 3d^2(3P)4p$	$b^2F - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1787.15	15		$3d^2(3F)4s - 3d^2(3P)4p$	$b^2F - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1788.26	1000		$3d^2(3P)4p - 3d^2(3P)4d$	$y^4D^{\circ} - g^4F$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1789.47	200		$3d^2(3F)4p - 3d^2(3F)4d$	$z^2D^{\circ} - c^4P$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1789.62	1000b		$3d^2(1D)4p - 3d^2(3P)4d$	$y^2D^{\circ} - g^4F$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1791.23	50		$3d^2(3F)4p - 3d^2(3F)4d$	$z^2D^{\circ} - c^2G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1793.82	500		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4H$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1794.00	250		$3d^2(3P)4p - 3d^2(3P)4d$	$y^4D^{\circ} - g^4F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1794.60	1000		$3d^2(1D)4p - 3d^2(1D)4d$	$y^2F^{\circ} - f^2G$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1796.77	300		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4D^{\circ} - c^4P$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1797.28	100		$3d^2(1G)4p - 3d^2(1G)4d$	$z^2H^{\circ} - f^2H$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1797.44	25		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4D^{\circ} - c^4P$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1797.63	100		$3d^2(3P)4p - 3d^2(3P)4d$	$y^4D^{\circ} - g^4F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1798.15	500		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4H$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1800.07	100		$3d^2(3F)4p - 3d^2(3F)5s$	$z^2G^{\circ} - f^2F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1802.55	300		$3d^2(3F)4s - 3d^2(3P)4p$	$b^2F - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1803.15	25		$3d^2(3F)4s - 3d^2(1D)4p$	$b^4F - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1804.13	500		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4H$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1804.52	75		$3d^2(3F)4p - 3d^2(3F)5s$	$z^2G^{\circ} - f^2F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1804.76	75		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1805.23	150		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4H$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1806.55	10		$3d^2(1G)4p - 3d^2(1G)4d$	$x^2F^{\circ} - i^2F$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1806.71	25		$3d^2(3F)4p - 3d^2(3F)4d$	$z^2G^{\circ} - f^4F$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1807.35	50		$3d^2(3F)4s - 3d^2(3P)4p$	$b^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1808.51	100		$3d^2(3F)4s - 3d^2(3P)4p$	$b^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1809.36	150		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1810.31	0		$3d^2(3F)4s - 3d^2(3P)4p$	$b^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M7,13
V III	1810.71	250		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1812.19	10000b		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4H$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1814.95	250		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1815.11	50		$3d^2(3F)4s - 3d^2(3P)4p$	$b^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1815.35	100		$3d^2(1G)4p - 3d^2(1G)4d$	$x^2F^{\circ} - i^2F$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1816.30	150		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1820.65	250		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4H$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1821.99	10		$3d^2(3P)4p - 3d^2(1D)4d$	$z^4P^{\circ} - f^2D$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1822.21	15		$3d^2(1D)4p - 3d^2(1D)4d$	$z^2P^{\circ} - g^2F$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1822.31	25		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1822.61	50		$3d^2(1D)4p - 3d^2(1D)4d$	$z^2P^{\circ} - f^2P$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1823.57	2000d		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1824.34	50		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4F^{\circ} - e^4D$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1824.88	75		$3d^2(1D)4p - 3d^2(1D)4d$	$z^2P^{\circ} - f^2P$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1825.60	25		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4F^{\circ} - e^4D$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1827.96	200		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4F^{\circ} - e^4D$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1828.84	5000b		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4H$	$\frac{3}{2} - \frac{3}{2}$	M7,13
V III	1830.61	50		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1831.15	400		$3d^2(1G)4p - 3d^2(1G)4d$	$z^2H^{\circ} - e^2I$	$\frac{3}{2} - \frac{3}{2}$	13
V III	1831.64	400		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4G^{\circ} - e^4G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1831.74	15		$3d^2(3F)4p - 3d^2(3F)4d$	$z^4F^{\circ} - e^4D$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1832.29	25		$3d^2(1G)4p - 3d^2(1G)4d$	$z^2H^{\circ} - g^2G$	$\frac{3}{2} - \frac{3}{2}$	11,13
V III	1832.99	150		$3d^2(1D)4p - 3d^2(1D)4d$	$y^2F^{\circ} - g^2F$	$\frac{3}{2} - \frac{3}{2}$	11,13

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	1833.42	25		3d ² (¹ G)4p - 3d ² (¹ G)5s	x ² F° - h ² G	½ - ½	11,13
V III	1835.01	200		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ D	½ - ½	11,13
V III	1835.56	25		3d ² (² F)4s - 3d ² (¹ D)4p	b ⁴ F° - y ² F°	½ - ½	11,13
V III	1836.17	10		3d ² (¹ D)4p - 3d ² (¹ D)4d	z ² P° - f ² P	½ - ½	13
V III	1836.78	250		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ D	½ - ½	11,13
V III	1840.45	25		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ G° - e ⁴ G	½ - ½	11,13
V III	1841.80	250		3d ² (² F)4p - 3d ² (² F)4d	z ² G° - e ² H	½ - ½	11,13
V III	1842.06	150		3d ² (¹ D)4p - 3d ² (¹ D)4d	y ² F° - g ² F	½ - ½	11,13
V III	1842.66	25		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ H	½ - ½	11,13
V III	1843.16	100		3d ² (¹ D)4p - 3d ² (¹ D)4d	z ² P° - e ² S	½ - ½	13
V III	1844.43	50		3d ² (¹ G)4p - 3d ² (¹ G)5s	x ² F° - h ² G	½ - ½	11,13
V III	1845.07	300		3d ² (¹ G)4p - 3d ² (¹ G)4d	z ² H° - e ² I	½ - ½	13
V III	1845.29	250		3d ² (² F)4p - 3d ² (² F)4d	z ² G° - e ² H	½ - ½	11,13
V III	1845.60	25		3d ² (¹ G)4p - 3d ² (¹ G)4d	z ² H° - g ² G	½ - ½	11,13
V III	1846.51	75		3d ² (² P)4p - 3d ² (² P)4d	z ⁴ P° - f ⁴ D	½ - ½	11,13
V III	1848.97	10		3d ² (² P)4p - 3d ² (¹ D)4d	y ⁴ D° - f ² P	½ - ½	11,13
V III	1849.55	250		3d ² (¹ G)4p - 3d ² (² P)4d	y ² G° - h ² F	½ - ½	11,13
V III	1850.69	300		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ G	½ - ½	11,13
V III	1851.32	150		3d ² (² P)4p - 3d ² (² P)4d	z ⁴ P° - f ⁴ D	½ - ½	11,13
V III	1852.01	400		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ G	½ - ½	11,13
V III	1852.70	25		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ² P	½ - ½	13
V III	1853.12	15		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ² F	½ - ½	11,13
V III	1854.42	500		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ G	½ - ½	11,13
V III	1854.71	5		3d ² (¹ D)4p - 3d ² (¹ D)4d	z ² P° - e ² S	½ - ½	13
V III	1855.06	300		3d ² (² P)4p - 3d ² (² P)4d	z ⁴ P° - f ⁴ D	½ - ½	11,13
V III	1856.64	500		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ G	½ - ½	11,13
V III	1857.00	25		3d ² (² F)4p - 3d ² (² F)4d	z ² G° - e ² H	½ - ½	11,13
V III	1858.32	75		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ G	½ - ½	11,13
V III	1859.29	50		3d ² (² P)4p - 3d ² (² P)4d	x ² D° - h ² D	½ - ½	13
V III	1859.49	50		3d ² (² P)4p - 3d ² (² P)4d	z ⁴ P° - f ⁴ D	½ - ½	11,13
V III	1866.22	75		3d ² (¹ D)4p - 3d ² (¹ D)4d	y ² D° - f ² P	½ - ½	11,13
V III	1863.14	100		3d ² (² P)4p - 3d ² (¹ D)4d	y ⁴ D° - g ² F	½ - ½	13
V III	1864.51	300		3d ² (² F)4s - 3d ² (¹ G)4p	b ² F - y ² G°	½ - ½	11,13
V III	1864.74	100		3d ² (² F)4p - 3d ² (² F)4d	z ² F° - e ² F	½ - ½	11,13
V III	1865.41	10		3d ² (² P)4p - 3d ² (² P)4d	z ⁴ P° - g ⁴ F	½ - ½	11,13
V III	1871.58	200		3d ² (¹ D)4p - 3d ² (¹ D)4d	y ² D° - g ² F	½ - ½	11,13
V III	1873.01	5		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ F° - e ⁴ G	½ - ½	11,13
V III	1875.62	250		3d ² (² F)4p - 3d ² (² F)4d	z ² F° - e ² F	½ - ½	11,13
V III	1875.88	250		3d ² (¹ D)4p - 3d ² (¹ D)4d	y ² D° - g ² F	½ - ½	11,13
V III	1878.68	300		3d ² (² F)4s - 3d ² (¹ G)4p	b ² F - y ² G°	½ - ½	11,13
V III	1880.41	400		3d ² (² F)4p - 3d ² (² F)4d	z ² F° - e ² F	½ - ½	11,13
V III	1881.28	25		3d ² (² F)4s - 3d ² (¹ G)4p	b ² F - y ² G°	½ - ½	11,13
V III	1881.75	10		3d ² (² P)4p - 3d ² (² P)5s	y ² P° - h ² P	½ - ½	13
V III	1883.57	250		3d ² (² F)4p - 3d ² (² F)4d	z ² G° - e ² G	½ - ½	11,13
V III	1884.61	200		3d ² (² F)4p - 3d ² (² F)4d	z ² G° - e ² G	½ - ½	11,13
V III	1885.26	15		3d ² (² F)4p - 3d ² (² F)4d	z ² D° - e ⁴ D	½ - ½	11,13
V III	1887.79	100		3d ² (² F)4p - 3d ² (² F)4d	z ² D° - e ⁴ D	½ - ½	13
V III	1889.22	40		3d ² (² P)4p - 3d ² (² P)5s	y ² P° - h ² P	½ - ½	13
V III	1891.47	50		3d ² (² F)4p - 3d ² (² F)4d	z ² F° - e ² F	½ - ½	11,13
V III	1891.71	10		3d ² (² F)4p - 3d ² (² F)4d	z ² D° - e ⁴ D	½ - ½	13
V III	1895.01	300		3d ² (² F)4p - 3d ² (² F)4d	z ² D° - e ⁴ D	½ - ½	13
V III	1896.84	10		3d ² (² F)4p - 3d ² (² F)4d	z ² G° - e ² G	½ - ½	11,13
V III	1899.81	400		3d ² (² F)4p - 3d ² (² F)4d	z ² D° - e ² F	½ - ½	11,13
V III	1901.63	50		3d ² (² F)4p - 3d ² (² F)4d	z ² D° - e ⁴ D	½ - ½	13
V III	1902.23	500		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,13
V III	1902.48	150		3d ² (² F)4p - 3d ² (² F)4d	z ² D° - e ² F	½ - ½	11,13
V III	1903.68	50		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,13
V III	1903.83	15		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,13
V III	1904.01	75		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,13
V III	1907.80	300b		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,15
V III	1910.68	200		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,13
V III	1912.17	50		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,13
V III	1913.62	350b		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,13
V III	1914.68	15		3d ² (² F)4p - 3d ² (² F)4d	z ⁴ D° - e ⁴ D	½ - ½	11,13
V III	1916.09	25		3d ² (² P)4p - 3d ² (² P)4d	y ² P° - h ² D	½ - ½	13

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V III	1920.38	75		$3d^2(^3F)4p - 3d^3(^3F)4d$	$z^4D^{\circ} - e^4D$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1921.24	100		$3d^2(^3F)4p - 3d^3(^3F)4d$	$z^4D^{\circ} - e^4F$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1922.98	25		$3d^2(^3F)4p - 3d^3(^3F)4d$	$z^4D^{\circ} - e^4F$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1926.23	25		$3d^2(^3P)4p - 3d^3(^3P)4d$	$y^3P^{\circ} - g^3D$	$\frac{1}{2} - \frac{3}{2}$	13
V III	1926.75	260		$3d^2(^3P)4p - 3d^3(^3P)4d$	$y^3P^{\circ} - h^3D$	$\frac{1}{2} - \frac{3}{2}$	13
V III	1928.05	15		$3d^2(^3P)4p - 3d^3(^3P)5s$	$y^3P^{\circ} - g^4P$	$\frac{1}{2} - \frac{3}{2}$	13
V III	1931.09	250		$3d^2(^3P)4p - 3d^3(^3P)4d$	$x^3D^{\circ} - h^3F$	$\frac{1}{2} - \frac{3}{2}$	13
V III	1932.59	10		$3d^2(^3P)4p - 3d^3(^3P)4d$	$x^3D^{\circ} - h^3F$	$\frac{1}{2} - \frac{3}{2}$	13
V III	1932.82	25		$3d^2(^3F)4p - 3d^3(^3F)4d$	$z^4D^{\circ} - e^4F$	$\frac{1}{2} - \frac{3}{2}$	13
V III	1934.00	300		$3d^2(^3P)4p - 3d^3(^3P)4d$	$x^3D^{\circ} - h^3F$	$\frac{1}{2} - \frac{3}{2}$	13
V III	1937.17	25		$3d^2(^3P)4p - 3d^3(^1D)4d$	$z^4P^{\circ} - f^3P$? $\frac{1}{2} - \frac{1}{2}$	11,13
V III	1947.37	20		$3d^2(^3P)4p - 3d^3(^1D)4d$	$x^3D^{\circ} - f^3D$? $\frac{1}{2} - \frac{3}{2}$	M24,13
V III	1952.00	150		$3d^2(^1G)4p - 3d^3(^1G)4d$	$x^2F^{\circ} - g^2G$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1967.11	150		$3d^2(^1G)4p - 3d^3(^1G)4d$	$x^2F^{\circ} - g^2G$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1968.37	5		$3d^2(^1D)4s - 3d^3(^3P)4p$	$c^3D - y^3P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	11,13
V III	1990.33	0		$3d^2(^3P)4s - 3d^3(^3P)4p$	$b^4P - y^3P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1992.83	100		$3d^2(^3F)4s - 3d^3(^1D)4p$	$b^2F - y^3D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13
V III	1994.57	25		$3d^2(^3F)4d - 3d^3(^1G)4f$	$e^2F - ^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	11,13

VANADIUM IV (V^{3+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^3F_2$ (20 electrons)
 Ionization Potential $376\ 730\ \text{cm}^{-1}$, $46.707\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V IV	675.469	30		$3d^3 - 3d4p$	$g^3F - z^3F^{\circ}$	3 - 4	12
V IV	677.345	200		$3d^3 - 3d4p$	$g^3F - z^3F^{\circ}$	4 - 4	12
V IV	678.740	60		$3d^2 - 3d4p$	$g^3F - z^3F^{\circ}$	3 - 3	12
V IV	679.647	50		$3d^3 - 3d4p$	$g^3F - z^3F^{\circ}$	2 - 2	12
V IV	680.632	40		$3d^3 - 3d4p$	$g^3F - z^3F^{\circ}$	4 - 3	12
V IV	681.145	40		$3d^3 - 3d4p$	$g^3F - z^3F^{\circ}$	3 - 2	12
V IV	682.455	40		$3d^3 - 3d4p$	$g^3F - z^3D^{\circ}$	3 - 3	12
V IV	682.923	40		$3d^2 - 3d4p$	$g^3F - z^3D^{\circ}$	2 - 2	12
V IV	684.368	500		$3d^2 - 3d4p$	$g^3F - z^3D^{\circ}$	4 - 3	12
V IV	684.450	100		$3d^3 - 3d4p$	$g^3F - z^3D^{\circ}$	3 - 2	12
V IV	691.530	100		$3d^2 - 3d4p$	$a^1D - z^1P^{\circ}$	2 - 1	12
V IV	693.128	50		$3d^3 - 3d4p$	$g^3F - z^1D^{\circ}$	2 - 2	12
V IV	699.497	30		$3d^3 - 3d4p$	$a^1D - z^1F^{\circ}$	2 - 3	12
V IV	702.035	1		$3d^3 - 3d4p$	$a^3P - z^1P^{\circ}$	0 - 1	12
V IV	711.911	20		$3d^2 - 3d4p$	$a^1D - z^3P^{\circ}$	2 - 1	12
V IV	722.912	40		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	1 - 2	12
V IV	723.045	40		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	0 - 1	12
V IV	723.537	40		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	1 - 0	12
V IV	723.652	40		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	1 - 1	12
V IV	724.068	40		$3d^3 - 3d4p$	$a^3P - z^3P^{\circ}$	2 - 2	12
V IV	724.809	5		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	2 - 1	12
V IV	734.344	20		$3d^3 - 3d4p$	$a^1D - z^3F^{\circ}$	2 - 2	12
V IV	737.854	400		$3d^3 - 3d4p$	$a^1G - z^1F^{\circ}$	4 - 3	12
V IV	745.165	20		$3d^2 - 3d4p$	$a^3P - z^3F^{\circ}$	2 - 3	12
V IV	749.641	40		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$	2 - 3	12
V IV	750.110	150		$3d^3 - 3d4p$	$a^1D - z^1D^{\circ}$	2 - 2	12
V IV	750.809	40		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$	1 - 2	12
V IV	751.908	30		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$	0 - 1	12
V IV	752.038	30		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$? - 2	12
V IV	752.568	20		$3d^3 - 3d4p$	$a^3P - z^3D^{\circ}$	1 - 1	12

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V IV	778.433	0		3d ² - 3d4p	a ¹ G - z ³ D°	4 - 3	I2
V IV	884.146	30		3d ² - 3d4p	¹ S - z ¹ P°	0 - 1	I2
V IV	1071.054	20		3d4p - 3d5s	z ¹ D° - ¹ D	2 - 2	I2
V IV	1086.382	5		3d4p - 3d5s	z ¹ D° - ³ D	2 - 2	I2
V IV	1096.375	2		3d4p - 3d5s	z ³ D° - ¹ D	2 - 2	I2
V IV	1110.720	2		3d4p - 3d5s	z ³ D° - ³ D	1 - 1	I2
V IV	1112.199	5		3d4p - 3d5s	z ³ D° - ³ D	3 - 3	I2
V IV	1112.436	5		3d4p - 3d5s	z ³ D° - ³ D	2 - 2	I2
V IV	1127.836	20		3d4p - 3d5s	z ³ F° - ³ D	3 - 2	I2
V IV	1131.255	20		3d4p - 3d5s	z ² F° - ³ D	4 - 3	I2
V IV	1194.462	20		3d4p - 3d5s	z ¹ F° - ¹ D	3 - 2	I2
V IV	1226.523	60		3d4p - 3d4d	z ¹ D° - ¹ D	2 - 2	I2
V IV	1242.248	3		3d4p - 3d4d	z ³ D° - ³ P	1 - 1	I2
V IV	1243.718	10		3d4p - 3d4d	z ³ D° - ³ P	1 - 0	I2
V IV	1244.287	2		3d4p - 3d4d	z ³ D° - ³ P	2 - 2	I2
V IV	1247.069	30		3d4p - 3d4d	z ³ D° - ³ P	2 - 1	I2
V IV	1250.918	20		3d4p - 3d4d	z ³ D° - ³ P	3 - 2	I2
V IV	1271.153	2		3d4p - 3d4d	z ³ F° - ¹ D	2 - 2	I2
V IV	1272.972	30		3d4p - 3d4d	z ¹ P° - ¹ S	1 - 0	I2
V IV	1273.529	10		3d4p - 3d4d	z ¹ D° - e ³ F	2 - 2	I2
V IV	1304.173	30		3d4p - 3d4d	z ³ D° - e ³ F	1 - 2	I2
V IV	1305.420	40		3d4p - 3d4d	z ³ D° - e ³ F	2 - 3	I2
V IV	1308.061	50		3d4p - 3d4d	z ³ D° - e ³ F	3 - 4	I2
V IV	1309.502	10		3d4p - 3d4d	z ³ D° - e ³ F	2 - 2	I2
V IV	1312.717	20		3d4p - 3d4d	z ³ D° - e ³ F	3 - 3	I2
V IV	1317.566	5		3d4p - 3d4d	z ³ F° - e ³ F	2 - 3	I2
V IV	1321.719	10		3d4p - 3d4d	z ³ F° - e ³ F	2 - 2	I2
V IV	1321.917	10		3d4p - 3d4d	z ³ F° - e ³ F	3 - 4	I2
V IV	1326.666	5		3d4p - 3d4d	z ³ F° - e ³ F	3 - 3	I2
V IV	1326.807	5		3d4p - 3d4d	z ³ P° - ³ P	1 - 2	I2
V IV	1329.288	10		3d4p - 3d4d	z ³ P° - ³ P	2 - 2	I2
V IV	1329.968	10		3d4p - 3d4d	z ³ P° - ³ P	1 - 1	I2
V IV	1330.355	10		3d4p - 3d4d	z ³ P° - ³ P	0 - 1	I2
V IV	1331.665	0		3d4p - 3d4d	z ³ P° - ³ P	1 - 0	I2
V IV	1332.459	3		3d4p - 3d4d	z ³ P° - ³ P	2 - 1	I2
V IV	1334.493			3d4p - 3d4d	z ³ F° - e ³ F	4 - 4	I2
V IV	1339.335	5		3d4p - 3d4d	z ³ F° - e ³ F	4 - 3	I2
V IV	1344.493	0		3d4p - 3d4d	z ³ P° - ¹ D	1 - 2	I2
V IV	1347.030	1		3d4p - 3d4d	z ³ P° - ¹ D	2 - 2	I2
V IV	1355.131	80		3d4p - 3d4d	z ¹ F° - ¹ G	3 - 4	I2
V IV	1356.529	10		3d4p - 3d4d	z ¹ D° - ¹ P	2 - 1	I2
V IV	1391.105	20		3d4p - 3d4d	z ¹ F° - ¹ D	3 - 2	I2
V IV	1395.001	60		3d4p - 3d4d	z ¹ D° - ¹ F	2 - 3	I2
V IV	1400.416	5		3d4p - 3d4d	z ³ D° - e ³ G	2 - 3	I2
V IV	1403.618	8		3d4p - 3d4d	z ³ D° - e ³ G	3 - 4	I2
V IV	1408.639	8		3d4p - 3d4d	z ³ D° - ³ P	1 - 2	I2
V IV	1410.018	8		3d4p - 3d4d	z ³ D° - ³ D	2 - 3	I2
V IV	1412.686	20		3d4p - 3d4d	z ³ D° - ³ D	1 - 1	I2
V IV	1414.409	50		3d4p - 3d4d	z ³ F° - e ³ G	2 - 3	I2
V IV	1414.842	20		3d4p - 3d4d	z ³ D° - ³ D	2 - 2	I2
V IV	1418.533	30		3d4p - 3d4d	z ³ D° - ³ D	3 - 3	I2
V IV	1418.921	10		3d4p - 3d4d	z ³ D° - ³ D	2 - 1	I2
V IV	1419.580	80		3d4p - 3d4d	z ³ F° - e ³ G	3 - 4	I2
V IV	1422.420	10		3d4p - 3d4d	z ³ D° - ³ D	3 - 2	I2
V IV	1423.719	30		3d4p - 3d4d	z ¹ P° - ¹ D	1 - 2	I2
V IV	1424.197	0		3d4p - 3d4d	z ³ F° - ³ D	2 - 3	I2
V IV	1424.916	10		3d4p - 3d4d	z ³ F° - e ³ G	3 - 3	I2
V IV	1426.654	100		3d4p - 3d4d	z ³ F° - e ³ G	4 - 5	I2
V IV	1429.114	10		3d4p - 3d4d	z ³ F° - ³ D	2 - 2	I2
V IV	1433.276	1		3d4p - 3d4d	z ³ F° - ³ D	2 - 1	I2
V IV	1434.092	15		3d4p - 3d4d	z ³ F° - e ³ G	4 - 4	I2
V IV	1434.842	15		3d4p - 3d4d	z ³ F° - ³ D	3 - 3	I2
V IV	1439.834	1		3d4p - 3d4d	z ³ F° - ³ D	3 - 2	I2
V IV	1447.120	0		3d4p - 3d4d	z ³ D° - ¹ F	3 - 3	I2
V IV	1449.681	20		3d4p - 3d4d	z ³ F° - ³ D	4 - 3	I2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V IV	1451.042	30		3d4p - 3d4d	$z^3P^{\circ} - ^3S$	1 - 1	I2
V IV	1451.496	10		3d4p - 3d4d	$z^3P^{\circ} - ^3S$	0 - 1	I2
V IV	1454.000	40		3d4p - 3d4d	$z^3P^{\circ} - ^3S$	2 - 1	I2
V IV	1520.142	60		3d4p - 3d4d	$z^3P^{\circ} - ^3D$	2 - 3	I2
V IV	1522.493	40		3d4p - 3d4d	$z^3P^{\circ} - ^3D$	1 - 2	I2
V IV	1525.756	10		3d4p - 3d4d	$z^3P^{\circ} - ^3D$	2 - 2	I2
V IV	1527.223	15		3d4p - 3d4d	$z^3P^{\circ} - ^3D$	1 - 1	I2
V IV	1527.721	15		3d4p - 3d4d	$z^3P^{\circ} - ^3D$	0 - 1	I2
V IV	1601.915	80		3d4p - 3d4d	$z^1P^{\circ} - ^1P$	1 - 1	I2
V IV	1611.879	80		3d4p - 3d4d	$z^1F^{\circ} - ^1F$	3 - 3	I2
V IV	1806.184	80		3d4s - 3d4p	$b^1D - z^1P^{\circ}$	2 - 1	I2
V IV	1809.854	60		3d4s - 3d4p	$a^3D - z^3P^{\circ}$	1 - 0	I2
V IV	1810.566	30		3d4s - 3d4p	$a^3D - z^3P^{\circ}$	1 - 1	I2
V IV	1813.050	50		3d4s - 3d4p	$a^3D - z^3P^{\circ}$	2 - 2	I2
V IV	1817.676	100		3d4s - 3d4p	$a^3D - z^3P^{\circ}$	2 - 1	I2
V IV	1825.836	200		3d4s - 3d4p	$a^3D - z^3P^{\circ}$	3 - 2	I2
V IV	1861.558	300		3d4s - 3d4p	$b^1D - z^1F^{\circ}$	2 - 3	I2
V IV	1939.065	500		3d4s - 3d4p	$a^3D - z^3F^{\circ}$	3 - 4	I2
V IV	1946.772	5		3d4s - 3d4p	$b^1D - z^3P^{\circ}$	2 - 2	I2
V IV	1951.432	400		3d4s - 3d4p	$a^3D - z^3F^{\circ}$	2 - 3	I2
V IV	1963.103	300		3d4s - 3d4p	$a^3D - z^3F^{\circ}$	1 - 2	I2
V IV	1966.244	20		3d4s - 3d4p	$a^3D - z^3F^{\circ}$	3 - 3	I2
V IV	1971.471	40		3d4s - 3d4p	$a^3D - z^3F^{\circ}$	2 - 2	I2
V IV	1982.422	15		3d4s - 3d4p	$a^3D - z^3D^{\circ}$	2 - 3	I2
V IV	1990.712	40		3d4s - 3d4p	$a^3D - z^3D^{\circ}$	1 - 2	I2
V IV	1997.722	500		3d4s - 3d4p	$a^3D - z^3D^{\circ}$	3 - 3	I2
V IV	1999.320	200		3d4s - 3d4p	$a^3D - z^3D^{\circ}$	2 - 2	I2

VANADIUM V (V^{4+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 D_{3/2}$ (19 electrons)
 Ionization Potential [526 100] cm^{-1} ; [65.23] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V V	224.90	30		$3p^6 3d - 3p^5 3d^2$	$g^3D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, F11
V V	225.48	30		$3p^6 3d - 3p^5 3d^2$	$g^3D - ^2D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G1, F11
V V	251.60	20		$3p^6 3d - 3p^5 3d^2$	$g^3D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	G1, F11
V V	252.40	20		$3p^6 3d - 3p^5 3d^2$	$g^3D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G1, F11
V V	286.36			3d - 4f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	G6
V V	286.88			3d - 4f	$g^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	G6
V V	481.657	2		3d - 4p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G6, G7
V V	483.099	25		3d - 4p	$g^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	G6, G7
V V	484.621	10		3d - 4p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	G6, G7
V V	506.11			4p - 6s	$^3P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	G6
V V	509.38			4p - 6s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	G6
V V	820.866	15		4p - 5s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	I2
V V	829.483	20		4p - 5s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	I2
V V	1142.741	40		4p - 4d	$^3P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	I2
V V	1157.577	50		4p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	I2
V V	1159.520	10		4p - 4d	$^1P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	I2
V V	1680.199	100		4s - 4p	$^3S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	I2
V V	1716.722	50		4s - 4p	$^3S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	I2
V V	1811.388	40h		4d - 4f	$^3D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	I2

VANADIUM VI (V^{5+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 1S_6$ (18 electrons)
 Ionization Potential $1\ 033\ 400\ \text{cm}^{-1}$; $128.12\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V VI	117.7	60		$3p^6 - 3p^4(^2P^o)5d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0-1	F23
V VI	118.7	70		$3p^6 - 3p^4(^2P^o)5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	F23
V VI	119.3	60		$3p^6 - 3p^4(^2P^o)5d$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0-1	F23
V VI	128.582	100		$3p^6 - 3p^4(^2P^o)5s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0-1	K27,M22
V VI	129.574	200		$3p^6 - 3p^4(^2P^o)5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	K27,M22
V VI	138.26	60		$3p^6 - 3p^4(^2P^o)4d$	$g^1S - (\frac{1}{2}, \frac{3}{2})^o$	0-1	A1
V VI	139.55	70		$3p^6 - 3p^4(^2P^o)4d$	$g^1S - (\frac{3}{2}, \frac{3}{2})^o$	0-1	A1
V VI	179.323	1600		$3p^6 - 3p^4(^2P^o)4s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0-1	K27,M22
V VI	182.050	70		$3p^6 - 3p^4(^2P^o)4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	K27,M22
V VI	213.04	20		$3p^5 3d - 3p^5 4f$	$^2P^o - ^2D$	0-1	W1
V VI	213.32	30		$3p^5 3d - 3p^5 4f$	$^2P^o - ^2D$	1-2	W1
V VI	213.61	10		$3p^5 3d - 3p^5 4f$	$^2P^o - ^2D$	1-1	W1
V VI	213.87	60		$3p^5 3d - 3p^5 4f$	$^2P^o - ^2D$	2-3	W1
V VI	214.50	10		$3p^5 3d - 3p^5 4f$	$^2P^o - ^2D$	2-2	W1
V VI	218.09	90		$3p^5 3d - 3p^5 4f$	$^2F^o - ^2G$	4-5	W1
V VI	218.64	60		$3p^5 3d - 3p^5 4f$	$^2F^o - ^2G$	3-4	W1
V VI	219.00	30		$3p^5 3d - 3p^5 4f$	$^2F^o - ^2G$	2-3	W1
V VI	223.30	100		$3p^5 3d - 3p^5 4f$	$^1D^o - ^1F$	2-3	W1
V VI	224.50	900		$3p^5 - 3p^4(^2P^o)3d$	$g^1S - ^1P$	0-1	G1,F11
V VI	224.59	90		$3p^5 3d - 3p^5 4f$	$^3D^o - ^2F$	2-3	W1
V VI	225.90	70		$3p^5 3d - 3p^5 4f$	$^1F^o - ^2F$	3-4	W1
V VI	226.66	60		$3p^5 3d - 3p^5 4f$	$^3D^o - ^1G$	3-4	W1

VANADIUM VII (V^{6+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 2P^o_{3/2}$ (17 electrons)
 Ionization Potential $1\ 211\ 200\ \text{cm}^{-1}$; $150.17\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V VII	108.3			$3p^5 - 3p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	117.2	150		$3p^5 - 3p^4(^1S)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	121.80			$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	121.93	300		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	122.56	250		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	122.95	200		$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F23
V VII	123.13			$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F23
V VII	123.72			$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2F$	$\frac{1}{2} - \frac{3}{2}$	F23
V VII	124.30			$3p^5 - 3p^4(^1D)4d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F23
V VII	125.19			$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	125.62			$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	125.87			$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	125.98	400		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F23
V VII	127.11	200		$3p^5 - 3p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F23
V VII	148.903	300		$3p^5 - 3p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E20
V VII	150.625	200		$3p^5 - 3p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E20
V VII	156.608	700		$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E20
V VII	158.467	600		$3p^5 - 3p^4(^1D)4s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E20
V VII	159.855	300		$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	E20
V VII	161.122	600		$3p^5 - 3p^4(^2P)4s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	E20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V VII	161.836	400		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	E20
V VII	163.135	200		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	E20
V VII	163.182	400		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E20
V VII	164.302	100		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	E20
V VII	164.523	50		$3p^5 - 3p^4(^3P)4s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	E20
V VII	221.95	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F13, F11
V VII	225.16	300		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	F13, F11
V VII	225.79	500		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F13, F11
V VII	227.88	400		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	F13, F11
V VII	229.38	600		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	F13, F11
V VII	231.99	300		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	F13, F11
V VII	233.47	700		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	F13, F11
V VII	237.50	300		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F13, F11
V VII	241.91	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F13, F11
V VII	456.29			$3s^33p^6 - 3s3p^6$	$g^2P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	K23
V VII	472.80			$3s^33p^6 - 3s3p^6$	$g^2P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	K23

VANADIUM VIII (V^{7+}), $Z = 23$
 Ground State $1s^22s^22p^63s^23p^4\ ^3P_2$ (16 electrons)
 Ionization Potential $1\ 401\ 000\ \text{cm}^{-1}$; 173.7 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V VIII	135.751	200		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	2 - 2	E19
V VIII	136.078	100		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	2 - 1	E19
V VIII	136.867	120		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	1 - 2	E19
V VIII	137.194	50		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	1 - 1	E19
V VIII	137.316	100		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	1 - 0	E19
V VIII	137.491	120		$3p^4 - 3p^3(^3P^o)4s$	$g^3P - ^3P^o$	0 - 1	E19
V VIII	139.188	50		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^1D^o$	2 - 2	E19
V VIII	139.730	200		$3p^4 - 3p^3(^3P^o)4s$	$^1D - ^1P^o$	2 - 1	E19
V VIII	140.451	600		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2 - 3	E19
V VIII	140.665	200		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2 - 2	E19
V VIII	140.934	50		$3p^4 - 3p^3(^3P^o)4s$	$^1D - ^3P^o$	2 - 2	E19
V VIII	141.864	200		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	1 - 2	E19
V VIII	141.924	100		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	1 - 1	E19
V VIII	142.247	100		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	0 - 1	E19
V VIII	144.653	600		$3p^4 - 3p^3(^3D^o)4s$	$^1D - ^1D^o$	2 - 2	E19
V VIII	145.507	400		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	2 - 1	E19
V VIII	146.613	180		$3p^4 - 3p^3(^3P^o)4s$	$^1S - ^1P^o$	0 - 1	E19
V VIII	146.789	200		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	1 - 1	E19
V VIII	147.126	100		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	0 - 1	E19
V VIII	228.15			$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2 - 2	G1
V VIII	228.67	400		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^1F^o$	2 - 3	G1, F11
V VIII	230.09			$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	1 - 1	G1
V VIII	230.12	500		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2 - 3	G1, F11
V VIII	230.82	200		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	0 - 1	G1, F11
V VIII	231.33			$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	1 - 2	G1
V VIII	236.01	300		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^1D^o$	2 - 2	F13, F11
V VIII	240.22	300		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	2 - 2	F13, F11
V VIII	243.69	100		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	1 - 2	F13, F11
V VIII	358.26			$3s^33p^4 - 3s3p^6$	$^1D - ^1P^o$	2 - 1	F4
V VIII	449.74			$3s^33p^4 - 3s3p^6$	$g^3P - ^3P^o$	2 - 1	F4

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V VIII	457.0			$3s^2 3p^4 - 3s 3p^5$	$g^2 P - ^2 P^o$	1 - 0	K8
V VIII	459.82			$3s^2 3p^4 - 3s 3p^5$	$g^2 P - ^2 P^o$	2 - 2	F4
V VIII	462.11			$3s^2 3p^4 - 3s 3p^5$	$g^2 P - ^2 P^o$	1 - 1	F4
V VIII	465.55			$3s^2 3p^4 - 3s 3p^5$	$g^2 P - ^2 P^o$	0 - 1	F4
V VIII	472.91			$3s^2 3p^4 - 3s 3p^5$	$g^2 P - ^2 P^o$	1 - 2	F2
V VIII	1830.6	f		$3p^4 - 3p^4$	$g^2 P - ^1 S$	1 - 0	S28

VANADIUM IX (V^{9+}), Z = 23
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [1 645 000] cm^{-1} ; [204] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V IX	125.420	600		$3p^3 - 3p^2(^2P)4s$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	K22
V IX	126.152	400		$3p^3 - 3p^2(^2P)4s$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	K22
V IX	126.732	250		$3p^3 - 3p^2(^2P)4s$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	K22
V IX	126.765	250		$3p^3 - 3p^2(^1D)4s$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	K22
V IX	126.810	20		$3p^3 - 3p^2(^1D)4s$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	K22
V IX	127.068	500		$3p^3 - 3p^2(^1D)4s$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	K22
V IX	235.72	400		$3p^3 - 3p^2(^1D)3d$	$^2 D^o - ^2 F$	$\frac{3}{2} - \frac{3}{2}$	G1, F11
V IX	237.66			$3p^3 - 3p^2(^2P)3d$	$^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	240.30			$3p^3 - 3p^2(^2P)3d$	$^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	243.58			$3p^3 - 3p^2(^2P)3d$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	F17
V IX	244.46	100		$3p^3 - 3p^2(^2P)3d$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	F17, F11
V IX	244.89			$3p^3 - 3p^2(^2P)3d$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	F17
V IX	247.70			$3p^3 - 3p^2(^1D)3d$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	248.91			$3p^3 - 3p^2(^1D)3d$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	251.61			$3p^3 - 3p^2(^1D)3d$	$^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	252.96			$3p^3 - 3p^2(^1D)3d$	$^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	253.90			$3p^3 - 3p^2(^1D)3d$	$^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	270.38			$3p^3 - 3p^2(^2P)3d$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	276.08			$3p^3 - 3p^2(^2P)3d$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F7
V IX	364.18			$3s^2 3p^3 - 3s 3p^4$	$^2 D^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F2
V IX	371.38			$3s^2 3p^3 - 3s 3p^4$	$^2 D^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	F2
V IX	433.97			$3s^2 3p^3 - 3s 3p^4$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F2
V IX	435.80			$3s^2 3p^3 - 3s 3p^4$	$^2 D^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F2
V IX	453.33			$3s^2 3p^3 - 3s 3p^4$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	F4
V IX	456.96			$3s^2 3p^3 - 3s 3p^4$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	F4
V IX	467.19			$3s^2 3p^3 - 3s 3p^4$	$g^4 S^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	F4
V IX	1633.3	f		$3p^3 - 3p^3$	$g^4 S^o - ^2 P^o$	$\frac{3}{2} - \frac{3}{2}$	S28

VANADIUM X (V^{9+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [1 855 100] cm^{-1} ; [230] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V X	245.35	100		$3p^2 - 3p3d$	$^1D - ^1F^{\circ}$	2 - 3	F17, F11
V X	252.17	100		$3p^2 - 3p3d$	$g^2P^{\circ} - ^2D^{\circ}$	1 - 2	F17, F11
V X	253.53			$3p^2 - 3p3d$	$g^2P^{\circ} - ^2D^{\circ}$	1 - 1	F17
V X	255.24			$3p^2 - 3p3d$	$g^2P^{\circ} - ^2D^{\circ}$	2 - 3	F17
V X	255.54			$3p^2 - 3p3d$	$g^2P^{\circ} - ^2P^{\circ}$	0 - 1	F7
V X	255.54			$3p^2 - 3p3d$	$g^2P^{\circ} - ^2D^{\circ}$	2 - 2	F17
V X	257.00			$3p^2 - 3p^{\sim}d$	$g^2P^{\circ} - ^2P^{\circ}$	1 - 0	F7
V X	258.28			$3p^2 - 3p3d$	$g^2P^{\circ} - ^2P^{\circ}$	1 - 1	F7
V X	260.93			$3f^2 - 3p3d$	$^1S - ^1P^{\circ}$	0 - 1	F7
V X	262.04			$3f^2 - 3p3d$	$g^2P^{\circ} - ^2P^{\circ}$	1 - 2	F7
V X	265.70			$3p^2 - 3p3d$	$g^2P^{\circ} - ^2P^{\circ}$	2 - 2	F7
V X	308.90			$3s^2 3p^2 - 3s 3p^2$	$g^2P^{\circ} - ^2S^{\circ}$	1 - 1	F4
V X	314.00			$3s^2 3p^2 - 3s 3p^2$	$g^2P^{\circ} - ^2S^{\circ}$	2 - 1	F4
V X	322.74			$3s^2 3p^2 - 3s 3p^2$	$^1D - ^1P^{\circ}$	2 - 1	K8
V X	364.18			$3s^2 3p^2 - 3s 3p^2$	$^1S - ^1P^{\circ}$	0 - 1	F4
V X	393.16			$3s^2 3p^2 - 3s 3p^2$	$g^2P^{\circ} - ^2P^{\circ}$	0 - 1	K8
V X	399.74			$3s^2 3p^2 - 3s 3p^2$	$g^2P^{\circ} - ^2P^{\circ}$	1 - 1	F4
V X	405.15			$3s^2 3p^2 - 3s 3p^2$	$^1D - ^1D^{\circ}$	2 - 2	F7
V X	408.38			$3s^2 3p^2 - 3s 3p^2$	$g^2P^{\circ} - ^2P^{\circ}$	2 - 2	F2
V X	457.29			$3s^2 3p^2 - 3s 3p^2$	$g^2P^{\circ} - ^2D^{\circ}$	0 - 1	F4
V X	461.04			$3s^2 3f^2 - 3s 3p^2$	$g^2P^{\circ} - ^2D^{\circ}$	1 - 2	F4
V X	470.25			$3s^2 3f^2 - 3s 3p^2$	$g^2P^{\circ} - ^2D^{\circ}$	2 - 3	F4
V X	1573.1	f		$3p^2 - 3p^2$	$g^2F^{\circ} - ^1S$	1 - 0	S28

VANADIUM XI (V^{10+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}$ (13 electrons)
 Ionization Potential 2 057 100 cm^{-1} ; 255.04 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XI	87.166	600		$3p - 4d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E18
V XI	87.868	800		$3p - 4d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E18
V XI	104.74			$3s 3p^2 - 3s 3f 4s$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	F10
V XI	105.08			$3s 3p^2 - 3s 3p 4s$	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F10
V XI	105.34			$3s 3p^2 - 3s 3p 4s$	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	F10
V XI	106.00			$3s 3p^2 - 3s 3p 4s$	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	F10
V XI	106.42			$3p - 4s$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F10
V XI	107.57			$3p - 4s$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F10
V XI	112.34			$3s 3p 3d - 3s 3p 4f$	$^4F^{\circ} - ^4G$	$\frac{3}{2} - \frac{11}{2}$	F10
V XI	112.63			$3s 3p 3d - 3s 3p 4f$	$^4F^{\circ} - ^4G$	$\frac{5}{2} - \frac{7}{2}$	F10
V XI	112.76			$3s 3p 3d - 3s 3p 4f$	$^4F^{\circ} - ^4G$	$\frac{7}{2} - \frac{9}{2}$	F10
V XI	119.28			$3d - 4f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	F10
V XI	119.36			$3d - 4f$	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{9}{2}$	F10
V XI	265.31			$3p - 3d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G1
V XI	271.75			$3p - 3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G1
V XI	320.60			$3s^2 3p - 3s 3p^2$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F4
V XI	325.97			$3s^2 3p - 3s 3p^2$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F4
V XI	330.94			$3s^2 3p - 3s 3p^2$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	F4
V XI	336.68			$3s^2 3p - 3s 3p^2$	$g^2P^{\circ} - ^2P$	$\frac{5}{2} - \frac{1}{2}$	F4
V XI	346.11			$3s^2 3p - 3s 3p^2$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XI	352.43						
V XI	358.23			$3s3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	F4
V XI	358.89			$3s^23p - 3s3p^2$	$g^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F4
V XI	429.29			$3s3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	F4
V XI	446.32			$3s^23p - 3s3p^2$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F4
					$g^3P^o - ^3D$	$\frac{3}{2} - \frac{3}{2}$	F4

VANADIUM XII (V¹¹⁺), Z = 23Ground State $1s^22s^22p^63s^2\ ^1S_0$ (12 electrons)Ionization Potential 2 486 300 cm⁻¹; 308.25 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XII	61.455	50					
V XII	61.717	100		$3s3p - 3s5d$	$^3P^o - ^3D$	1 - 2	E18
V XII	76.307	300		$3s3p - 3s5d$	$^3P^o - ^3D$	2 - 3	E18
V XII	76.960	50		$3s^2 - 3s4p$	$g^1S - ^1P^o$	0 - 1	E18
V XII	80.896	100		$3s3d - 3s5f$	$^3D - ^3F^o$	3 - 4	E18
				$3s3p - 3s4d$	$^3P^o - ^3D$	0 - 1	E18
V XII	81.077	200					
V XII	81.098	50		$3s3p - 3s4d$	$^3P^o - ^3D$	1 - 2	E18
V XII	81.513	400		$3s3p - 3s4d$	$^3P^o - ^3D$	1 - 1	E18
V XII	81.550	50		$3s3p - 3s4d$	$^3P^o - ^3D$	2 - 3	E18
V XII	87.36			$3s3p - 3s4d$	$^3P^o - ^3D$	2 - 2	E18
				$3s3p - 3s4d$	$^1P^o - ^1D$	1 - 2	F10
V XII	97.642	50					
V XII	97.938	200		$3s3p - 3s4s$	$^3P^o - ^3S$	0 - 1	E18
V XII	98.630	300		$3s3p - 3s4s$	$^3P^o - ^3S$	1 - 1	E18
V XII	104.45			$3s3p - 3s4s$	$^3P^o - ^3S$	2 - 1	E18
V XII	104.58			$3p3d - 3p4f$	$^3F^o - ^3G$	4 - 5	F10
				$3p3d - 3p4f$	$^3F^o - ^3G$	2 - 3	F10
V XII	104.66						
V XII	105.49			$3p3d - 3p4f$	$^3F^o - ^3G$	3 - 4	F10
V XII	106.781	200		$3p3d - 3p4f$	$^1D^o - ^3F$	2 - 3	F10
V XII	106.820	300		$3s3d - 3s4f$	$^3D - ^3F^o$	1 - 2	E18
V XII	106.885	400		$3s3d - 3s4f$	$^3D - ^3F^o$	2 - 3	E18
				$3s3d - 3s4f$	$^3D - ^3F^o$	3 - 4	E18
V XII	107.25						
V XII	107.83			$3p3d - 3p4f$	$^3P^o - ^3D$	0 - 1	F10
V XII	108.93			$3p3d - 3p4f$	$^3D^o - ^3D$	3 - 3	F10
V XII	113.39			$3p3d - 3p4f$	$^3D^o - ^3F$	3 - 4	F10
V XII	113.78			$3p3d - 3p4f$	$^1P^o - ^1D$	1 - 2	F10
				$3p3d - 3p4f$	$^1F^o - ^1G$	3 - 4	F10
V XII	283.28						
V XII	288.69			$3s3p - 3s3d$	$^3P^o - ^3D$	1 - 2	F4
V XII	297.77			$3s3p - 3s3d$	$^3P^o - ^3D$	2 - 3	F4
V XII	301.50			$3p^2 - 3p3d$	$^3P - ^3D^o$	2 - 3	F4
V XII	321.9			$3p^2 - 3p3d$	$^3P - ^3P^o$	2 - 2	F4
				$3p^2 - 3p3d$	$^1D - ^1D^o$	2 - 2	F4
V XII	343.12						
V XII	355.11			$3p^2 - 3p3d$	$^1S - ^1P^o$	0 - 1	F4
V XII	373.20			$3s^2 - 3s3p$	$g^1S - ^1P^o$	0 - 1	F22
V XII	380.87			$3s3p - 3p^2$	$^3P^o - ^3P$	1 - 2	F22
V XII	383.63			$3s3p - 3p^2$	$^3P^o - ^3P$	0 - 1	F22
				$3s3p - 3p^2$	$^3P^o - ^3P$	2 - 2	F22
V XII	385.54						
V XII	392.60			$3s3p - 3p^2$	$^3P^o - ^3P$	1 - 1	F22
V XII	396.61			$3s3p - 3p^2$	$^3P^o - ^3P$	1 - 0	F22
V XII	399.76			$3s3p - 3p^2$	$^3P^o - ^3P$	2 - 1	F22
V XII	411.12			$3s3d - 3p3d$	$^3D - ^3D^o$	3 - 3	F4
				$3s3p - 3p^2$	$^1P^o - ^1S$	1 - 0	F4
V XII	476.85						
V XII	488.53			$3s3d - 3p3d$	$^3D - ^3P^o$	3 - 4	F4
V XII	499.41			$3s3d - 3p3d$	$^3D - ^3F^o$	2 - 3	F4
V XII	521.10	?		$3s3d - 3p3d$	$^3D - ^3F^o$	1 - 2	F4
V XII	521.10	?		$3s^2 - 3s3p$	$g^1S - ^3P^o$	0 - 1	K8
V XII	577.93	?		$3s3p - 3p^2$	$^1P^o - ^1D$	1 - 2	K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XII	609.24			3s3p - 3s3d	$^1P^{\circ} - ^1D$	1 - 2	F4

VANADIUM XIII (V^{12+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)
 Ionization Potential $2\,712\,250\text{ cm}^{-1}$; 336.267 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XIII	23.678	0					F27
V XIII	23.96	20					F27
V XIII	24.083	20					F27
V XIII	24.202		-A	$2p^6 3s - 2p^5 3s^2$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	F27
V XIII	24.330	30					F27
V XIII	24.440	0					F27
V XIII	24.517		-A	$2p^6 3s - 2p^5 3s^2$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F27
V XIII	24.654	0					F27
V XIII	24.758	0					F27
V XIII	52.870			$3s - 5p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E16
V XIII	52.928			$3s - 5p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E16
V XIII	58.116			$3p - 5d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E16
V XIII	58.482			$3p - 5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E16
V XIII	70.262			$3d - 5f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E16
V XIII	70.323			$3d - 5f$	$^2D - ^2F^{\circ}$	$\frac{1}{2} - \frac{7}{2}$	E16
V XIII	71.799			$3s - 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E16
V XIII	72.025			$3s - 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E16
V XIII	78.101			$3p - 4d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E16
V XIII	78.746			$3p - 4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E16
V XIII	78.783			$3p - 4d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E16
V XIII	93.025			$3p - 4s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E16
V XIII	93.994			$3p - 4s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E16
V XIII	99.523			$3d - 4f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E16
V XIII	99.625			$3d - 4f$	$^2D - ^2F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	E16
V XIII	118.08			$3d - 4p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F10
V XIII	118.50			$3d - 4p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	F10
V XIII	313.38			$3p - 3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F22
V XIII	323.23			$3p - 3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F22
V XIII	324.58			$3p - 3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F22
V XIII	422.81			$3s - 3p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F22
V XIII	443.48			$3s - 3p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	F22

VANADIUM XIV (V^{13+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^6 1S_0$ (10 electrons)
 Ionization Potential $7\,223\,500\text{ cm}^{-1}$; 895.58 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XIV	15.748	100		$2p^6 - 2p^5 5d$	$g^1 S - ^2 D^{\circ}$	0 - 1	F24
V XIV	16.939	500		$2p^6 - 2p^5 4d$	$g^1 S - ^1 P^{\circ}$	0 - 1	F24
V XIV	17.094	430		$2p^6 - 2p^5 4d$	$g^1 S - ^2 D^{\circ}$	0 - 1	F24
V XIV	17.26	200		$2p^6 - 2p^5 4d$	$g^1 S - ^3/2 [^1/2]^{\circ}$	0 - 1	F8
V XIV	17.575	100		$2p^6 - 2p^5 4s$	$g^1 S - ^1 P^{\circ}$	0 - 1	F24
V XIV	17.754	100		$2p^6 - 2p^5 4s$	$g^1 S - ^3 P^{\circ}$	0 - 1	F24
V XIV	18.782	700		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^1 P^{\circ}$	0 - 1	F24
V XIV	18.870	300		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^2 P^{\circ}$	0 - 1	F24
V XIV	20.716			$2p^6 - 2p^5 3d$	$g^1 S - ^1/2 [^3/2]^{\circ}$	0 - 1	E26, M22
V XIV	21.018			$2p^6 - 2p^5 3d$	$g^1 S - ^3/2 [^1/2]^{\circ}$	0 - 1	E26, M22
V XIV	21.294	1000		$2p^6 - 2p^5 3d$	$g^1 S - ^2 P^{\circ}$	0 - 1	F24
V XIV	23.490			$2p^6 - 2p^5 3s$	$g^1 S - ^1/2 [^1/2]^{\circ}$	0 - 1	E26, M22
V XIV	23.794			$2p^6 - 2p^5 3s$	$g^1 S - ^3/2 [^3/2]^{\circ}$	0 - 1	E26, M22

VANADIUM XV (V^{14+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^5 2P_{3/2}^{\circ}$ (9 electrons)
 Ionization Potential $7\,856\,200\text{ cm}^{-1}$; 974.02 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XV	15.87			$2p^5 - 2p^4 4d$			F5
V XV	19.04	40		$2p^5 - 2p^4 (^1S) 3d$	$g^2 P^{\circ} - ^2 D$	$3/2 - 5/2$	C10
V XV	19.21	60		$2p^5 - 2p^4 (^1S) 3d$	$g^2 P^{\circ} - ^2 D$	$1/2 - 3/2$	C10
V XV	19.38	80		$2p^5 - 2p^4 (^1D) 3d$	$g^2 P^{\circ} - ^2 P$	$3/2 - 3/2$	C10
V XV	19.45	60		$2p^5 - 2p^4 (^1D) 3d$	$g^2 P^{\circ} - ^2 P$	$3/2 - 1/2$	C10
V XV	19.53	70		$2p^5 - 2p^4 (^1D) 3d$	$g^2 P^{\circ} - ^2 D$	$3/2 - 5/2$	C10
V XV	19.66	60b		$2p^5 - 2p^4 (^2P) 3d$	$g^2 P^{\circ} - ^2 D$	$3/2 - 5/2$	C10
V XV	19.69			$2p^5 - 2p^4 (^1D) 3d$	$g^2 P^{\circ} - ^2 S$	$1/2 - 1/2$	C10
V XV	19.74	10		$2p^5 - 2p^4 (^2P) 3d$	$g^2 P^{\circ} - ^2 D$	$3/2 - 3/2$	C10
V XV	19.79	30		$2p^5 - 2p^4 (^2P) 3d$	$g^2 P^{\circ} - ^2 P$	$3/2 - 3/2$	C10
V XV	19.86	70		$2p^5 - 2p^4 (^2P) 3d$	$g^2 P^{\circ} - ^2 P$	$3/2 - 1/2$	C10
V XV	19.91	40b		$2p^5 - 2p^4 (^2P) 3d$	$g^2 P^{\circ} - ^4 D$	$3/2 - 3/2$	C10
V XV	20.00	10		$2p^5 - 2p^4 (^2P) 3d$	$g^2 P^{\circ} - ^2 P$	$1/2 - 3/2$	C10
V XV	20.03	30		$2p^5 - 2p^4 (^2P) 3d$	$g^2 P^{\circ} - ^2 P$	$1/2 - 1/2$	C10
V XV	21.58	60		$2p^5 - 2p^4 (^1D) 3s$	$g^2 P^{\circ} - ^2 D$	$3/2 - 5/2$	C10
V XV	21.83	50		$2p^5 - 2p^4 (^1D) 3s$	$g^2 P^{\circ} - ^2 D$	$1/2 - 3/2$	C10
V XV	21.92	50		$2p^5 - 2p^4 (^2P) 3s$	$g^2 P^{\circ} - ^2 P$	$3/2 - 3/2$	C10
V XV	22.09	60		$2p^5 - 2p^4 (^2P) 3s$	$g^2 P^{\circ} - ^4 P$	$3/2 - 3/2$	C10
V XV	22.20	30		$2p^5 - 2p^4 (^2P) 3s$	$g^2 P^{\circ} - ^2 P$	$1/2 - 3/2$	C10
V XV	22.38	20		$2s 2p^6 - 2s 2p^5 3s$	$^2 S - ^2 P^{\circ}$	$1/2 - 3/2$	C10
V XV	113.87			$2s^2 2p^5 - 2s 2p^6$	$g^2 P^{\circ} - ^2 S$	$3/2 - 1/2$	F5
V XV	121.97			$2s^2 2p^5 - 2s 2p^6$	$g^2 P^{\circ} - ^2 S$	$1/2 - 1/2$	F5

VANADIUM XVI (V¹⁵⁺), Z = 23
Ground State 1s²2s²2p⁴ ³P₂ (8 electrons)
Ionization Potential [8 533 600] cm⁻¹; [1058] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XVI	18.076	200		2p ⁴ - 2p ³ (³ P ^o)3d	g ³ P - ³ D ^o	2 - 3	G13
V XVI	18.223	50		2p ⁴ - 2p ³ (³ P ^o)3d	g ³ P - ³ P ^o	2 - 2	G13
V XVI	18.344	400		2p ⁴ - 2p ³ (³ D ^o)3d	g ³ P - ³ P ^o	2 - 2	G13
V XVI	18.529	400		2p ⁴ - 2p ³ (³ D ^o)3d	¹ D - ¹ F ^o	2 - 3	G13
V XVI	18.630	600		2p ⁴ - 2p ³ (³ D ^o)3d	¹ D - ¹ D ^o	2 - 2	G13
V XVI	18.713	200		2p ⁴ - 2p ³ (⁴ S ^o)3d	g ³ P - ³ D ^o	2 - 3	G13
V XVI	18.890	200		2p ⁴ - 2p ³ (⁴ S ^o)3d	g ³ P - ³ D ^o	1 - 2	G13
V XVI	19.730	300		2p ⁴ - 2p ³ (³ P ^o)3s	g ³ P - ³ P ^o	2 - 2	G13
V XVI	20.082	600		2p ⁴ - 2p ³ (³ D ^o)3s	g ³ P - ³ D ^o	2 - 3	G13
V XVI	20.282	400		2p ⁴ - 2p ³ (³ D ^o)3s	g ¹ P - ³ D ^o	1 - 2	G13
V XVI	20.447	600		2p ⁴ - 2p ³ (⁴ S ^o)3s	g ³ P - ⁴ S ^o	2 - 1	G13
V XVI	20.516	400		2p ⁴ - 2p ³ (³ P ^o)3s	¹ S - ¹ P ^o	0 - 1	G13
V XVI	20.663	250		2p ⁴ - 2p ³ (⁴ S ^o)3s	g ³ P - ³ S ^o	1 - 1	G13
V XVI	108.15			2s ³ 2p ⁴ - 2s2p ⁵	¹ D - ¹ P ^o	2 - 1	F5
V XVI	123.72			2s ³ 2p ³ - 2s2p ⁵	¹ S - ¹ P ^o	0 - 1	F5
V XVI	125.11			2s ³ 2p ⁴ - 2s2p ⁵	g ³ P - ³ P ^o	2 - 1	F5
V XVI	129.16			2s ³ 2p ⁴ - 2s2p ⁵	g ³ P - ³ P ^o	1 - 0	F5
V XVI	131.22			2s ³ 2p ⁴ - 2s2p ⁵	g ³ P - ³ P ^o	2 - 2	F5
V XVI	133.29			2s ³ 2p ⁴ - 2s2p ⁵	g ³ P - ³ P ^o	1 - 1	F5
V XVI	133.48			2s ³ 2p ⁴ - 2s2p ⁵	g ³ P - ³ P ^o	0 - 1	F5
V XVI	140.25			2s ³ 2p ⁴ - 2s2p ⁵	g ³ P - ³ P ^o	1 - 2	F5

VANADIUM XVII (V¹⁶⁺), Z = 23
Ground State 1s²2s²2p³ ⁴S_{3/2} (7 electrons)
Ionization Potential [9 396 600] cm⁻¹; [1165] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XVII	17.27			2s ³ 2p ³ - 2s ² 2p ² (³ P)3d	g ⁴ S ^o - ⁴ P	3/2 - 3/2	F5
V XVII	17.6			2s ³ 2p ³ - 2s ² 2p ² (¹ D)3d	³ D ^o - ² F	3/2 - 3/2	F5
V XVII	102.84			2s ³ 2p ³ - 2s2p ⁴	³ D ^o - ² P	3/2 - 1/2	F5
V XVII	111.27			2s ³ 2p ³ - 2s2p ⁴	³ D ^o - ³ P	3/2 - 3/2	F5
V XVII	117.23			2s ³ 2p ³ - 2s2p ⁴	² P ^o - ³ P	3/2 - 1/2	F5
V XVII	120.82			2s ³ 2p ³ - 2s2p ⁴	³ P ^o - ² P	1/2 - 3/2	F5
V XVII	126.71			2s ³ 2p ³ - 2s2p ⁴	³ P ^o - ³ S	1/2 - 1/2	F5
V XVII	130.91			2s ³ 2p ³ - 2s2p ⁴	³ P ^o - ³ S	3/2 - 1/2	F5
V XVII	134.01			2s ³ 2p ³ - 2s2p ⁴	³ D ^o - ³ D	3/2 - 3/2	F5
V XVII	136.45			2s ³ 2p ³ - 2s2p ⁴	³ D ^o - ³ D	3/2 - 3/2	F5
V XVII	150.03			2s ³ 2p ³ - 2s2p ⁴	g ⁴ S ^o - ⁴ P	3/2 - 3/2	F5
V XVII	159.30			2s ³ 2p ³ - 2s2p ⁴	g ⁴ S ^o - ⁴ P	3/2 - 3/2	F5

VANADIUM XVIII (V^{17+}), $Z = 23$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential [10 155 000] cm^{-1} ; [1259] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XVIII	16.321	100		$2s^2 2p^2 - 2s^2 2p 3d$	$g^2 P - ^2 P^o$	1 - 2	G14
V XVIII	16.341	100		$2s 2p^2 - 2s 2p^2 (^4P) 3d$	$^4 S^o - ^2 P$	2 - 3	G14
V XVIII	16.378	100		$2s^2 2p^2 - 2s^2 2p 3d$	$g^2 P - ^2 P^o$	2 - 2	G14
V XVIII	16.423	40		$2s^2 2p^2 - 2s^2 2p 3d$	$g^2 P - ^2 D^o$	2 - 3	G14
V XVIII	16.467	160		$2s^2 2p^2 - 2s^2 2p 3d$	$^1 D - ^1 F^o$	2 - 3	G14
V XVIII	16.558	140		$2s 2p^2 - 2s 2p^2 (^2D) 3d$	$^2 D^o - ^2 F$	3 - 4	G14
V XVIII	16.816	60		$2s^2 2p^2 - 2s^2 2p 3d$	$^1 S - ^1 P^o$	0 - 1	G14
V XVIII	17.018	40		$2s 2p^2 - 2s 2p^2 (^4P) 3d$	$^2 D^o - ^2 F$	2 - 3	G14
V XVIII	17.400	180		$2s^2 2p^2 - 2s^2 2p 3s$	$g^2 P - ^3 P^o$	1 - 2	G14
V XVIII	17.442	80		$2s 2p^2 - 2s 2p^2 (^4P) 3s$	$^5 S^o - ^5 P$	2 - 3	G14
V XVIII	17.482	160		$2s^2 2p^2 - 2s^2 2p 3s$	$g^2 P - ^2 P^o$	2 - 2	G14
V XVIII	17.545	40		$2s 2p^2 - 2s 2p^2 (^2D) 3s$	$^2 D^o - ^2 D$	2 - 2	G14
V XVIII	17.678	80		$2s^2 2p^2 - 2s^2 2p 3s$	$g^2 P - ^3 P^o$	2 - 1	G14
V XVIII	17.717	20		$2s^2 2p^2 - 2s^2 2p 3s$	$^1 D - ^1 P^o$	2 - 1	G14
V XVIII	18.12	P		$2s^2 2p^2 - 2s^2 2p 3s$	$^1 S - ^1 P^o$	0 - 1	G14
V XVIII	124.94	?		$2s^2 2p^2 - 2s 2p^2$	$^1 D - ^1 P^o$	2 - 1	K8
V XVIII	132.00	?		$2s^2 2p^2 - 2s 2p^3$	$g^2 P - ^2 S^o$	2 - 1	K8
V XVIII	141.15	?		$2s^2 2p^2 - 2s 2p^2$	$^1 D - ^1 D^o$	2 - 2	K8
V XVIII	142.23	?		$2s^2 2p^2 - 2s 2p^2$	$^1 S - ^1 P^o$	0 - 1	K8
V XVIII	163.29	?		$2s^2 2p^2 - 2s 2p^2$	$g^2 P - ^2 P^o$	1 - 2	K8
V XVIII	172.10	?		$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^2 P^o$	2 - 2	K8
V XVIII	175.16	?		$2s^2 2p^2 - 2s 2p^2$	$g^3 P - ^2 P^o$	2 - 1	K8
V XVIII	208.22	?		$2s^2 2p^2 - 2s 2p^2$	$g^2 P - ^2 D^o$	2 - 3	K8

VANADIUM XIX (V^{18+}), $Z = 23$
 Ground State $1s^2 2s^2 2p \ ^2P_{1/2}$ (5 electrons)
 Ionization Potential [10 913 000] cm^{-1} ; [1353] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XIX	12.14	?		$2p - 4s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	K8
V XIX	15.70	?		$2p - 3d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	K8
V XIX	16.59	?		$2p - 3s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	K8
V XIX	145.54	?		$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	K8
V XIX	161.61	?		$2s^2 2p - 2s 2p^2$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	K8

VANADIUM XX (V^{19+}), $Z = 23$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential [11 953 000] cm^{-1} ; [1482] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XX	9.84 ?			$2s^2 - 2s 5p$	$g^1S - ^2P^o$	0 - 1	K8
V XX	10.95 ?			$2s^2 - 2s 4p$	$g^1S - ^2P^o$	0 - 1	K8
V XX	13.82 ?			$2s^2 - 2p 3s$	$g^1S - ^1P^o$	0 - 1	K8
V XX	170.58 ?			$2s^2 - 2s 2p$	$g^1S - ^1P^o$	0 - 1	K8
V XX	326.07 ?			$2s^2 - 2s 2p$	$g^1S - ^2P^o$	0 - 1	K8

VANADIUM XXI (V^{20+}), $Z = 23$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [12 655 000] cm^{-1} ; [1569] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XXI	234.49 P			$2s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K8
V XXI	287.25 P			$2s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	K8

VANADIUM XXII (V^{21+}), $Z = 23$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential [55 258 000] cm^{-1} ; [6851] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XXII	2.04			$1s^2 - 1s 3p$	$g^1S - ^3P^o$	0 - 1	C11
V XXII	2.39 P			$1s^2 - 1s 2p$	$g^1S - ^1P^o$	0 - 1	K8, C11
V XXII	2.40			$1s^2 - 1s 2p$	$g^1S - ^3P^o$	0 - 1	C11
V XXII	2.43 ?	f		$1s^2 - 1s 2s$	$g^1S - ^3S$	0 - 1	K8

VANADIUM XXIII (V^{2+}), $Z = 23$ Ground State $1s^2 S_{1/2}$ (1 electron)Ionization Potential [58 443 600] cm^{-1} ; [7245.9] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
V XXIII	2.29 P			$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K8

CHROMIUM, Z = 24

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr	12.201	0					S ³¹
Cr	12.329	0					S ³¹
Cr	12.435	0					S ³¹
Cr	12.589	0					S ³¹
Cr	12.778	0					S ³¹
Cr	12.909	10					S ³¹
Cr	13.217	10					S ³¹
Cr	13.652	10					S ³¹
Cr	13.760	0					S ³¹
Cr	14.024	10					S ³¹
Cr	14.039	10					S ³¹
Cr	14.205	10					S ³¹
Cr	14.641	0					S ³¹
Cr	206.53	100					F ¹¹
Cr	215.38	300					F ¹¹
Cr	217.19	300					F ¹¹
Cr	217.55	200					F ¹¹
Cr	217.61	200					F ¹¹
Cr	218.15	100					F ¹¹
Cr	219.29	400					F ¹¹
Cr	219.94	200					F ¹¹

CHROMIUM I (Cr⁰⁺), Z = 24Ground State 1s²2s²2p⁶3s²3p⁶3d⁵4s ⁷S₃ (24 electrons)Ionization Potential 54 570 cm⁻¹; 6.766 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr I	1880.39	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - r ⁴ P ^o	2-2	K12
Cr I	1881.87	250		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - r ⁴ P ^o	2-1	K12
Cr I	1883.11	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - r ⁴ P ^o	3-3	K12
Cr I	1886.34	500		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - r ⁴ P ^o	3-2	K12
Cr I	1887.60	150		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - o ⁴ F ^o	2-3	K12
Cr I	1887.85	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - o ⁴ F ^o	1-2	K12
Cr I	1888.17	150		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - o ⁴ F ^o	3-4	K12
Cr I	1889.20	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - o ⁴ F ^o	0-1	K12
Cr I	1890.78	300		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - o ⁴ F ^o	4-5	K12
Cr I	1892.01	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - o ⁴ F ^o	2-2	K12
Cr I	1893.59	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - o ⁴ F ^o	3-3	K12
Cr I	1895.78	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - o ⁴ F ^o	4-4	K12
Cr I	1902.43	150		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - q ⁴ D ^o	1-2	K12
Cr I	1903.30	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - q ⁴ D ^o	0-1	K12
Cr I	1903.57	50		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - q ⁴ D ^o	3-4	K12
Cr I	1906.67	100		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - q ⁴ D ^o	2-2	K12
Cr I	1907.28	100		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - q ⁴ D ^o	1-0	K12
Cr I	1908.46	200		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - q ⁴ D ^o	3-3	K12
Cr I	1909.72	100		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - q ⁴ D ^o	2-1	K12
Cr I	1911.30	350		3d ⁴ 4s ² - 3d ⁴ 4s(a ⁴ D)6p	a ⁵ D - q ⁴ D ^o	4-4	K12

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr I	1912.79	200		$3d^4 4s^2 - 3d^4 4s(a^4D)6p$	$a^4D - q^4D^{\circ}$	3-2	K12
Cr I	1916.23	100		$3d^4 4s^2 - 3d^4 4s(a^4D)6p$	$a^4D - q^4D^{\circ}$	4-3	K12
Cr I	1989.00	200	49	$3d^4 4s^2 - 3d^4 4s(a^4D)4p$	$a^4D - s^4F^{\circ}$	2-3	K12
Cr I	1989.92	750	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	1-2	K12
Cr I	1990.27	400	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	0-1	K12
Cr I	1991.22	750	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	2-3	K12
Cr I	1992.12	300	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	3-4	K12
Cr I	1992.65	250	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	1-1	K12
Cr I	1994.10	400	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	1-0	K12
Cr I	1994.55	750	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	2-2	K12
Cr I	1995.69	250	49	$3d^4 4s^2 - 3d^4(a^4D)4p$	$a^4D - s^4F^{\circ}$	3-3	K12
Cr I	1997.09	250	49	$3d^4 4s^2 - 3d^4(a^4D)4p$	$a^4D - s^4F^{\circ}$	3-4	K12
Cr I	1997.30	500b	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	2-1	K12
Cr I	1997.90	600	48	$3d^4 4s^2 - 3d^4 4s(a^4D)5p$	$a^4D - r^4D^{\circ}$	3-3	K12

CHROMIUM II (Cr^{1+}), $Z = 24$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)Ionization Potential $133\ 060\ cm^{-1}$; $16.50\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr II	1786.07	40	224	$3d^4(a^2F)4s - 3d^4(b^2F)4p$	$b^2F - u^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1791.51	40	224	$3d^4(a^2F)4s - 3d^4(b^2F)4p$	$b^2F - u^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1808.66	60	18	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$a^4D - x^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	K11
Cr II	1810.08	100		$3d^4(a^2D)4s - 3d^4(a^2F)4p$	$a^4D - y^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1812.95	20		$3d^5 - 3d^4(a^1F)4p$	$a^2D - v^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1813.50	20		$3d^4(a^2D)4s - 3d^4(a^2F)4p$	$a^4D - y^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1815.32	60		$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$a^4D - x^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	K11
Cr II	1818.89	20		$3d^5 - 3d^4(a^1F)4p$	$a^2D - v^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1819.81	100		$3d^4(a^2D)4s - 3d^4(a^2F)4p$	$a^4D - y^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1820.84	80	18	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1821.58	160		$3d^4(a^2D)4s - 3d^4(a^2F)4p$	$a^4D - y^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1823.07	20		$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$a^4D - x^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	K11
Cr II	1825.34	60	4	$3d^5 - 3d^4(a^2D)4p$	$g^4S - z^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1828.62	60		$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$a^4D - x^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	K11
Cr II	1830.61	100	4	$3d^5 - 3d^4(a^2D)4p$	$g^4S - z^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1836.23	240	18	$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1852.13	500	33	$3d^5 - 3d^4(a^2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$	K11
Cr II	1852.37	60	33	$3d^5 - 3d^4(a^2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	K11
Cr II	1854.46	20		$3d^5 - 3d^4(a^2D)4p$	$a^4G - x^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1854.68	60		$3d^5 - 3d^4(a^2D)4p$	$a^4G - x^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1855.14	400	33	$3d^5 - 3d^4(a^2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	K11
Cr II	1858.54	400	33	$3d^5 - 3d^4(a^2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1858.72	300	33	$3d^5 - 3d^4(a^2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1860.12	240	33	$3d^5 - 3d^4(a^2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1865.80	20		$3d^5 - 3d^4(a^2D)4p$	$a^4G - x^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1866.22	300	156	$3d^5 - 3d^4(a^1F)4p$	$a^2F - v^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1870.46	20		$3d^4(a^2D)4s - 3d^4(a^2D)4p$	$a^4D - w^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1875.22	60		$3d^5 - 3d^4(a^1F)4p$	$a^2D - u^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1879.05	200	156	$3d^5 - 3d^4(a^1F)4p$	$a^2F - v^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	K11
Cr II	1881.06	120		$3d^5 - 3d^4(a^2D)4p$	$a^4P - y^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1883.35	200	40	$3d^5 - 3d^4(a^2D)4p$	$a^4P - x^4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	K11
Cr II	1884.12	20		$3d^5 - 3d^4(a^1F)4p$	$a^2D - u^2F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1887.96	120	156	$3d^5 - 3d^4(a^1F)4p$	$a^2F - v^2G^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11
Cr II	1890.55	600	40	$3d^5 - 3d^4(a^2D)4p$	$a^4P - x^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	K11
Cr II	1898.92	700	40	$3d^5 - 3d^4(a^2D)4p$	$a^4P - x^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	K11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr II	1907.36	60		$3d^4(a^5D)4s - 3d^4(a^3P)4p$	$a^5D - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1911.36	140	155	$3d^5 - 3d^4(a^1F)4p$	$a^3F - u^3F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1918.30	80		$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1923.02	160	155	$3d^5 - 3d^4(a^1F)4p$	$a^3F - u^3F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1929.96	240	285	$3d^5 - 3d^4(b^2F)4p$	$c^2F - u^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1932.64	100	273	$3d^4(a^2G)4s - 3d^4(b^2F)4p$	$c^2G - u^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1935.58	500	39	$3d^5 - 3d^4(a^2D)4p$	$a^4P - w^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1937.56	400	39	$3d^5 - 3d^4(a^2D)4p$	$a^4P - w^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1938.42	60	39	$3d^5 - 3d^4(a^2D)4p$	$a^4P - w^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1939.15	120	136	$3d^5 - 3d^4(a^2D)4p$	$a^2D - w^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1939.90	100	285	$3d^5 - 3d^4(b^2F)4p$	$c^2F - u^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1945.98	200	136	$3d^5 - 3d^4(a^1D)4p$	$a^2D - w^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1948.51	200	136	$3d^5 - 3d^4(a^1D)4p$	$a^2D - w^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1949.00	800	205	$3d^4(a^2H)4s - 3d^4(a^1F)4p$	$a^2H - v^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1949.22	700	272	$3d^4(a^2G)4s - 3d^4(b^2F)4p$	$c^2G - u^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1950.06	1000	272	$3d^4(a^2G)4s - 3d^4(b^2F)4p$	$c^2G - u^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1955.93	300	205	$3d^4(a^2H)4s - 3d^4(a^1F)4p$	$a^2H - v^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1963.00	300	205	$3d^4(a^2H)4s - 3d^4(a^1F)4p$	$a^2H - v^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1985.42	P 440	31	$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{11}{2} - \frac{11}{2}$	K11
Cr II	1985.67	240	31	$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{7}{2} - \frac{11}{2}$	K11
Cr II	1987.43	100	154	$3d^5 - 3d^4(a^1D)4p$	$a^2F - w^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1990.79	200	236	$3d^5 - 3d^4(a^1F)4p$	$b^2H - v^2G^{\circ}$	$\frac{11}{2} - \frac{7}{2}$	K11
Cr II	1993.37	300	31	$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{11}{2} - \frac{7}{2}$	K11
Cr II	1993.63	500	31	$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1996.62	60		$3d^4(a^2D)4s - 3d^4(a^2F)4p$	$a^4D - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11
Cr II	1998.14	40	204	$3d^4(a^2H)4s - 3d^4(a^1F)4p$	$a^2H - u^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K11

CHROMIUM III (Cr^{2+}), $Z = 24$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)
 Ionization Potential $249\,700\text{ cm}^{-1}$; 30.96 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	735.89	200					M25
Cr III	748.35	80					M25
Cr III	755.69	10					M25
Cr III	756.59	10					M25
Cr III	767.30	10					M25
Cr III	767.61	10		$3d^4 - 3d^3(b^2D)4p$	$a^2G - v^3F^{\circ}$	3 - 3	M25
Cr III	767.83	20					M25
Cr III	768.21	20					M25
Cr III	768.51	30		$3d^4 - 3d^3(b^2D)4p$	$a^2G - v^3F^{\circ}$? 4 - 3	M25
Cr III	769.20	40					M25
Cr III	769.66	30					M25
Cr III	777.38	30					M25
Cr III	777.86	10		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - w^2F^{\circ}$? 2 - 2	M25
Cr III	777.97	10					M25
Cr III	778.12	10					M25
Cr III	778.29	10		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - w^2F^{\circ}$? 3 - 4	M25
Cr III	778.40	10					M25
Cr III	779.43	10					M25
Cr III	780.87	50					M25
Cr III	781.42	40					M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	781.88	30					M25
Cr III	782.26	20					M25
Cr III	782.45	10					M25
Cr III	788.05	20					M25
Cr III	788.90	30					M25
Cr III	789.59	10					M25
Cr III	789.81	10					M25
Cr III	790.65	10					M25
Cr III	796.03	10					M25
Cr III	798.31	10					M25
Cr III	801.04	30					M25
Cr III	814.71	10					M25
Cr III	814.90	10					M25
Cr III	815.40	10					M25
Cr III	815.99	10					M25
Cr III	816.57	10					M25
Cr III	817.25	10					M25
Cr III	817.87	10					M25
Cr III	820.88	10					M25
Cr III	821.74	20		3d ⁴ - 3d ³ (a ² F)4p	a ³ H - v ³ D°	? 4-3	M25
Cr III	823.93	10					M25
Cr III	843.37	10					M25
Cr III	845.90	10					M25
Cr III	866.19	10					M25
Cr III	875.05	20					M25
Cr III	876.79	10		3d ⁴ - 3d ³ (a ² F)4p	a ³ H - w ³ G°	5-5	M25
Cr III	877.81	100		3d ⁴ - 3d ³ (a ² F)4p	a ³ H - w ³ G°	6-5	M25
Cr III	878.20	100		3d ⁴ - 3d ³ (a ² F)4p	a ³ H - w ³ G°	5-4	M25
Cr III	878.39	100		3d ⁴ - 3d ³ (a ² F)4p	a ³ H - w ³ G°	4-3	M25
Cr III	883.00	50		3d ⁴ - 3d ³ (a ² F)4p	a ³ D - v ³ D°	3-3	M25
Cr III	884.18	20					M25
Cr III	886.84	10		3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ G°	3-4	M25
Cr III	887.57	10		3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ G°	2-3	M25
Cr III	888.25	10		3d ⁴ - 3d ³ (a ² F)4p	a ³ D - v ³ D°	? 2-2	M25
Cr III	888.54	10		3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ G°	? 4-3	M25
Cr III	889.33	30					M25
Cr III	892.09	10					M25
Cr III	894.86	10					M25
Cr III	895.19	10					M25
Cr III	896.82	50		3d ⁴ - 3d ³ (a ² F)4p	a ³ H - w ³ F°	? 4-3	M25
Cr III	905.35	50		3d ⁴ - 3d ³ (a ² F)4p	a ³ G - w ³ G°	5-5	M25
Cr III	905.66	100		3d ⁴ - 3d ³ (a ² F)4p	a ³ G - w ³ G°	4-4	M25
Cr III	905.92	10					M25
Cr III	906.29	10		3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ F°	3-4	M25
Cr III	906.59	80		3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ F°	2-2	M25
Cr III	906.90	150		3d ⁴ - 3d ³ (a ² F)4p	a ³ F - w ³ F°	4-4	M25
Cr III	910.75	50		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - y ³ D°	3-4	M25
Cr III	911.17	50					M25
Cr III	912.26	10					M25
Cr III	912.57	100		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - y ³ D°	4-4	M25
Cr III	912.83	10		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - y ³ D°	? 2-3	M25
Cr III	913.18	10		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	? 1-2	M25
Cr III	913.75	30					M25
Cr III	914.08	80		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	? 2-2	M25
Cr III	914.67	10					M25
Cr III	915.02	20					M25
Cr III	916.21	20		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - y ³ D°	4-3	M25
Cr III	917.40	10					M25
Cr III	917.75	20		3d ⁴ - 3d ³ (a ² G)4p	ga ³ D - z ³ H°	? 4-4	M25
Cr III	918.18	10					M25
Cr III	918.50	10					M25
Cr III	919.19	30					M25
Cr III	920.73	30	4	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	2-3	M25
Cr III	922.19	50	4	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	3-3	M25
Cr III	922.47	100	4	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	1-2	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	Reference
Cr III	923.55	200	4	3d ⁴ - 3d ³ (a ² P)4p	ga ⁴ D - z ⁴ P ^o	2 - 2	M25
Cr III	923.81	100	4	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁴ D - z ⁴ P ^o	0 - 1	M25
Cr III	924.07	200	4	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁴ D - z ⁴ P ^o	4 - 3	M25
Cr III	924.32	200	4	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁴ D - z ⁴ P ^o	1 - 1	M25
Cr III	925.03	200	4	3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁴ D - z ⁴ P ^o	3 - 2	M25
Cr III	925.35	150	4	3d ⁴ - 3d ³ (a ² P)4p	ga ⁴ D - z ⁴ P ^o	2 - 1	M25
Cr III	925.49	150	27	3d ⁴ - 3d ³ (a ² F)4p	a ² G - w ³ F ^o	3 - 2	M25
Cr III	926.52	150	27	3d ⁴ - 3d ³ (a ² F)4p	a ² G - w ³ F ^o	4 - 3	M25
Cr III	927.16	200	27	3d ⁴ - 3d ³ (a ² F)4p	a ² G - w ³ F ^o	5 - 4	M25
Cr III	930.78	10					M25
Cr III	934.91	10					M25
Cr III	937.06	40h					M25
Cr III	939.93	10					M25
Cr III	940.39	40					M25
Cr III	942.86	10					M25
Cr III	953.94	100					M25
Cr III	954.07	100					M25
Cr III	963.34	200					M25
Cr III	964.80	60					M25
Cr III	966.28	80	11	3d ⁴ - 3d ³ (a ² H)4p	a ² H - x ² G ^o	4 - 3	M25
Cr III	967.59	100	11	3d ⁴ - 3d ³ (a ² H)4p	a ² H - x ² G ^o	5 - 4	M25
Cr III	968.06	5	11	3d ⁴ - 3d ³ (a ² H)4p	a ² H - x ² G ^o	5 - 5	M25
Cr III	969.26	200	11	3d ⁴ - 3d ³ (a ² H)4p	a ² H - x ² G ^o	6 - 5	M25
Cr III	969.70	20		3d ⁴ - 3d ³ (a ² F)4p	a ² D - w ³ F ^o	3 - 4	M25
Cr III	970.86	10		3d ⁴ - 3d ³ (a ² F)4p	a ² D - w ³ F ^o	2 - 3	M25
Cr III	971.78	10		3d ⁴ - 3d ³ (a ² F)4p	a ² D - w ³ F ^o	1 - 2	M25
Cr III	974.96	40					M25
Cr III	977.82	50					M25
Cr III	984.54	10		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁴ D - z ⁴ F ^o	? 2 - 3	M25
Cr III	984.95	10		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁴ D - z ⁴ F ^o	? 4 - 4	M25
Cr III	985.12	10		3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ¹ H ^o	? 6 - 5	M25
Cr III	987.58	20		3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D ^o	1 - 2	M25
Cr III	992.59	50		3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D ^o	2 - 3	M25
Cr III	994.08	20					M25
Cr III	994.31	40		3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D ^o	2 - 2	M25
Cr III	996.09	100		3d ⁴ - 3d ³ (a ² H)4p	a ² H - z ² I ^o	6 - 7	M25
Cr III	999.08	150		3d ⁴ - 3d ³ (a ² H)4p	a ² H - z ² I ^o	5 - 6	M25
Cr III	999.37	200	26	3d ⁴ - 3d ³ (a ² H)4p	a ² G - x ² G ^o	3 - 3	M25
Cr III	999.52	10	26	3d ⁴ - 3d ³ (a ² H)4p	a ² G - x ² G ^o	3 - 4	M25
Cr III	999.84	200	19	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D ^o	4 - 3	M25
Cr III	1000.28	10	19	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D ^o	2 - 2	M25
Cr III	1000.86	400	19	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - w ³ D ^o	3 - 2	M25
Cr III	1001.04	400	26	3d ⁴ - 3d ³ (a ² H)4p	a ² G - x ² G ^o	4 - 4	M25
Cr III	1001.28	100		3d ⁴ - 3d ³ (a ² H)4p	a ² H - z ² I ^o	4 - 5	M25
Cr III	1001.52	20	26	3d ⁴ - 3d ³ (a ² H)4p	a ² G - x ² G ^o	4 - 5	M25
Cr III	1002.96	300	26	3d ⁴ - 3d ³ (a ² H)4p	a ² G - x ² G ^o	5 - 5	M25
Cr III	1002.99	200		3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ¹ G ^o	5 - 4	M25
Cr III	1003.37	90		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁴ D - z ⁴ G ^o	? 2 - 3	B25
Cr III	1007.23	100					M25
Cr III	1014.02	10					M25
Cr III	1014.20	100		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - z ¹ H ^o	? 4 - 5	M25
Cr III	1015.03	30		3d ⁴ - 3d ³ (a ² H)4p	a ³ F - y ¹ G ^o	4 - 4	M25
Cr III	1015.77	20	9	3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ³ H ^o	5 - 6	M25
Cr III	1016.29	40	9	3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ³ H ^o	4 - 5	M25
Cr III	1016.41	100	18	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - x ³ F ^o	4 - 4	M25
Cr III	1017.14	500	9	3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ³ H ^o	6 - 6	M25
Cr III	1017.31	500	9	3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ³ H ^o	4 - 4	M25
Cr III	1017.57	500	9	3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ³ H ^o	5 - 5	M25
Cr III	1018.58	5	9	3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ³ H ^o	5 - 4	M25
Cr III	1018.90	10	9	3d ⁴ - 3d ³ (a ² H)4p	a ² H - y ³ H ^o	6 - 5	M25
Cr III	1019.60	10		3d ⁴ - 3d ³ (a ² D)4p	a ³ F - x ³ F ^o	2 - 3	M25
Cr III	1020.24	30		3d ⁴ - 3d ³ (a ⁴ P)4p	a ³ P - y ³ D ^o	1 - 2	M25
Cr III	1020.94	200	18	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - x ³ F ^o	4 - 3	M25
Cr III	1021.64	150	18	3d ⁴ - 3d ³ (a ² D)4p	a ³ F - x ³ F ^o	3 - 2	M25
Cr III	1023.47	20		3d ⁴ - 3d ³ (a ⁴ P)4p	a ³ P - y ³ D ^o	2 - 3	M25

Element	Wave-length	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1025.58	100		$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$? 2 - 3	B25
Cr III	1027.46	200	3	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	3 - 3	M25
Cr III	1028.33	300	3	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	1 - 2	M25
Cr III	1029.57	100	3	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	2 - 2	M25
Cr III	1029.78	50		$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	4 - 3	M25
Cr III	1030.10	200	3	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	0 - 1	M25
Cr III	1030.47	600	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	4 - 5	M25
Cr III	1030.74	20	3	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	1 - 1	M25
Cr III	1030.89	300	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	3 - 4	M25
Cr III	1031.23	50		$3d^4 - 3d^3(a^4F)4p$	$a^3F - y^3D^o$	4 - 3	M25
Cr III	1031.46	80		$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	3 - 2	M25
Cr III	1031.60	10	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	2 - 3	M25
Cr III	1032.05	10	3	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	2 - 3	M25
Cr III	1032.42	50	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	1 - 2	M25
Cr III	1033.23	500	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	4 - 4	M25
Cr III	1033.45	500	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	3 - 3	M25
Cr III	1033.69	1000b	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	3 - 4	M25
Cr III	1033.99	200	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	1 - 1	M25
Cr III	1034.20	150					M25
Cr III	1034.44	150		$3d^4 - 3d^3(a^4P)4p$	$a^3F - y^3D^o$	3 - 2	M25
Cr III	1034.86	200					M25
Cr III	1035.29	250	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	2 - 1	M25
Cr III	1035.57	250	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	3 - 2	M25
Cr III	1035.77	200	2	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3F^o$	4 - 3	M25
Cr III	1035.93	500	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	2 - 3	M25
Cr III	1036.03	1000	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	4 - 4	M25
Cr III	1037.80	200	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	3 - 3	M25
Cr III	1038.06	5		$3d^4 - 3d^3(a^2G)4p$	$a^2G - z^3H^o$	4 - 5	M25
Cr III	1038.80	50		$3d^4 - 3d^3(a^4F)4p$	$a^3F - y^3D^o$	2 - 1	M25
Cr III	1038.97	30	25	$3d^4 - 3d^3(a^2H)4p$	$a^2G - y^3G^o$	4 - 4	M25
Cr III	1039.40	20	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$? 2 - 2	B25
Cr III	1040.05	200	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	0 - 1	M25
Cr III	1040.17	300	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	4 - 3	M25
Cr III	1040.41	250	24	$3d^4 - 3d^3(a^3D)4p$	$a^2G - x^3F^o$	4 - 4	M25
Cr III	1040.53	400	25	$3d^4 - 3d^3(a^3H)4p$	$a^2G - y^3G^o$	5 - 4	M25
Cr III	1040.70	50	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	1 - 1	M25
Cr III	1040.79	50					M25
Cr III	1041.34	150	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	3 - 2	M25
Cr III	1042.02	10	1	$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$	2 - 1	M25
Cr III	1042.58	20					M25
Cr III	1042.87	30					M25
Cr III	1043.39	20		$3d^4 - 3d^3(a^2G)4p$	$a^3F - z^3G^o$? 3 - 4	M25
Cr III	1044.74	40		$3d^4 - 3d^3(a^4F)4p$	$g^3D - z^3D^o$? 1 - 0	M25
Cr III	1045.06	400	24	$3d^4 - 3d^3(a^3D)4p$	$a^2G - x^3F^o$	3 - 2	M25
Cr III	1045.14	400	24	$3d^4 - 3d^3(a^3D)4p$	$a^2G - x^3F^o$	4 - 3	M25
Cr III	1045.71	30					M25
Cr III	1047.04	5		$3d^4 - 3d^3(a^4P)4p$	$a^3P - z^3S^o$	2 - 2	M25
Cr III	1050.50	70		$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^3F^o$	4 - 3	M25
Cr III	1051.92	50		$3d^4 - 3d^3(a^2F)4p$	$b^3F - v^3D^o$? 2 - 2	M25
Cr III	1052.36	30		$3d^4 - 3d^3(a^2H)4p$	$a^3D - x^3G^o$? 3 - 4	M25
Cr III	1052.89	20		$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^3F^o$	5 - 4	M25
Cr III	1054.10	70		$3d^4 - 3d^3(a^2H)4p$	$a^2G - y^3H^o$	3 - 4	M25
Cr III	1054.32	100		$3d^4 - 3d^3(a^2H)4p$	$a^2G - y^3H^o$	5 - 6	M25
Cr III	1054.66	150		$3d^4 - 3d^3(a^3H)4p$	$a^2G - y^3H^o$	4 - 5	M25
Cr III	1056.11	100					M25
Cr III	1056.97	30		$3d^4 - 3d^3(a^2G)4p$	$a^3P - y^3F^o$? 2 - 3	M25
Cr III	1057.30	5	8	$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^3G^o$	4 - 5	M25
Cr III	1058.63	3	8	$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^3G^o$? 5 - 5	B25
Cr III	1059.13	600					M25
Cr III	1060.15	600	8	$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^3G^o$	6 - 5	M25
Cr III	1060.68	30					M25
Cr III	1061.04	600	8	$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^3G^o$	5 - 4	M25
Cr III	1062.68	500	8	$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^3G^o$	4 - 3	M25
Cr III	1063.63	10	17	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^o$	2 - 3	M25
Cr III	1064.32	300	17	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^o$	3 - 3	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1064.43	300	17	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^o$	2-2	M25
Cr III	1065.12	150	17	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^o$	4-3	M25
Cr III	1065.40	30	17	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^o$	3-4	M25
Cr III	1066.23	500	17	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3F^o$	4-4	M25
Cr III	1066.55	50					M25
Cr III	1067.16	200		$3d^4 - 3d^3(a^4F)4p$	$ga^3D - z^3G^o$? 1-2	M25
Cr III	1067.25	200					M25
Cr III	1067.92	200					M25
Cr III	1068.41	800					M25
Cr III	1069.45	20		$3d^4 - 3d^3(a^2G)4p$	$a^2G - z^1G^o$? 4-4	M25
Cr III	1070.55	30b		$3d^4 - 3d^3(a^4F)4p$	$ga^3D - z^3G^o$	3-2	M25
Cr III	1072.13	200	16	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^o$	4-5	M25
Cr III	1073.74	200	16	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^o$	3-4	M25
Cr III	1074.56	50	16	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^o$	4-4	M25
Cr III	1076.15	200	16	$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^3G^o$	2-3	M25
Cr III	1076.74	200	32	$3d^4 - 3d^3(a^3D)4p$	$a^3D - w^3D^o$	3-3	M25
Cr III	1077.29	10		$3d^4 - 3d^3(a^3D)4p$	$a^3D - w^3D^o$	2-3	M25
Cr III	1078.80	36	32	$3d^4 - 3d^3(a^3D)4p$	$a^3D - w^3D^o$	3-2	M25
Cr III	1079.43	150	32	$3d^4 - 3d^3(a^3D)4p$	$a^3D - w^3D^o$	2-2	M25
Cr III	1079.97	10					M25
Cr III	1080.21	20	32	$3d^4 - 3d^3(a^3D)4p$	$a^3D - w^3D^o$	1-2	M25
Cr III	1082.10	50		$3d^4 - 3d^3(a^2G)4p$	$a^3H - z^3H^o$	6-5	M25
Cr III	1083.72	20	32	$3d^4 - 3d^3(a^3D)4p$	$a^3D - w^3D^o$	2-1	M25
Cr III	1084.26	20					M25
Cr III	1084.84	20					M25
Cr III	1085.27	20		$3d^4 - 3d^3(a^2G)4p$	$a^3H - z^3H^o$? 5-4	M25
Cr III	1085.96	20					M25
Cr III	1087.70	10					M25
Cr III	1088.28	10					M25
Cr III	1089.30	10					M25
Cr III	1089.76	40		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3F^o$	3-3	M25
Cr III	1090.27	20		$3d^4 - 3d^3(a^4P)4p$	$a^3P - z^3P^o$	2-2	M25
Cr III	1090.54	10		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3F^o$	3-2	M25
Cr III	1091.54	10		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3F^o$	4-3	M25
Cr III	1092.65	30		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3F^o$	4-4	M25
Cr III	1093.17	50h		$3d^4 - 3d^3(a^4P)4p$	$a^3P - z^3P^o$	0-1	M25
Cr III	1094.38	200		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3F^o$	5-4	M25
Cr III	1094.53	5		$3d^4 - 3d^3(a^2G)4p$	$a^3F - z^3H^o$	4-5	M25
Cr III	1095.96	50	31	$3d^4 - 3d^3(a^3D)4p$	$a^3D - x^3F^o$	3-4	M25
Cr III	1096.90	30					M25
Cr III	1097.25	100		$3d^4 - 3d^3(a^4P)4p$	$a^3F - y^3D^o$? 4-3	M25
Cr III	1097.45	30		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3P^o$? 2-2	M25
Cr III	1098.21	100		$3d^4 - 3d^3(a^4P)4p$	$a^3F - z^3P^o$? 3-2	M25
Cr III	1098.61	100		$3d^4 - 3d^3(a^2G)4p$	$a^3F - z^3H^o$	3-4	M25
Cr III	1098.86	100	23	$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3G^o$	4-5	M25
Cr III	1098.95	50					M25
Cr III	1099.46	100		$3d^4 - 3d^3(a^2G)4p$	$a^3F - z^3H^o$	4-4	M25
Cr III	1099.82	10		$3d^4 - 3d^3(a^4F)4p$	$a^3F - y^3D^o$	3-2	M25
Cr III	1100.61	300	23	$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3G^o$	5-5	M25
Cr III	1101.26	50	31	$3d^4 - 3d^3(a^3D)4p$	$a^3D - x^3F^o$	3-3	M25
Cr III	1101.43	300	23	$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3G^o$	4-4	M25
Cr III	1101.91	150	31	$3d^4 - 3d^3(a^3D)4p$	$a^3D - x^3F^o$	2-3	M25
Cr III	1102.88	300	23	$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3G^o$	3-3	M25
Cr III	1103.57	10		$3d^4 - 3d^3(a^3D)4p$	$a^3D - x^3F^o$? 2-2	M25
Cr III	1103.68	30		$3d^4 - 3d^3(a^4P)4p$	$a^3P - z^3P^o$? 2-2	M25
Cr III	1104.44	150	31	$3d^4 - 3d^3(a^3D)4p$	$a^3D - x^3F^o$	1-2	M25
Cr III	1104.69	30	23	$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^3G^o$	4-3	M25
Cr III	1105.80	70					M25
Cr III	1108.11	100					M25
Cr III	1112.60	10					M25
Cr III	1113.26	100	30	$3d^4 - 3d^3(a^4P)4p$	$a^3D - y^3D^o$	3-3	M25
Cr III?	1116.46	10					M25
Cr III	1117.19	300	22	$3d^4 - 3d^3(a^2G)4p$	$a^2G - z^3H^o$	5-6	M25
Cr III	1117.88	20	30	$3d^4 - 3d^3(a^4P)4p$	$a^3D - y^3D^o$	3-2	M25
Cr III	1118.55	200	30	$3d^4 - 3d^3(a^4P)4p$	$a^3D - y^3D^o$	2-2	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J	References
Cr III	1119.40	5	30	$3d^4 - 3d^3(a^4P)4p$	$a^3D - y^3D^{\circ}$	1-2	M25
Cr III	1121.35	30					M25
Cr III	1122.43	150	22	$3d^4 - 3d^3(a^2G)4p$	$a^2G - z^3H^{\circ}$	4-5	M25
Cr III	1123.37	30		$3d^4 - 3d^3(a^4P)4p$	$a^2G - y^3D^{\circ}$? 3-3	M25
Cr III	1123.59	150					M25
Cr III	1124.43	5	30	$3d^4 - 3d^3(a^4P)4p$	$a^3D - y^3D^{\circ}$	2-1	M25
Cr III	1125.27	100	30	$3d^4 - 3d^3(a^4P)4p$	$a^3D - y^3D^{\circ}$	1-1	M25
Cr III	1125.73	200	22	$3d^4 - 3d^3(a^2G)4p$	$a^2G - z^3H^{\circ}$	3-4	M25
Cr III	1125.90	20					M25
Cr III?	1126.35	10					M25
Cr III	1127.71	150		$3d^4 - 3d^3(a^2G)4p$	$a^2G - z^3H^{\circ}$? 4-4	M25
Cr III	1128.78	10					M25
Cr III	1128.88	30					M25
Cr III	1131.90	150					M25
Cr III	1132.75	300					M25
Cr III	1133.91	50					M25
Cr III	1136.67	500		$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^2G^{\circ}$? 4-4	M25
Cr III	1136.91	10					M25
Cr III	1137.08	20		$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^2G^{\circ}$	3-4	M25
Cr III	1138.76	20		$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^2G^{\circ}$	2-3	M25
Cr III	1141.17	5		$3d^4 - 3d^3(a^4P)4p$	$a^3D - z^3S^{\circ}$	3-2	M25
Cr III	1143.63	150					M25
Cr III	1144.10	100					M25
Cr III	1146.34	250					M25
Cr III	1152.82	10	29	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^{\circ}$? 3-3	M25
Cr III	1153.60	150	29	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^{\circ}$	2-3	M25
Cr III	1154.12	150	29	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^{\circ}$	3-4	M25
Cr III	1154.43	10	29	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^{\circ}$? 2-2	M25
Cr III	1155.39	150	29	$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3F^{\circ}$	1-2	M25
Cr III	1161.43	500					M25
Cr III	1162.60	10					M25
Cr III	1166.23	10					M25
Cr III	1168.32	100		$3d^4 - 3d^3(a^2G)4p$	$a^3D - y^3G^{\circ}$	2-3	M25
Cr III	1168.73	20		$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3F^{\circ}$	4-4	M25
Cr III	1169.25	20		$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3F^{\circ}$? 3-4	M25
Cr III	1170.10	30		$3d^4 - 3d^3(a^2F)4p$	$b^3F - w^3F^{\circ}$	3-3	M25
Cr III	1170.64	30					M25
Cr III	1173.19	40					M25
Cr III	1173.34	50					M25
Cr III	1173.77	100					M25
Cr III	1174.82	150					M25
Cr III	1178.55	30					M25
Cr III	1178.80	20		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3F^{\circ}$? 4-4	M25
Cr III	1178.99	10					M25
Cr III	1179.68	30					M25
Cr III	1180.81	60					M25
Cr III	1181.03	10					M25
Cr III	1181.45	10					M25
Cr III	1181.63	50					M25
Cr III	1186.24	20					M25
Cr III	1187.36	200					M25
Cr III	1187.65	300					M25
Cr III	1192.69	50		$3d^4 - 3d^3(a^4P)4p$	$a^3D - z^3P^{\circ}$? 3-2	M25
Cr III	1193.47	70		$3d^4 - 3d^3(a^4P)4p$	$a^3D - z^3P^{\circ}$? 2-2	M25
Cr III?	1193.89	10					M25
Cr III	1194.44	30		$3d^4 - 3d^3(a^4P)4p$	$a^3D - z^3P^{\circ}$? 1-2	M25
Cr III	1194.96	20					M25
Cr III	1195.42	10		$3d^4 - 3d^3(a^4P)4p$	$a^3D - y^3D^{\circ}$	2-2	M25
Cr III	1196.04	30					M25
Cr III	1196.32	50	15	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^{\circ}$	3-4	M25
Cr III	1197.37	200	15	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^{\circ}$	4-4	M25
Cr III	1197.60	10					M25
Cr III	1198.31	70		$3d^4 - 3d^3(a^4P)4p$	$a^3D - y^3D^{\circ}$? 2-1	M25
Cr III	1200.91	50					M25
Cr III	1201.00	50					M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1201.25	100					M25
Cr III	1201.42	150	15	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^0$	3 - 3	M25
Cr III	1202.02	10					M25
Cr III	1202.45	100	15	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^0$	4 - 3	M25
Cr III	1203.59	120					M25
Cr III	1203.95	20					M25
Cr III	1204.46	50	7	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^0$? 5 - 5	M25
Cr III	1204.59	10				? 2 - 3	M25
Cr III	1204.93	200	15	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^0$	2 - 2	M25
Cr III	1205.15	10					M25
Cr III	1205.78	100	15	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^0$	3 - 2	M25
Cr III	1206.12	10					M25
Cr III	1206.38	600	7	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^0$	6 - 5	M25
Cr III	1206.70	30					M25
Cr III	1206.99	20					M25
Cr III	1207.13	100					M25
Cr III	1207.36	49	7	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^0$	4 - 4	M25
Cr III	1209.13	800	7	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^0$	5 - 4	M25
Cr III	1209.42	10				? 2 - 2	M25
Cr III	1209.66	10					M25
Cr III	1211.12	800	7	$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^0$	4 - 3	M25
Cr III	1211.84	10					M25
Cr III	1212.98	50					M25
Cr III	1213.51	50				? 1 - 1	M25
Cr III	1213.82	10					M25
Cr III	1218.60	100					M25
Cr III	1218.89	50					M25
Cr III	1219.55	50					M25
Cr III	1220.14	200					M25
Cr III	1221.07	400					M25
Cr III	1221.45	10					M25
Cr III	1221.90	400	14	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^0$	4 - 5	M25
Cr III	1223.28	10					M25
Cr III	1224.43	30					M25
Cr III	1225.02	100					M25
Cr III	1225.27	150					M25
Cr III	1225.32	150					M25
Cr III	1225.65	300	14	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^0$	3 - 4	M25
Cr III	1226.18	10		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$c^3F - v^3D^0$? 4 - 3	M25
Cr III	1226.72	200	14	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^0$	4 - 4	M25
Cr III	1227.11	20		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$a^5F - w^3G^0$	2 - 3	M25
Cr III	1228.03	10					M25
Cr III	1228.37	10					M25
Cr III	1228.65	300	14	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^0$	2 - 3	M25
Cr III	1229.53	150	14	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^0$	3 - 3	M25
Cr III	1230.25	10					M25
Cr III	1230.63	10	14	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^0$	4 - 3	M25
Cr III	1230.80	200	21	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^0$	4 - 4	M25
Cr III	1231.88	300		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$a^5F - w^3G^0$? 4 - 4	M25
Cr III	1232.96	500	21	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^0$	5 - 4	M25
Cr III	1233.28	10					M25
Cr III	1233.92	200	21	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^0$	3 - 3	M25
Cr III	1236.20	400	21	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^0$	4 - 3	M25
Cr III	1236.51	10					M25
Cr III	1236.71	10		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$a^5F - w^3G^0$? 5 - 4	M25
Cr III	1238.51	400	21	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^0$	3 - 2	M25
Cr III	1241.32	20					M25
Cr III	1242.08	10h					M25
Cr III	1243.43	20					M25
Cr III	1243.60	20		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3D^0$? 4 - 3	M25
Cr III	1243.97	40					M25
Cr III	1244.41	10		$3d^4 - 3d^3(a^2F)4p$	$b^1G - w^3G^0$? 4 - 5	M25
Cr III	1244.58	100		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3F^0$? 4 - 5	M25
Cr III	1245.09	50					M25
Cr III	1245.23	150	6	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^0$	0 - 1	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1246.83	100					M25
Cr III	1247.86	200	6	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	1 - 2	M25
Cr III	1248.61	120		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3F^{\circ}$	6 - 5	M25
Cr III	1250.33	20					M25
Cr III	1250.57	20		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3F^{\circ}$	5 - 4	M25
Cr III	1251.42	150	6	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	1 - 1	M25
Cr III	1252.61	500	6	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	2 - 3	M25
Cr III	1253.87	5		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3F^{\circ}$	1 - 2	M25
Cr III	1256.18	20		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3F^{\circ}$?	B25
Cr III	1256.73	80	20	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^{\circ}$	4 - 5	M25
Cr III	1258.55	200	6	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	2 - 2	M25
Cr III	1259.02	400	20	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^{\circ}$	5 - 5	M25
Cr III	1259.49	100	20	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^{\circ}$	3 - 4	M25
Cr III	1259.80	200	5	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	0 - 1	M25
Cr III	1261.09	10		$3d^3(a^2H)4s - 3d^3(b^2D)4p$	$b^3H - v^3F^{\circ}$?	4 - 3
Cr III	1261.53	20		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3F^{\circ}$?	2 - 3
Cr III	1261.86	400	20	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^{\circ}$	4 - 4	M25
Cr III	1262.34	300	5	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	1 - 2	M25
Cr III	1263.06	50	13	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	3 - 3	M25
Cr III	1263.61	350	20	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^{\circ}$	3 - 3	M25
Cr III	1264.21	350	13	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	4 - 3	M25
Cr III	1264.75	10		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3F^{\circ}$?	2 - 2
Cr III	1265.22	5		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^{\circ}$	4 - 5	M25
Cr III	1266.01	20	20	$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^{\circ}$	4 - 3	M25
Cr III	1266.14	150	5	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	1 - 1	M25
Cr III	1266.53	20		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$a^3F - w^3F^{\circ}$	3 - 3	M25
Cr III	1268.01	250	5	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	2 - 3	M25
Cr III	1268.15	20	13	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	2 - 2	M25
Cr III	1269.11	250	13	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	3 - 2	M25
Cr III	1271.85	200	13	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	2 - 1	M25
Cr III	1273.31	150	5	$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$	2 - 2	M25
Cr III	1275.34	150		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^{\circ}$?	3 - 2
Cr III	1276.76	200		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^{\circ}$?	2 - 1
Cr III	1277.23	30		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^{\circ}$?	2 - 1
Cr III	1278.71	20	13	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	3 - 3	M25
Cr III	1279.91	200	12	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	4 - 3	M25
Cr III	1281.98	200					M25
Cr III	1283.12	50	13	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	2 - 2	M25
Cr III	1284.09	200	12	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	3 - 2	M25
Cr III	1284.46	10					M25
Cr III	1285.90	10					M25
Cr III	1287.05	400	12	$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^{\circ}$	2 - 1	M25
Cr III	1289.81	200		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^{\circ}$?	4 - 5
Cr III	1290.93	200	37	$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^3G^{\circ}$	2 - 3	M25
Cr III	1291.25	20	37	$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^3G^{\circ}$	3 - 3	M25
Cr III	1291.53	250	37	$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^3G^{\circ}$	3 - 4	M25
Cr III	1291.77	250	37	$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^3G^{\circ}$	4 - 5	M25
Cr III	1293.57	100					M25
Cr III	1296.01	40					M25
Cr III	1299.56	40					M25
Cr III	1302.45	20					M25
Cr III	1302.85	5		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^{\circ}$	4 - 3	M25
Cr III	1303.47	40					M25
Cr III	1306.16	60					M25
Cr III	1307.24	100					M25
Cr III	1307.47	10					M25
Cr III	1307.64	60		$3d^3(a^4F)4p - 3d^3(a^2H)4d$	$z^3D^{\circ} - g^3H$?	4 - 5
Cr III	1308.27	150					M25
Cr III	1309.34	200	28	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^{\circ}$	3 - 4	M25
Cr III	1310.18	30					M25
Cr III	1315.00	100b	33	$3d^4 - 3d^3(a^2H)4p$	$a^3F - y^3G^{\circ}$	3 - 4	M25
Cr III	1315.44	20	28	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^{\circ}$	3 - 3	M25
Cr III	1316.16	200					M25
Cr III	1316.40	200	28	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^{\circ}$	2 - 3	M25
Cr III	1321.65	30	28	$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^{\circ}$	2 - 2	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1322.83	100	28	$3d^4 - 3d^3(a^4F)4p$	$a^2D - z^2F^{\circ}$	1 - 2	M25
Cr III	1323.22	10		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^{\circ}$? 2 - 3	M25
Cr III	1327.17	10					M25
Cr III	1327.79	100		$3d^4 - 3d^3(a^2D)4p$	$b^2F - w^2D^{\circ}$	4 - 3	M25
Cr III	1328.37	10		$3d^4 - 3d^3(a^2D)4p$	$b^2F - w^2D^{\circ}$? 3 - 3	M25
Cr III	1328.78	10		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^{\circ}$? 3 - 2	M25
Cr III	1329.29	20					M25
Cr III	1331.56	50		$3d^4 - 3d^3(a^2D)4p$	$b^2F - w^2D^{\circ}$	3 - 2	M25
Cr III	1341.17	10					M25
Cr III	1342.24	40		$3d^4 - 3d^3(a^4P)4p$	$a^4F - y^2D^{\circ}$? 3 - 3	M25
Cr III?	1345.12	100					M25
Cr III?	1345.46	70					M25
Cr III	1351.94	10					M25
Cr III	1354.16	10		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$c^2F - w^2G^{\circ}$	4 - 4	M25
Cr III	1354.75	50		$3d^4 - 3d^3(a^2H)4p$	$b^2F - y^2G^{\circ}$	4 - 4	M25
Cr III	1356.25	10					M25
Cr III	1356.86	20		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$c^2F - w^2G^{\circ}$? 4 - 3	M25
Cr III	1357.20	150	36	$3d^4 - 3d^3(a^2D)4p$	$b^2F - x^2F^{\circ}$	4 - 4	M25
Cr III	1357.69	20					M25
Cr III	1357.85	5	36	$3d^4 - 3d^3(a^2D)4p$	$b^2F - x^2F^{\circ}$	3 - 4	M25
Cr III	1358.65	30					M25
Cr III	1358.75	20					M25
Cr III	1360.40	60		$3d^3(a^4F)4p - 3d^3(a^2H)4d$	$z^2G^{\circ} - g^2H$? 5 - 6	M25
Cr III	1360.56	20					M25
Cr III	1360.97	10					M25
Cr III	1361.15	200		$3d^3(a^4F)4p - 3d^3(a^2H)4d$	$z^2G^{\circ} - g^2H$? 4 - 5	M25
Cr III	1361.30	200					M25
Cr III	1362.85	50		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2G^{\circ}$? 5 - 4	M25
Cr III	1363.73	20		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2G^{\circ}$? 3 - 3	M25
Cr III	1364.26	50		$3d^4 - 3d^3(a^2G)4p$	$a^4F - z^4G^{\circ}$? 3 - 4	M25
Cr III	1365.06	40					M25
Cr III	1365.29	200	36	$3d^4 - 3d^3(a^2D)4p$	$b^2F - x^2F^{\circ}$	4 - 3	M25
Cr III	1365.94	70	36	$3d^4 - 3d^3(a^2D)4p$	$b^2F - x^2F^{\circ}$	3 - 3	M25
Cr III	1366.06	70					M25
Cr III	1366.63	120		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2G^{\circ}$	4 - 3	M25
Cr III	1366.88	20					M25
Cr III	1367.13	40		$3d^3(a^4F)4p - 3d^3(a^2H)4d$	$z^2G^{\circ} - g^2H$? 5 - 5	M25
Cr III	1368.23	20	36	$3d^4 - 3d^3(a^2D)4p$	$b^2F - x^2F^{\circ}$	2 - 2	M25
Cr III	1368.67	150	36	$3d^4 - 3d^3(a^2D)4p$	$b^2F - x^2F^{\circ}$	3 - 2	M25
Cr III	1370.20	20					M25
Cr III	1370.74	20					M25
Cr III	1372.27	60					M25
Cr III	1374.91	10					M25
Cr III	1376.90	10					M25
Cr III	1381.67	30					M25
Cr III	1382.19	100					M25
Cr III	1383.79	250	35	$3d^4 - 3d^3(a^4P)4p$	$b^2F - y^2D^{\circ}$	4 - 3	M25
Cr III	1384.44	10	35	$3d^4 - 3d^3(a^4P)4p$	$b^2F - y^2D^{\circ}$	3 - 3	M25
Cr III?	1385.07	10					M25
Cr III	1388.13	40					M25
Cr III	1388.24	20					M25
Cr III	1389.55	70					M25
Cr III	1389.73	150		$3d^4 - 3d^3(a^4F)4p$	$a^2D - z^2D^{\circ}$	3 - 3	M25
Cr III	1390.77	40		$3d^4 - 3d^3(a^4F)4p$	$a^2D - z^2D^{\circ}$	2 - 3	M25
Cr III	1391.26	20	35	$3d^4 - 3d^3(a^4P)4p$	$b^2F - y^2D^{\circ}$	2 - 2	M25
Cr III	1391.61	150	35	$3d^4 - 3d^3(a^4P)4p$	$b^2F - y^2D^{\circ}$	3 - 2	M25
Cr III	1391.78	10					M25
Cr III	1392.40	100					M25
Cr III	1392.83	10		$3d^3(a^4P)4s - 3d^3(a^2F)4p$	$c^2P - v^2D^{\circ}$? 2 - 3	M25
Cr III	1393.00	10h		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$c^2F - w^2F^{\circ}$	3 - 3	M25
Cr III	1393.22	10					M25
Cr III	1393.98	10					M25
Cr III	1394.33	100					M25
Cr III	1394.58	70					M25
Cr III	1396.26	10					M25

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1396.42	100					M25
Cr III	1396.63	30					M25
Cr III	1396.96	30h		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	3 - 2	M25
Cr III	1397.40	30					M25
Cr III	1397.69	10					M25
Cr III	1397.90	30					M25
Cr III	1398.12	50		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	2 - 2	M25
Cr III	1399.05	100					M25
Cr III	1399.42	10		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	1 - 2	M25
Cr III	1400.02	5		3d ³ (a ⁴ F)4s - 3d ³ (a ³ F)4p	c ³ F - w ³ F°	4 - 1	M25
Cr III	1400.34	150	35	3d ⁴ - 3d ³ (a ⁴ F)4p	b ³ F - y ³ D°	2 - 1	M25
Cr III	1400.62	10		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ F°	? 3 - 3	M25
Cr III	1400.72	10					M25
Cr III	1401.55	100h		3d ⁴ - 3d ³ (a ² G)4p	a ¹ F - y ³ F°	? 3 - 2	M25
Cr III	1402.07	30		3d ⁴ - 3d ³ (a ² G)4p	a ¹ F - y ³ F°	? 3 - 4	M25
Cr III	1402.62	40		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	2 - 1	M25
Cr III	1402.99	10					M25
Cr III	1403.42	70					M25
Cr III	1403.92	30		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	1 - 1	M25
Cr III	1404.50	10		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ F°	? 3 - 2	M25
Cr III	1405.37	30					M25
Cr III	1405.72	20		3d ³ (a ⁴ F)4s - 3d ³ (a ³ H)4p	a ⁵ F - x ³ G°	2 - 3	M25
Cr III	1406.31	40					M25
Cr III	1406.90	100					M25
Cr III	1407.22	10					M25
Cr III	1407.89	40		3d ⁴ - 3d ³ (a ² G)4p	b ³ F - z ¹ G°	? 3 - 4	M25
Cr III	1408.71	50		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	3 - 3	M25
Cr III	1409.10	10		3d ³ (a ⁴ F)4p - 3d ³ (a ² G)4d	z ³ F° - i ³ H	5 - 6	M25
Cr III	1409.81	20		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ F°	2 - 3	M25
Cr III	1410.03	20		3d ³ (a ⁴ F)4s - 3d ³ (a ³ H)4p	a ⁵ F - x ³ G°	3 - 4	M25
Cr III	1410.82	20					M25
Cr III	1411.53	10					M25
Cr III	1412.67	30					M25
Cr III	1413.32	10					M25
Cr III	1413.77	40					M25
Cr III	1414.62	50					M25
Cr III	1414.79	10					M25
Cr III	1415.25	50		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	3 - 2	M25
Cr III	1415.81	10					M25
Cr III	1416.33	50		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	2 - 2	M25
Cr III	1417.13	70					M25
Cr III	1417.67	10		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	1 - 2	M25
Cr III	1419.25	70					M25
Cr III	1420.81	100					M25
Cr III	1421.20	50h		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	? 2 - 1	M25
Cr III	1421.80	10					M25
Cr III	1422.47	40		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	1 - 1	M25
Cr III	1422.58	20		3d ³ (a ⁴ F)4s - 3d ³ (a ³ H)4p	a ⁵ F - x ³ G°	? 5 - 5	M25
Cr III	1425.30	10					M25
Cr III	1427.00	150					M25
Cr III	1427.20	10					M25
Cr III	1428.46	10					M25
Cr III	1429.04	50					M25
Cr III	1429.17	50					M25
Cr III	1430.02	40		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ D - z ³ D°	? 1 - 0	M25
Cr III	1430.15	30					M25
Cr III	1430.42	50					M25
Cr III	1433.26	50					M25
Cr III	1434.19	10					M25
Cr III	1436.65	20		3d ⁴ - 3d ³ (a ³ H)4p	b ¹ G - x ³ G°	? 4 - 5	M25
Cr III	1437.17	70					M25
Cr III	1437.76	20					M25
Cr III	1438.03	10					M25
Cr III	1438.90	5		3d ⁴ - 3d ³ (a ² D)4p	b ³ P - w ³ D°	1 - 2	M25
Cr III	1441.66	50					M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1441.90	50					M25
Cr III	1442.78	10		$3d^3(a^2F)4s - 3d^3(b^2D)4p$	$d^3F - v^3F^o$? 3 - 3	M25
Cr III	1443.08	20		$3d^4 - 3d^3(a^2D)4p$	$b^3P - w^3D^o$	0 - 1	M25
Cr III	1443.82	60					M25
Cr III	1444.84	20					M25
Cr III	1446.27	20		$3d^4 - 3d^3(a^2G)4p$	$b^3F - y^3F^o$	3 - 3	M25
Cr III	1446.52	150		$3d^4 - 3d^3(z^2D)4p$	$b^3P - w^3D^o$	2 - 3	M25
Cr III	1446.70	80					M25
Cr III	1447.31	20		$3d^4 - 3d^3(a^2G)4p$	$b^3F - y^3F^o$	2 - 2	M25
Cr III	1447.50	20		$3d^4 - 3d^3(a^2G)4p$	$b^3F - y^3F^o$	4 - 4	M25
Cr III	1449.89	20		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$a^3F - w^3D^o$	2 - 3	M25
Cr III	1450.22	5		$3d^4 - 3d^3(a^2D)4p$	$b^3P - w^3D^o$	2 - 2	M25
Cr III	1450.52	10					M25
Cr III	1451.95	80					M25
Cr III	1454.00	50					M25
Cr III	1455.27	300		$3d^3(a^2F)4s - 3d^3(b^2D)4p$	$d^3F - v^3F^o$? 4 - 3	W3, K8
Cr III	1457.22	30					M25
Cr III	1458.17	10		$3d^3(a^2P)4s - 3d^3(a^2F)4p$	$d^3P - v^3D^o$? 1 - 2	M25
Cr III	1458.41	80		$3d^4 - 3d^3(a^2G)4p$	$b^3F - y^3G^o$	4 - 5	M25
Cr III	1462.12	30h					M25
Cr III	1463.87	10					M25
Cr III?	1465.00	30					M25
Cr III	1467.04	20		$3d^3(a^4F)4p - 3d^3(a^2G)4d$	$z^3G^o - f^3H$? 5 - 6	M25
Cr III	1467.68	50					M25
Cr III	1468.05	50					M25
Cr III	1469.55	50					M25
Cr III	1470.60	10					M25
Cr III	1472.45	20		$3d^4 - 3d^3(a^4F)4p$	$a^2D - z^2G^o$? 1 - 2	M25
Cr III	1473.32	30					M25
Cr III	1473.82	10		$3d^3(a^4P)4s - 3d^3(a^2F)4p$	$a^3P - w^3G^o$? 3 - 4	M25
Cr III	1476.04	50					M25
Cr III	1477.49	10					M25
Cr III	1478.08	20		$3d^3(a^2D)4s - 3d^3(a^2F)4p$	$b^2D - v^2D^o$? 3 - 3	M25
Cr III	1478.64	20					M25
Cr III	1480.16	100					M25
Cr III	1483.11	20					M25
Cr III	1483.45	10		$3d^4 - 3d^3(a^4P)4p$	$a^1F - z^3P^o$? 3 - 2	M25
Cr III	1483.75	50					M25
Cr III	1484.39	10					M25
Cr III?	1486.02	10					M25
Cr III	1486.54	10		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$a^3F - y^1G^o$? 3 - 4	M25
Cr III	1487.03	40					M25
Cr III	1487.86	10					M25
Cr III	1488.72	20					M25
Cr III	1489.10	20					M25
Cr III	1489.35	20		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$a^3F - x^3F^o$? 3 - 4	M25
Cr III	1489.93	40					M25
Cr III	1491.50	20					M25
Cr III	1492.05	40					M25
Cr III	1492.23	40		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$a^3F - y^1G^o$? 4 - 4	M25
Cr III	1492.98	50					M25
Cr III	1493.68	10					M25
Cr III	1494.45	50					M25
Cr III	1495.01	20					M25
Cr III	1495.21	20		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$a^3F - x^3F^o$? 4 - 4	M25
Cr III	1495.36	20					M25
Cr III	1496.47	10					M25
Cr III	1501.38	30					M25
Cr III	1502.87	30					M25
Cr III	1503.65	30					M25
Cr III	1504.16	20					M25
Cr III	1505.76	100					M25
Cr III	1506.82	10					M25
Cr III	1506.95	10					M25
Cr III	1507.93	30h					M25

Element	Wavelength	Intensity	Multiplicity	Configuration	Term	J - J	References
Cr III	1508.14	100					M25
Cr III	1508.71	50					M25
Cr III	1509.31	30h		3d ⁴ - 3d ³ (a ¹ P)4p	b ³ P - y ³ D ^o	? 1 - 2	M25
Cr III	1510.05	10					M25
Cr III	1510.62	10					M25
Cr III	1511.78	80					M25
Cr III	1512.22	100		3d ⁴ - 3d ³ (a ⁴ P)4p	b ³ F - y ⁵ D ^o	? 2 - 2	M25
Cr III	1513.18	10		3d ⁴ - 3d ³ (a ⁴ P)4p	b ³ P - y ³ D ^o	? 2 - 3	M25
Cr III	1513.39	10					M25
Cr III	1515.01	20		3d ⁴ - 3d ³ (a ² H)4p	b ¹ G - y ¹ G ^o	? 4 - 4	M25
Cr III	1515.44	80					M25
Cr III	1517.45	20					M25
Cr III	1517.85	20					M25
Cr III	1518.48	40					M25
Cr III	1519.66	10					M25
Cr III	1520.01	70		3d ⁴ - 3d ³ (a ⁴ P)4p	b ³ P - y ³ D ^o	? 1 - 1	M25
Cr III	1520.79	40					M25
Cr III	1521.29	10					M25
Cr III	1521.59	30		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁵ F - y ³ D ^o	? 3 - 3	M25
Cr III	1522.29	5		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁵ F - y ³ D ^o	? 1 - 2	M25
Cr III	1523.12	50					M25
Cr III	1523.21	80					M25
Cr III	1524.65	20					M25
Cr III	1525.27	10					M25
Cr III	1525.42	5		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁵ F - y ³ D ^o	? 2 - 2	M25
Cr III	1525.78	10					M25
Cr III	1528.38	30		3d ³ (a ⁴ P)4s - 3d ³ (a ² F)4p	a ⁵ P - w ³ F ^o	? 3 - 4	M25
Cr III	1528.52	40		3d ³ (a ² G)4s - 3d ³ (a ² F)4p	b ³ G - w ³ F ^o	? 4 - 5	M25
Cr III	1528.91	20					M25
Cr III	1529.16	20					M25
Cr III	1530.59	5		3d ³ (a ⁴ P)4s - 3d ³ (a ² F)4p	a ⁵ P - w ³ F ^o	? 3 - 2	M25
Cr III	1532.09	20		3d ³ (a ⁴ F)4p - 3d ³ (a ⁴ F)5s	z ⁵ G ^o - f ³ F	? 2 - 2	M25
Cr III	1532.54	10		3d ⁴ - 3d ³ (a ⁴ P)4p	b ³ P - y ³ D ^o	? 2 - 1	M25
Cr III	1533.12	70	92	3d ³ (a ² G)4s - 3d ³ (a ² F)4p	b ³ G - w ³ G ^o	? 5 - 5	M25
Cr III	1534.09	80					M25
Cr III	1534.40	10					M25
Cr III	1535.66	10					M25
Cr III	1537.14	40					M25
Cr III	1538.04	10					M25
Cr III	1538.43	10		3d ³ (a ⁴ F)4p - 3d ³ (a ⁴ F)5s	z ⁵ G ^o - f ³ F	? 4 - 3	M25
Cr III	1539.70	30		3d ⁴ - 3d ³ (a ⁴ P)4p	b ³ F - z ⁵ P ^o	? 2 - 1	M25
Cr III	1541.57	10					M25
Cr III	1542.52	10					M25
Cr III	1545.03	30					M25
Cr III	1546.34	30					M25
Cr III	1546.55	30					M25
Cr III	1547.05	30					M25
Cr III	1548.86	20		3d ³ (a ⁴ F)4p - 3d ³ (a ⁴ F)4d	z ⁵ G ^o - e ³ F	? 2 - 2	M25
Cr III	1550.09	20					M25
Cr III	1550.94	10		3d ⁴ - 3d ³ (a ² H)4p	b ¹ G - y ³ H ^o	? 4 - 4	M25
Cr III	1551.43	50		3d ⁴ - 3d ³ (a ⁴ P)4p	b ¹ G - y ³ D ^o	? 4 - 3	M25
Cr III	1552.31	40					M25
Cr III	1552.95	10					M25
Cr III	1553.30	40					M25
Cr III	1553.38	50					M25
Cr III	1554.71	30					M25
Cr III	1555.94	30					M25
Cr III	1557.01	30					M25
Cr III	1558.14	30					M25
Cr II	1559.67	10		3d ³ (a ⁴ F)4s - 3d ³ (a ² H)4p	c ³ F - x ³ G ^o	? 2 - 3	M25
Cr III	1561.72	10		3d ³ (a ² G)4p - 3d ³ (a ² H)4d	z ⁵ H ^o - g ³ H	? 4 - 5	M25
Cr III	1564.07	10		3d ³ (a ⁴ P)4s - 3d ³ (a ² F)4p	c ³ P - w ³ G ^o	? 2 - 3	M25
Cr III	1564.32	10					M25
Cr III	1565.40	20		3d ³ (a ⁴ F)4p - 3d ³ (a ⁴ F)5s	z ⁵ G ^o - f ³ F	? 3 - 4	M25
Cr III	1565.54	20		3d ³ (a ⁴ F)4p - 3d ³ (a ⁴ F)5s	z ⁵ G ^o - f ³ F	? 2 - 3	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1567.41	80					M25
Cr III	1567.80	10					M25
Cr III	1568.48	20		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^3G^\circ$	3 - 4	M25
Cr III	1569.07	30		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^5F - z^5S^\circ$? 2 - 2	M25
Cr III	1569.36	20		$3d^3(a^2G)4p - 3d^3(a^2H)4d$	$z^3H^\circ - f^3I$? 5 - 6	M25
Cr III	1569.51	50					M25
Cr III	1570.67	40	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	2 - 2	M25
Cr III	1571.04	100					M25
Cr III	1571.38	20					M25
Cr III	1571.98	50					M25
Cr III	1572.13	20	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	3 - 3	M25
Cr III	1572.54	10					M25
Cr III	1572.89	20					M25
Cr III	1573.34	10					M25
Cr III	1573.87	70	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	2 - 1	M25
Cr III	1574.00	40	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	4 - 4	M25
Cr III	1574.63	20					M25
Cr III	1576.24	20	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	5 - 5	M25
Cr III	1577.14	100	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	3 - 2	M25
Cr III	1577.36	50					M25
Cr III	1578.01	10		$3d^3(a^2G)4p - 3d^3(a^2H)4d$	$z^3H^\circ - f^3I$? 6 - 7	M25
Cr III	1578.39	10					M25
Cr III	1578.61	40		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^3G^\circ$? 4 - 3	M25
Cr III	1580.20	10					M25
Cr III	1580.34	10		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^3G^\circ$	4 - 5	M25
Cr III	1580.73	200	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	4 - 3	M25
Cr III	1581.15	100					M25
Cr III	1581.57	20					M25
Cr III	1582.62	250					M25
Cr III	1582.93	200					M25
Cr III	1583.70	20					M25
Cr III	1584.09	10					M25
Cr III	1584.60	400	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	5 - 4	M25
Cr III	1584.84	30					M25
Cr III	1585.01	30		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^3F$? 3 - 4	M25
Cr III	1586.35	150					M25
Cr III	1587.35	10		$3d^4 - 3d^3(a^2G)4p$	$b^3P - y^3F^\circ$	2 - 3	M25
Cr III	1587.54	20		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^3F$? 2 - 3	M25
Cr III	1588.00	20					M25
Cr III	1588.42	150		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3F^\circ$? 3 - 4	M25
Cr III	1588.87	200	73	$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5G^\circ - f^5F$	6 - 5	M25
Cr III	1589.91	20					M25
Cr III	1590.49	20		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$c^1G - w^3G^\circ$? 4 - 5	M25
Cr III	1590.77	10		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3F^\circ$	3 - 2	M25
Cr III	1591.09	50					M25
Cr III	1592.39	100					M25
Cr III	1593.16	40		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^5F - y^3F^\circ$? 2 - 2	M25
Cr III	1593.38	40					M25
Cr III	1593.71	10					M25
Cr III	1594.03	80					M25
Cr III	1594.45	20					M25
Cr III	1595.86	20		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^3F$? 3 - 3	M25
Cr III	1596.06	10					M25
Cr III	1596.52	150		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^5F - y^3F^\circ$? 3 - 3	M25
Cr III	1596.76	10		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3F^\circ$	5 - 4	M25
Cr III	1597.46	120					M25
Cr III	1597.86	10					M25
Cr III	1598.05	50					M25
Cr III	1598.48	30					M25
Cr III	1599.01	30					M25
Cr III	1600.02	70					M25
Cr III	1600.21	50					M25
Cr III	1601.57	40					M25
Cr III	1602.17	100					M25
Cr III	1602.79	100					M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1603.19	300		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^5F - y^3F^o$? 4 - 3	M25
Cr III	1603.93	10					M25
Cr III	1604.34	10					M25
Cr III	1604.82	20					M25
Cr III	1605.18	20					M25
Cr III	1606.19	10		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^o - f^3F$	3 - 3	M25
Cr III	1606.53	20					M25
Cr III	1606.67	20					M25
Cr III	1607.57	10					M25
Cr III	1607.78	20					M25
Cr III	1607.92	30					M25
Cr III	1608.19	10		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^o - f^3F$? 5 - 4	M25
Cr III	1609.01	30		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$c^3P - w^3F^o$	1 - 2	M25
Cr III	1609.35	20G					M25
Cr III	1609.79	150		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3D^o - f^3F$? 3 - 4	M25
Cr III	1609.91	200					M25
Cr III	1610.10	10		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^o - f^3F$? 2 - 2	M25
Cr III	1610.56	40					M25
Cr III	1610.88	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5D^o - e^3F$? 2 - 3	M25
Cr III	1611.08	10C		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3D^o - f^3F$? 2 - 3	M25
Cr III	1611.57	10					M25
Cr III	1612.07	30					M25
Cr III	1612.57	10					M25
Cr III	1613.02	10					M25
Cr III	1613.14	20					M25
Cr III	1614.04	100		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3D^o - f^3F$? 1 - 2	M25
Cr III	1614.17	80		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3P - w^3D^o$? 2 - 3	M25
Cr III	1615.21	10		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^o - f^3F$? 3 - 2	M25
Cr III	1617.23	20					M25
Cr III	1617.49	10					M25
Cr III	1617.72	5		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^5F - y^3G^o$	3 - 4	M25
Cr III	1617.90	10		$3d^3(a^2G)4p - 3d^3(a^4H)4d$	$y^3G^o - f^3I$? 5 - 6	M25
Cr III	1619.94	100		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5D^o - e^3G$? 3 - 4	M25
Cr III	1620.44	10		$3d^3(a^2G)4p - 3d^3(a^4H)4d$	$y^3G^o - g^3H$? 5 - 5	M25
Cr III	1620.76	10					M25
Cr III	1621.10	30					M25
Cr III	1621.60	10					M25
Cr III	1621.87	30					M25
Cr III	1622.61	20					M25
Cr III	1623.01	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5D^o - e^3F$? 3 - 2	M25
Cr III	1625.32	30		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5D^o - e^3F$? 4 - 4	M25
Cr III	1625.78	10					M25
Cr III	1626.33	100d					M25
Cr III	1626.85	50					M25
Cr III	1627.25	30					M25
Cr III	1627.80	20		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - w^3D^o$	3 - 2	M25
Cr III	1628.39	120		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5F^o - e^3F$? 2 - 2	M25
Cr III	1628.58	10		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - w^3D^o$	2 - 1	M25
Cr III	1628.98	100					M25
Cr III	1629.56	100		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5D^o - e^3F$? 4 - 3	M25
Cr III	1631.49	20					M25
Cr III	1631.68	20		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^o - f^3F$? 1 - 2	M25
Cr III	1631.89	20		$3d^4 - 3d^3(a^2G)4p$	$b^1G - y^3G^o$? 4 - 4	M25
Cr III	1632.62	100		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^o - f^3F$? 2 - 3	M25
Cr III	1632.85	20					M25
Cr III	1633.17	20					M25
Cr III	1633.60	20					M25
Cr III	1634.12	120		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^o - f^3F$? 3 - 4	M25
Cr III	1634.61	10		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - w^3D^o$	4 - 3	M25
Cr III	1635.10	100		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3D^o - e^3F$? 2 - 3	M25
Cr III	1635.48	100		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^o - f^3F$? 4 - 5	M25
Cr III	1636.35	200					M25
Cr III	1636.69	10					M25
Cr III	1637.53	100h					M25
Cr III	1637.90	100					M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1638.10	10		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^5F$? 2 - 2	M25
Cr III	1638.78	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5D^\circ - e^5F$? 2 - 2	M25
Cr III	1639.46	10					M25
Cr III	1639.90	20					M25
Cr III	1640.94	100		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5D^\circ - e^5F$? 3 - 4	M25
Cr III	1641.09	50					M25
Cr III	1641.56	100		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^5F$? 2 - 1	M25
Cr III	1641.83	10					M25
Cr III	1642.16	100					M25
Cr III	1643.07	70					M25
Cr III	1643.20	100					M25
Cr III	1643.34	80					M25
Cr III	1643.86	50		$3d^3(a^2G)4p - 3d^3(a^2H)4d$	$y^3F^\circ - f^3I$? 4 - 5	M25
Cr III	1645.16	50		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^\circ - f^5F$? 3 - 4	M25
Cr III	1646.15	70					M25
Cr III	1646.56	20					M25
Cr III	1647.71	5		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - f^5D$? 4 - 4	W3, K8
Cr III	1648.36	50					M25
Cr III	1648.58	10		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^\circ - f^5F$? 1 - 2	M25
Cr III	1649.13	50					M25
Cr III	1649.51	150		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^\circ - f^5F$? 5 - 5	M25
Cr III	1649.93	40					M25
Cr III	1651.32	10					M25
Cr III	1651.56	100		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^\circ - f^5F$? 4 - 4	M25
Cr III	1651.92	20					M25
Cr III	1652.08	50		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^\circ - f^5F$? 1 - 1	M25
Cr III	1652.46	150h		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^\circ - f^5F$? 3 - 3	M25
Cr III	1653.06	10					M25
Cr III	1654.23	10					M25
Cr III	1654.79	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5F$? 3 - 4	M25
Cr III	1655.48	70					M25
Cr III	1657.18	10					M25
Cr III	1657.45	20		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^5F$? 2 - 3	M25
Cr III	1657.71	40		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^5F - y^5D^\circ$? 3 - 4	M25
Cr III	1658.30	20					M25
Cr III	1658.63	20		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^\circ - f^5F$? 5 - 4	M25
Cr III	1658.93	120h		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5F^\circ - f^5F$? 4 - 3	M25
Cr III	1659.26	100		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5D$? 5 - 4	M25
Cr III	1659.82	30					M25
Cr III	1660.24	80					M25
Cr III	1660.44	10		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^5F$? 3 - 4	M25
Cr III	1660.70	150					M25
Cr III	1661.02	10		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$c^1G - w^3F^\circ$? 4 - 3	M25
Cr III	1661.58	20					M25
Cr III	1661.93	40h					M25
Cr III	1663.01	20		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^5F$? 2 - 2	M25
Cr III	1663.75	40		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - y^1G^\circ$? 3 - 4	M25
Cr III	1663.94	30		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^5F - z^3H^\circ$? 5 - 6	M25
Cr III	1664.35	150		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5F$? 4 - 4	M25
Cr III	1664.90	10		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^5F - y^5D^\circ$? 4 - 4	M25
Cr III	1665.18	20		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5F$? 5 - 5	M25
Cr III	1665.53	70		$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$a^1H - w^3G^\circ$? 5 - 5	M25
Cr III	1665.62	50					M25
Cr III	1665.98	20					M25
Cr III	1666.66	100		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^5F$? 2 - 1	M25
Cr III	1667.32	20		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - x^3F^\circ$? 3 - 4	M25
Cr III	1667.44	30					M25
Cr III	1667.63	120		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5F$? 2 - 1	M25
Cr III	1667.92	20		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^5D^\circ - f^5F$? 3 - 3	M25
Cr III	1668.24	100		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^5F - y^5D^\circ$? 1 - 2	M25
Cr III	1668.33	80		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^5F - z^3P^\circ$? 2 - 2	M25
Cr III	1668.96	70					M25
Cr III	1669.58	20		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^5F - y^5D^\circ$? 3 - 3	M25
Cr III	1669.97	150		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - x^3F^\circ$? 2 - 3	M25
Cr III	1670.27	50					M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1670.45	150		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^3F$? 3-2	M25
Cr III	1670.80	20		$3d^3(a^4F)4s - 3d^3(a^3G)4p$	$a^4F - z^3H^\circ$? 4-5	M25
Cr III	1671.40	10					M25
Cr III	1671.85	30					M25
Cr III	1672.03	10		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^4F - y^3D^\circ$	2-2	M25
Cr III	1677.64	200					M25
Cr III	1673.00	20		$3d^3(a^3H)4s - 3d^3(a^2F)4p$	$b^3H - w^3G^\circ$	4-5	M25
Cr III	1673.58	50		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3D^\circ - f^3F$? 3-2	M25
Cr III	1673.77	100d		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^4F - y^3D^\circ$	5-4	M25
Cr III	1674.73	150		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3F$	4-3	M25
Cr III	1675.72	200		$3d^3(a^4F)4s - 3d^3(a^3H)4p$	$c^3F - y^3G^\circ$	4-4	M25
Cr III	1676.20	150		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3F$? 5-4	M25
Cr III	1676.96	100		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^4F - y^3D^\circ$	4-3	M25
Cr III	1677.54	10		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^4F - y^3D^\circ$	2-1	M25
Cr III	1677.68	10		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^4F - y^3D^\circ$	3-2	M25
Cr III	1678.41	100		$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$b^3H - w^3G^\circ$	6-5	M25
Cr III	1679.25	300	72	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3F$	6-6	M25
Cr III	1679.38	150		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3F$	6-5	M25
Cr III	1679.53	120		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - x^3F^\circ$	3-3	M25
Cr III	1679.83	100		$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$b^3H - w^3G^\circ$	5-4	M25
Cr III	1682.36	60		$3d^3(a^2H)4s - 3d^3(a^2F)4p$	$b^3H - w^3G^\circ$	4-3	M25
Cr III	1683.50	40		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - x^3F^\circ$	3-2	M25
Cr III	1684.02	150		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3G^\circ - f^3F$? 5-4	M25
Cr III	1684.14	100					M25
Cr III	1685.38	10					M25
Cr III	1685.85	150					M25
Cr III	1686.44	40					M25
Cr III	1687.03	150		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3G^\circ - f^3F$? 4-3	M25
Cr III	1687.56	70					M25
Cr III	1688.15	10					M25
Cr III	1688.39	40					M25
Cr III	1689.14	10					M25
Cr III	1689.46	100		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3G^\circ - f^3F$? 3-2	M25
Cr III	1689.77	80					M25
Cr III	1690.00	30					M25
Cr III	1690.28	300	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5H$	2-3	M25
Cr III	1690.52	20					M25
Cr III	1690.72	10					M25
Cr III	1691.09	50					M25
Cr III	1691.64	50					M25
Cr III	1691.76	40		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - x^3F^\circ$	4-3	M25
Cr III	1692.31	30					M25
Cr III	1692.63	20					M25
Cr III	1692.89	600	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5H$	3-4	M25
Cr III	1693.43	30					M25
Cr III	1693.72	20					M25
Cr III	1694.53	70					M25
Cr III	1694.92	70					M25
Cr III	1695.77	70		$3d^3(a^2P)4s - 3d^3(a^2F)4p$	$d^3P - w^3F^\circ$? 1-2	M25
Cr III	1696.27	70					M25
Cr III	1696.64	600	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5H$	4-5	M25
Cr III	1696.85	20					M25
Cr III	1697.43	60					M25
Cr III	1697.84	40	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5H$	3-3	M25
Cr III	1698.03	40					M25
Cr III	1698.55	30					M25
Cr III	1698.75	200					M25
Cr III	1699.35	10		$3d^3(a^3G)4p - 3d^3(a^3H)4d$	$z^1G^\circ - f^3I$? 4-5	M25
Cr III	1699.84	20		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$a^4F - z^3P^\circ$? 2-2	M25
Cr III	1700.12	20					M25
Cr III	1700.29	200	34	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$	4-4	M25
Cr III	1701.05	30		$3d^4 - 3d^3(a^4F)4p$	$a^1F - z^3G^\circ$? 3-3	M25
Cr III	1701.32	20	34	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$? 3-4	M25
Cr III	1701.48	600	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5H$	5-6	M25
Cr III	1702.89	80	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^5G^\circ - e^5H$	4-4	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1703.73	40					M25
Cr III	1704.79	19					M25
Cr III	1705.36	10		$3d^3(a^2G)4p - 3d^3(a^2G)4d$	$z^3H^\circ - f^3H$? 5-6	M25
Cr III	1705.76	10h		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3F$? 3-3	M25
Cr III	1705.96	80					M25
Cr III	1706.15	50					M25
Cr III	1707.27	30					M25
Cr III	1707.43	800	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3H$	6-7	M25
Cr III	1707.78	400		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3H$	4-3	M25
Cr III	1708.51	10		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - y^3D^\circ$	2-2	M25
Cr III	1708.98	60	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3H$	5-5	M25
Cr III	1710.10	30					M25
Cr III	1710.60	20	34	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$	4-3	M25
Cr III	1711.02	200					M25
Cr III	1711.12	P 5	34	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$	2-3	M25
Cr III	1711.63	200	34	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$	3-3	M25
Cr III	1712.24	20					M25
Cr III	1712.52	10					M25
Cr III	1712.85	10					M25
Cr III	1713.43	50		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3F$? 4-3	M25
Cr III	1714.01	150		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3G$? 4-4	M25
Cr III	1714.26	10					M25
Cr III	1714.63	40					M25
Cr III	1715.17	30					M25
Cr III	1715.65	20h					M25
Cr III	1716.21	40	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3H$	6-6	M25
Cr III	1716.33	40					M25
Cr III	1716.50	40		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$y^3H^\circ - g^3H$? 5-6	M25
Cr III	1717.43	200		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3G$? 3-3	M25
Cr III	1717.65	40					M25
Cr III	1717.92	40					M25
Cr III	1718.16	40		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3F$? 5-4	M25
Cr III	1719.78	5		$3d^3(a^4F)4s - 3d^3(a^4H)4p$	$c^3F - y^3H^\circ$	4-4	M25
Cr III	1720.00	80	34	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$	2-2	M25
Cr III	1720.25	80		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - y^3D^\circ$	4-3	M25
Cr III	1720.51	20h	34	$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$	3-2	M25
Cr III	1721.18	150					M25
Cr III	1721.43	10					M25
Cr III	1721.67	200		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$y^3H^\circ - g^3H$? 6-6	M25
Cr III	1721.84	70h		$3d^3(a^2G)4p - 3d^3(a^2G)4d$	$z^3H^\circ - f^3H$? 6-6	M25
Cr III	1722.19	70		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - y^3D^\circ$	2-1	M25
Cr III	1722.38	70		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3F^\circ - f^3F$? 3-4	M25
Cr III	1723.16	100		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$y^3H^\circ - f^3I$? 6-7	M25
Cr III	1723.50	100		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3G$? 5-4	M25
Cr III	1723.83	50	71	$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3H$	6-5	M25
Cr III	1724.32	120		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$y^3H^\circ - f^3I$? 5-6	M25
Cr III	1725.12	100		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^\circ - e^3G$? 4-3	M25
Cr III	1725.29	150					M25
Cr III	1725.60	40		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3D^\circ - e^3F$? 0-1	M25
Cr III	1726.00	20					M25
Cr III	1726.61	20					M25
Cr III	1727.11	70					M25
Cr III	1727.51	10					M25
Cr III	1727.78	10					M25
Cr III	1727.97	10					M25
Cr III	1728.24	20					M25
Cr III	1728.34	80					M25
Cr III	1729.79	40		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3G^\circ - f^3F$? 4-4	M25
Cr III	1730.34	10					M25
Cr III	1730.92	5		$3d^3(a^2D)4s - 3d^3(a^2F)4p$	$b^3D - w^3F^\circ$	1-2	M25
Cr III	1731.53	20		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3D^\circ - e^3F$? 4-5	M25
Cr III	1731.76	90h		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3D^\circ - e^3F$? 3-4	M25
Cr III?	1732.06	200					M25
Cr III	1732.85	50		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^\circ - e^3D$? 4-4	M25
Cr III	1733.00	200		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3F^\circ - f^3F$? 4-4	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1733.13	150		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5D^o - e^5F$? 2-3	M25
Cr III	1734.83	70					M25
Cr III	1735.20	70					M25
Cr III	1735.61	10		$3d^2(a^2H)4p - 3d^2(a^2H)4d$	$y^3H^o - f^3I$? 4-5	M25
Cr III	1735.76	10		$3d^2(a^2D)4s - 3d^2(a^2F)4p$	$b^2D - w^2F^o$? 2-3	M25
Cr III	1736.49	30					M25
Cr III	1736.63	200		$3d^2(a^2D)4s - 3d^2(a^2F)4p$	$b^2D - w^2F^o$? 2-2	M25
Cr III	1737.47	30		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5D^o - e^5F$? 1-1	M25
Cr III	1738.23	120					M25
Cr III	1738.90	10		$3d^2(a^2D)4s - 3d^2(a^2F)4p$	$b^2D - w^2F^o$? 3-4	M25
Cr III	1740.06	10		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5D^o - e^5F$? 2-2	M25
Cr III	1740.31	20					M25
Cr III	1740.78	60		$3d^2(a^2D)4s - 3d^2(a^2F)4p$	$b^2D - w^2F^o$? 3-3	M25
Cr III	1742.19	150		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5D$? 5-4	M25
Cr III	1742.52	20					M25
Cr III	1742.96	70					M25
Cr III	1743.44	100		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5D^o - e^5F$? 3-3	M25
Cr III	1743.65	30		$3d^2(a^2H)4p - 3d^2(a^2H)4d$	$y^3H^o - f^3I$? 6-5	M25
Cr III	1743.87	30					M25
Cr III	1744.67	20		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5D^o - e^5F$? 2-1	M25
Cr III	1744.81	30		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 3-4	M25
Cr III	1745.04	40		$3d^2(a^2F)4s - 3d^2(a^2F)4p$	$d^2F - v^2D^o$? 3-3	M25
Cr III	1745.55	80h					M25
Cr III	1746.48	10		$3d^2(a^4F)4p - 3d^2(a^4F)5s$	$z^2F^o - f^2F$? 3-2	M25
Cr III	1746.77	200					M25
Cr III	1747.14	300		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^2G^o - e^2H$? 5-6	M25
Cr III	1747.30	70					M25
Cr III	1748.74	80		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5G$? 5-6	M25
Cr III	1748.87	40		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 5-5	M25
Cr III	1749.67	70		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5D^o - e^5F$? 3-2	M25
Cr III	1749.88	10					M25
Cr III	1750.27	20					M25
Cr III	1750.98	10		$3d^4 - 3d^2(a^4F)4f$	$b^2F - z^2G^o$? 4-5	M25
Cr III	1751.34	100		$3d^2(a^2H)4s - 3d^2(a^2F)4p$	$b^2H - w^2F^o$? 5-4	M25
Cr III	1752.47	80		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 4-4	M25
Cr III	1753.23	30					M25
Cr III	1753.60	30					M25
Cr III	1754.36	20					M25
Cr III	1754.76	300					M25
Cr III	1754.94	20		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5D^o - e^5F$? 4-3	M25
Cr III	1755.24	150					M25
Cr III	1755.46	200		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 2-2	M25
Cr III	1755.78	100		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 3-3	M25
Cr III	1756.29	30		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 1-1	M25
Cr III	1756.58	10					M25
Cr III	1756.97	10					M25
Cr III	1757.45	10					M25
Cr III	1757.95	10					M25
Cr III	1758.20	50		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^3F^o - e^3F$? 2-2	M25
Cr III	1759.19	30		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^3F^o - e^3F$? 3-4	M25
Cr III	1759.34	20					M25
Cr III	1759.50	50		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 5-4	M25
Cr III	1760.31	10					M25
Cr III	1761.38	40h		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 2-1	M25
Cr III	1761.73	20		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^5F^o - e^5F$? 3-2	M25
Cr III	1762.52	30b					M25
Cr III	1762.81	450		$3d^2(a^2G)4p - 3d^2(a^2H)4d$	$z^1H^o - g^2H$? 5-6	M25
Cr III	1763.13	70		$3d^2(a^2G)4p - 3d^2(a^2G)4d$	$y^3G^o - f^3H$? 5-6	M25
Cr III	1763.77	150		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^3F^o - e^3F$? 3-3	M25
Cr III	1764.15	10		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^4F^o - e^3G$? 3-4	M25
Cr III	1765.06	120					M25
Cr III	1765.53	10		$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^3D^o - e^5F$? 1-1	M25
Cr III	1765.93	10					M25
Cr III	1766.08	10					M25
Cr III	1766.58	60		$3d^4 - 3d^2(a^4F)4p$	$a^1F - z^2D^o$? 3-3	M25
				$3d^2(a^4F)4p - 3d^2(a^4F)4d$	$z^3F^o - e^3G$? 2-3	M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1766.92	300					M25
Cr III	1767.18	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3D^o - e^3F$? 2-2	M25
Cr III	1768.32	40					M25
Cr III	1768.50	49					M25
Cr III	1768.78	50		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3G^o$	2-3	M25
Cr III	1769.03	100					M25
Cr III	1769.17	300		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^o - e^3F$? 4-4	M25
Cr III	1770.10	30					M25
Cr III	1770.35	20					M25
Cr III	1770.66	20		$3d^3(a^2G)4p - 3d^3(a^2H)4d$	$z^3H^o - f^3I$? 5-6	M25
Cr III	1770.96	30h		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$y^3G^o - g^3H$? 4-5	M25
Cr III	1772.46	40		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$z^3I^o - g^3H$? 5-5	M25
Cr III	1772.60	50					M25
Cr III	1773.32	20h		$3d^3(a^2H)4p - 3d^3(a^2F)4d$	$z^3I^o - f^3I$? 6-7	M25
Cr III	1773.70	10		$3d^3(a^2G)4p - 3d^3(a^2H)4d$	$z^3H^o - g^3H$? 5-5	M25
Cr III	1774.51	20					M25
Cr III	1774.89	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^o - e^3G$? 4-4	M25
Cr III	1775.06	30					M25
Cr III	1777.27	40					M25
Cr III	1777.49	10					M25
Cr III	1778.93	200		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3D^o - e^3H$	3-3	M25
Cr III	1779.91	40					M25
Cr III	1779.99	40					M25
Cr III	1780.14	50		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$z^3I^o - f^3I$? 6-6	M25
Cr III	1781.45	20					M25
Cr III	1781.73	10					M25
Cr III	1782.07	100					M25
Cr III	1782.99	250					M25
Cr III	1783.95	200		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$z^3I^o - f^3I$? 5-5	M25
Cr III	1784.43	150					M25
Cr III	1784.72	50					M25
Cr III	1785.53	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^o - e^3H$	2-3	M25
Cr III	1787.18	120h		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^o - e^3H$	5-6	M25
Cr III	1789.24	30		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3F^o - f^3F$? 3-3	M25
Cr III	1789.77	40					M25
Cr III	1790.48	40					M25
Cr III	1790.71	10					M25
Cr III	1792.73	80					M25
Cr III	1793.60	10					M25
Cr III	1793.75	50		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$e^3F - y^3F^o$	2-2	M25
Cr III	1793.95	80		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^o - e^3H$	4-4	M25
Cr III	1794.47	10					M25
Cr III	1795.58	30		$3d^3(a^4F)4p - 3d^3(a^4F)5s$	$z^3F - f^3F$? 3-2	M25
Cr III	1796.37	10					M25
Cr III	1796.89	10					M25
Cr III	1798.33	50					M25
Cr III	1798.97	20					M25
Cr III	1799.40	10					M25
Cr III	1800.84	10					M25
Cr III	1801.46	10					M25
Cr III	1802.60	120		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$e^3F - y^3F^o$	3-3	M25
Cr III	1803.47	10h					M25
Cr III	1804.85	10		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$e^3F - y^3F^o$	3-2	M25
Cr III	1807.45	10					M25
Cr III	1809.58	10h					M25
Cr III	1810.14	30		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3D^o - e^3H$	3-3	M25
Cr III	1810.77	30		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^o - e^3D$? 3-4	M25
Cr III	1810.92	40					M25
Cr III	1812.24	40		$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$a^3P - w^3D^o$? 3-3	M25
Cr III	1815.49	80					M25
Cr III	1816.09	10					M25
Cr III	1817.16	100					M25
Cr III	1817.79	20					M25
Cr III	1818.28	40					M25
Cr III	1819.79	30		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$e^3F - y^3F^o$? 4-4	M25

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1821.08	20					
Cr III	1822.26	20					
Cr III	1825.66	10		$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^2G - x^2G^\circ$	3 - 3	M25
Cr III	1827.26	300	46				M25
Cr III	1829.39	20		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^2G^\circ$	2 - 3	M25
Cr III	1829.72	100	46				M25
Cr III	1831.15	20		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - y^2G^\circ$	3 - 4	M25
Cr III	1831.60	10					M25
Cr III	1832.34	10					M25
Cr III	1832.87	40					M25
Cr III	1833.00	10					M25
Cr III	1834.68	10					M25
Cr III	1837.65	100	46				M25
Cr III	1838.34	30h		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^2G^\circ - e^2G$	5 - 6	M25
Cr III	1839.72	10		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3D^\circ$	4 - 3	M25
Cr III	1840.48	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^2G^\circ - e^2F$? 4 - 4	M25
Cr III	1840.69	10		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$? 4 - 5	M25
Cr III	1843.40	100d		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^2G^\circ - e^2F$? 3 - 3	M25
Cr III	1844.99	100d		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^2G^\circ - e^2F$? 3 - 3	M25
Cr III	1846.45	80		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$y^1H^\circ - f^1I$? 5 - 5	M25
Cr III	1846.71	10					M25
Cr III	1848.56	100					M25
Cr III	1848.96	30					M25
Cr III	1849.76	10					M25
Cr III	1849.99	30h		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^2G^\circ - e^2F$? 3 - 2	M25
Cr III	1850.45	10					M25
Cr III	1852.31	30		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^2G^\circ - e^2F$	4 - 3	M25
Cr III	1853.36	10					M25
Cr III	1856.20	10					M25
Cr III	1857.59	20		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^\circ$? 4 - 3	M25
Cr III	1858.03	10h					M25
Cr III	1866.12	10					M25
Cr III	1866.63	20					M25
Cr III	1867.52	10					M25
Cr III	1871.00	20		$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$a^3P - x^3F^\circ$	3 - 4	M25
Cr III	1875.52	10		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^\circ - e^3D$? 3 - 4	M25
Cr III	1877.93	10					M25
Cr III	1878.77	20		$3d^3(a^2H)4p - 3d^3(a^2H)4d$	$x^2G^\circ - g^2H$? 5 - 6	M25
Cr III	1878.99	20		$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$a^3P - x^3F^\circ$	2 - 2	M25
Cr III	1881.02	20h		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - y^3D^\circ$	3 - 4	M25
Cr III	1881.33	20					M25
Cr III	1881.73	20					M25
Cr III	1884.30	5		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - y^3D^\circ$	2 - 3	M25
Cr III	1884.49	5		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3D^\circ$	3 - 2	M25
Cr III	1885.50	50					M25
Cr III	1887.83	5		$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$a^3P - x^3F^\circ$	3 - 2	M25
Cr III	1888.83	10					M25
Cr III	1893.30	10		$3d^3(a^2H)4p - 3d^3(a^2I)4d$	$x^2G^\circ - g^2H$? 4 - 5	M25
Cr III	1894.05	20					M25
Cr III	1896.09	30		$3d^3(a^2H)4p - 3d^3(a^2G)4d$	$y^3H^\circ - f^3H$? 6 - 6	M25
Cr III	1896.39	10		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - y^3D^\circ$	4 - 4	M25
Cr III	1899.15	10					M25
Cr III	1899.56	20h		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^2F^\circ - e^2F$? 2 - 3	M25
Cr III	1900.02	20h					M25
Cr III	1900.66	30h					M25
Cr III	1902.19	20h		$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$b^2G - w^2D^\circ$	4 - 3	M25
Cr III	1902.59	20h					M25
Cr III	1903.29	5		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - z^3I^\circ$	3 - 4	M25
Cr III	1903.98	5		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - z^3H^\circ$	4 - 5	M25
Cr III	1904.84	30h					M25
Cr III	1906.12	40					M25
Cr III	1910.33	50					M25
Cr III	1911.66	80					M25
Cr III	1912.50	40		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^\circ - e^3F$? 2 - 1	M25
Cr III	1913.85	20					M25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr III	1914.87	30h					M25
Cr III	1917.52	10		$3d^3(a^4P)4s - 3d^3(a^2H)4s$	$a^5P - y^3H^\circ$? 3-4	M25
Cr III	1918.27	40		$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$a^5P - y^3D^\circ$? 3-3	M25
Cr III	1918.51	5		$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$c^1G - x^3G^\circ$	4-5	M25
Cr III	1918.61	40		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3F^\circ$? 2-3	M25
Cr III	1919.05	30		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$c^3F - z^3H^\circ$	4-4	M25
Cr III	1922.72	20		$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$a^5P - y^3D^\circ$	2-2	M25
Cr III	1923.41	10					M25
Cr III	1925.26	10					M25
Cr III	1926.64	40					M25
Cr III	1928.61	10					M25
Cr III	1929.72	P 10		$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$c^3P - w^3D^\circ$? 1-2	M25
Cr III	1930.39	20		$3d^3(a^4F)4s - 3d^3(a^4P)4p$	$c^3F - z^3P^\circ$? 3-3	M25
Cr III	1934.58	10		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3F^\circ$	5-4	M25
Cr III	1937.84	30					M25
Cr III	1939.44	20					M25
Cr III	1942.30	50		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3F^\circ - e^3H$? 2-3	M25
Cr III	1942.73	10					M25
Cr III	1944.94	5		$3d^3(a^4P)4s - 3d^3(a^2D)4p$	$c^3P - w^3D^\circ$	2-3	M25
Cr III	1953.26	50					M25
Cr III	1956.36	40h		$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - z^3I^\circ$? 4-5	M25
Cr III	1956.93	50					M25
Cr III	1957.88	10		$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$b^3G - x^3F^\circ$	3-4	M25
Cr III	1958.05	10		$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - y^1G^\circ$	4-4	M25
Cr III	1960.18	10h					M25
Cr III	1960.69	10					M25
Cr III	1961.93	10					M25
Cr III	1962.16	5		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - z^1H^\circ$	5-5	M25
Cr III	1962.37	10					M25
Cr III	1963.15	80		$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$b^3G - x^3F^\circ$	4-4	M25
Cr III	1965.56	200		$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$b^3G - y^1G^\circ$	5-4	M25
Cr III	1966.57	10					M25
Cr III	1971.11	20					M25
Cr III	1972.45	100					M25
Cr III	1973.20	70					M25
Cr III	1974.03	50		$3d^3(a^2H)4p - 3d^3(a^2G)4d$	$z^3I^\circ - f^3H$? 7-6	M25
Cr III	1974.43	60					M25
Cr III	1974.70	10		$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$b^3G - x^3F^\circ$	3-3	M25
Cr III	1975.56	100					M25
Cr III	1975.90	10					M25
Cr III	1976.07	30					M25
Cr III	1978.91	40					M25
Cr III	1980.09	100		$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$b^3G - x^3F^\circ$	4-3	M25
Cr III	1980.24	100		$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$b^3G - x^3F^\circ$	3-2	M25
Cr III	1981.61	40		$3d^3(a^2G)4s - 3d^3(a^2H)4p$	$c^1G - y^1H^\circ$? 4-5	M25
Cr III	1981.82	20					M25
Cr III	1986.54	50					M25
Cr III	1986.82	10		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3G^\circ$	4-5	M25
Cr III	1987.00	10					M25
Cr III	1987.19	10					M25
Cr III	1987.42	30h	49	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$a^5P - z^5S^\circ$	1-2	M25
Cr III	1987.62	150					M25
Cr III	1989.18	P 60		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3G^\circ$	3-4	M25, B25
Cr III	1989.64	10					M25
Cr III	1991.17	40					M25
Cr III	1992.57	100					M25
Cr III	1992.72	250	49	$3d^3(a^4P)4s - 3d^3(a^4P)4p$	$a^5P - z^5S^\circ$	2-2	M25
Cr III	1995.09	50					M25
Cr III	1996.03	10					M25
Cr III	1996.70	20h		$3d^3(a^4P)4p - 3d^3(a^4F)5s$	$y^5D^\circ - f^3F$? 3-4	M25
Cr III	1997.12	10					M25
Cr III	1999.12	20		$3d^3(a^2G)4s - 3d^3(a^2D)4p$	$c^1G - w^3D^\circ$? 4-3	M25
Cr III	1999.47	60		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^3G^\circ$	5-5	M25

CHROMIUM IV (Cr^{3+}), $Z = 24$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 4F_{3/2}$ (21 electrons)
 Ionization Potential [396 000] cm^{-1} ; [49.1] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr IV	573.82	100		$3d^3 - 3d^3(a^2P)4p$	$ga^4F - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	575.11	250		$3d^3 - 3d^3(a^2P)4p$	$gc^3F - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	575.88	50		$3d^3 - 3d^3(a^2P)4p$	$ga^4F - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	576.30	15G		$3d^3 - 3d^3(a^2P)4p$	$ga^4F - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	576.68	150		$3d^3 - 3d^3(a^2P)4p$	$ga^4F - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	595.09	150		$3d^3 - 3d^3(a^1G)4p$	$a^2G - z^2H^o$	$\frac{9}{2} - \frac{11}{2}$	B25
Cr IV	612.70	250		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4P^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	613.76	200		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4P^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	614.09	200		$3d^3 - 3d^3(a^1G)4p$	$a^2G - y^2G^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	614.51	20		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4P^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	614.95	200		$3d^3 - 3d^3(a^1G)4p$	$a^2G - y^2G^o$	$\frac{9}{2} - \frac{9}{2}$	B25
Cr IV	615.36	150		$3d^3 - 3d^3(a^1G)4p$	$a^2G - y^2G^o$	$\frac{9}{2} - \frac{7}{2}$	B25
Cr IV	615.68	150		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4P^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	616.82	250		$3d^3 - 3d^3(a^1G)4p$	$a^2H - z^2H^o$	$\frac{11}{2} - \frac{11}{2}$	B25
Cr IV	617.05	100	4	$3d^3 - 3d^3(a^3F)4p$	$ga^4F - z^2D^o$	$\frac{7}{2} - \frac{7}{2}$	M23
Cr IV	617.94	P 20	3	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$	M22, W4
Cr IV	618.22	200	4	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{7}{2} - \frac{5}{2}$	M23
Cr IV	619.12	200	4	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{7}{2} - \frac{7}{2}$	M23
Cr IV	620.65	500	3	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$	M23
Cr IV	621.33	300	3	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$	M23
Cr IV	622.07	200	3	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4D^o$	$\frac{5}{2} - \frac{3}{2}$	M23
Cr IV	623.59	150		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4D^o$	$\frac{7}{2} - \frac{7}{2}$	B25
Cr IV	625.08	200		$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^2F^o$	$\frac{9}{2} - \frac{1}{2}$	B25
Cr IV	625.40	100		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4D^o$	$\frac{7}{2} - \frac{5}{2}$	B25
Cr IV	625.95	200		$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^2F^o$	$\frac{7}{2} - \frac{5}{2}$	B25
Cr IV	626.58	50		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B25
Cr IV	627.70	50		$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{9}{2}$	M23
Cr IV	628.46	100	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	M23
Cr IV	629.26	P 500	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	M23
Cr IV	629.32	P 80	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{5}{2}$	M23, W4
Cr IV	629.73	250	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	M23
Cr IV	630.28	400	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$	M22
Cr IV	630.77	100	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{3}{2}$	M23
Cr IV	630.92	50	1	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{9}{2} - \frac{11}{2}$	M23
Cr IV	631.30	P 40	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{9}{2} - \frac{7}{2}$	M22, W4
Cr IV	631.55	P 40	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{7}{2} - \frac{5}{2}$	M22, W4
Cr IV	631.74	P 40	2	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$	M22, W4
Cr IV	632.60	150	1	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{7}{2} - \frac{9}{2}$	M23
Cr IV	634.13	100	1	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{5}{2} - \frac{7}{2}$	M23
Cr IV	635.45	50	1	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{5}{2}$	M23
Cr IV	636.44	P 1	1	$3d^3 - 3d^3(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{5}{2} - \frac{5}{2}$	M22, W4
Cr IV	636.92	100		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4S^o$	$\frac{1}{2} - \frac{3}{2}$	B25
Cr IV	637.40	150		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4S^o$	$\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	637.54	250	10	$3d^3 - 3d^3(a^1G)4p$	$a^2H - y^2G^o$	$\frac{9}{2} - \frac{7}{2}$	M23
Cr IV	638.12	250	10	$3d^3 - 3d^3(a^1G)4p$	$a^2H - y^2G^o$	$\frac{11}{2} - \frac{9}{2}$	M23
Cr IV	638.61	150		$3d^3 - 3d^3(a^2P)4p$	$a^4P - y^4S^o$	$\frac{5}{2} - \frac{3}{2}$	B25
Cr IV	665.00	30	7	$3d^3 - 3d^3(a^2F)4p$	$a^2G - z^2G^o$	$\frac{7}{2} - \frac{9}{2}$	M22, W4
Cr IV	666.55	500	7	$3d^3 - 3d^3(a^2F)4p$	$a^2G - z^2G^o$	$\frac{9}{2} - \frac{9}{2}$	M23
Cr IV	667.31	375	7	$3d^3 - 3d^3(a^2F)4p$	$a^2G - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$	M23
Cr IV	668.87	80	7	$3d^3 - 3d^3(a^2F)4p$	$a^2G - z^2G^o$	$\frac{9}{2} - \frac{7}{2}$	M22, W4
Cr IV	675.14	150		$3d^3 - 3d^3(a^2F)4p$	$a^2P - z^2D^o$	$\frac{3}{2} - \frac{5}{2}$	B25
Cr IV	676.47	100		$3d^3 - 3d^3(a^2F)4p$	$a^4P - z^2D^o$	$\frac{5}{2} - \frac{5}{2}$	B25
Cr IV	677.54	200	5	$3d^3 - 3d^3(a^2F)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{7}{2}$	M23
Cr IV	678.91	100	5	$3d^3 - 3d^3(a^2F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{5}{2}$	M23
Cr IV	679.19	20		$3d^3 - 3d^3(a^2F)4p$	$a^2G - z^2D^o$	$\frac{7}{2} - \frac{5}{2}$	B25
Cr IV	680.15	100	5	$3d^3 - 3d^3(a^2F)4p$	$a^4P - z^4D^o$	$\frac{5}{2} - \frac{5}{2}$	M23
Cr IV	680.62	40	5	$3d^3 - 3d^3(a^2F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	M23
Cr IV	681.20	100	5	$3d^3 - 3d^3(a^2F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	681.88	150		$3d^3 - 3d^3(a^2F)4p$	$a^2G - z^4D^o$	$\frac{9}{2} - \frac{7}{2}$	R25
Cr IV	682.82	200		$3d^3 - 3d^3(a^2F)4p$	$a^2G - z^4D^o$	$\frac{7}{2} - \frac{5}{2}$	B25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr IV	684.35	50		$3d^3 - 3d^2(a^3F)4p$	$a^3P - z^3F^o$	$\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	687.13	200	6	$3d^3 - 3d^2(a^3F)4p$	$a^3G - z^3F^o$	$\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	688.47	250	6	$3d^3 - 3d^2(a^3F)4p$	$a^3G - z^3F^o$	$\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	692.70	60	9	$3d^3 - 3d^2(a^3F)4p$	$a^3H - z^3G^o$	$\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	693.93	500	9	$3d^3 - 3d^2(a^3F)4p$	$a^3H - z^3G^o$	$\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	695.22	250	9	$3d^3 - 3d^2(a^3F)4p$	$a^3H - z^3G^o$	$\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	706.00	250	8	$3d^3 - 3d^2(a^3F)4p$	$a^3D - z^3D^o$	$\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	712.91	150		$3d^3 - 3d^2(a^3F)4p$	$a^3D - z^3F^o$?	M25, K8
Cr IV	816.92	10		$3d^3 - 3d^2(a^3F)4p$	$a^3F - z^4F^o$?	M25, K8
Cr IV	996.50	10		$3d^2(a^3F)4p - 3d^2(a^1G)4d$	$z^4G^o - e^2H$?	M25, K8
Cr IV	1002.39	30		$3d^2(a^3F)4p - 3d^2(a^1G)4d$	$z^4G^o - e^2H$?	M25, K8
Cr IV	1010.82	10		$3d^2(a^3F)4p - 3d^2(a^1G)4d$	$z^4G^o - e^2H$?	M25, K8
Cr IV	1026.38	100		$3d^2(a^3F)4p - 3d^2(a^1G)4d$	$z^4D^o - f^2G$?	M25, K8
Cr IV	1049.14	10		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^4G^o - f^4F$?	M25, K8
Cr IV	1055.43	10		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^4G^o - f^4F$?	M25, K8
Cr IV	1055.89	400		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^4G^o - f^4F$?	M25, K8
Cr IV	1057.85	300		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^4F^o - f^2F$?	M25, K8
Cr IV	1066.36	50		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^4F^o - f^4F$?	M25, K8
Cr IV	1070.55	30b		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^4F^o - f^4F$?	M25, K8
Cr IV	1090.97	30		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^2D^o - f^2F$?	M25, K8
Cr IV	1092.23	10		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^4D^o - f^4F$?	M25, K8
Cr IV	1098.06	10		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^4D^o - f^4F$?	M25, K8
Cr IV	1111.17	10		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^2D^o - f^4F$?	M25, K8
Cr IV	1122.87	30		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^2G^o - f^2F$?	M25, K8
Cr IV	1144.31	70		$3d^2(a^3F)4p - 3d^2(a^3F)5s$	$z^2G^o - f^4F$?	M25, K8
Cr IV	1207.58	100		$3d^2(a^1D)4p - 3d^2(a^3F)5s$	$y^2D^o - f^4F$?	M25, K8
Cr IV	1227.43	10		$3d^2(a^1G)4p - 3d^2(a^1G)4d$	$y^2G^o - f^2G$?	M25, K8
Cr IV	1315.00	100b		$3d^2(a^1G)4p - 3d^2(a^1G)4d$	$z^2H^o - f^2G$?	M25, K8
Cr IV	1315.86	125		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4H$	$\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1319.68	150		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4H$	$\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1320.85	40		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^2F$?	M25, K8
Cr IV	1325.03	200		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4H$	$\frac{3}{2} - \frac{1}{2}$	M22, W4
Cr IV	1325.86	50		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4H$	$\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1331.91	50		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4H$	$\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1332.44	250		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4H$	$\frac{1}{2} - \frac{1}{2}$	M22, W4
Cr IV	1338.20	10		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4H$	$\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1339.84	50		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4F$	$\frac{1}{2} - \frac{3}{2}$	M22, W4
Cr IV	1346.62	10		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4G^o - e^4H$	$\frac{1}{2} - \frac{3}{2}$	M22, W4
Cr IV	1348.44	20		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4F^o - e^2G$?	M25, K8
Cr IV	1351.63	40		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2F^o - e^2G$?	M25, K8
Cr IV	1359.93	10		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4F^o - e^2G$?	M25, K8
Cr IV	1364.49	10		$3d^2(a^3F)4s - 3d^2(a^1G)4p$	$b^4F - y^2G^o$?	M25, K8
Cr IV	1367.39	150		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2F^o - e^2F$?	M25, K8
Cr IV	1369.58	20		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4F^o - e^2G$?	M25, K8
Cr IV	1373.46	20		$3d^2(a^3F)4s - 3d^2(a^1G)4p$	$b^4F - y^2G^o$?	M25, K8
Cr IV	1375.56	200		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2F^o - e^2F$?	M25, K8
Cr IV	1383.24	10		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2F^o - e^4G$?	M25, K8
Cr IV	1388.49	20		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4D^o - e^4F$?	M25, K8
Cr IV	1395.83	30b		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4D^o - e^4H$?	M25, K8
Cr IV	1399.50	10		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^4D^o - e^2G$?	M25, K8
Cr IV	1401.81	30		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2D^o - e^2F$?	M25, K8
Cr IV	1410.37	20		$3d^2(a^3F)4s - 3d^2(a^1I)4p$	$b^4F - y^2F^o$?	M25, K8
Cr IV	1412.24	30		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2D^o - e^4G$?	M25, K8
Cr IV	1423.16	100		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2D^o - e^4G$?	M25, K8
Cr IV	1424.62	100		$3d^2(a^1S)4p - 3d^2(a^3F)5s$	$x^2P^o - f^4F$?	M25, K8
Cr IV	1426.58	10		$3d^2(a^3F)4s - 3d^2(a^3P)4p$	$b^4F - y^4D^o$?	M25, K8
Cr IV	1427.71	10		$3d^2(a^1S)4p - 3d^2(a^3F)5s$	$x^2P^o - f^4F$?	M25, K8
Cr IV	1429.41	10		$3d^2(a^1S)4p - 3d^2(a^3F)5s$	$x^2P^o - f^4F$?	M25, K8
Cr IV	1447.03	10		$3d^2(a^1G)4p - 3d^2(a^3F)5s$	$x^2F^o - f^2F$?	M25, K8
Cr IV	1461.04	20		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2G^o - e^4H$?	M25, K8
Cr IV	1466.14	20		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$z^2G^o - e^2F$?	M25, K8
Cr IV	1475.10	10		$3d^2(a^3F)4d - 3d^2(a^3F)4f$	$e^4G - y^4G^o$?	M25, K8
Cr IV	1482.07	20		$3d^2(a^3F)4d - 3d^2(a^3F)4f$	$e^2G - y^4G^o$?	M25, K8
Cr IV	1482.36	20		$3d^2(a^3F)4d - 3d^2(a^3F)4f$	$e^4G - y^4G^o$?	M25, K8
Cr IV	1485.04	150		$3d^2(a^3F)4s - 3d^2(a^1G)4p$	$b^2F - y^2G^o$?	M25, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr IV	1500.46	10		$3d^2(a^3F)4d - 3d^2(a^3F)4f$	$e^4H - y^4G^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1508.89	120		$3d^2(a^3F)4d - 3d^2(a^3F)4f$	$e^4F - y^4G^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1509.85	10		$3d^2(a^3F)4d - 3d^2(a^3F)4f$	$e^4H - y^4G^o$? $\frac{1}{2} - \frac{1}{2}$	M25, K8
Cr IV	1533.42	20		$3d^2(a^3F)4s - 3d^2(a^1D)4p$	$b^2F - y^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1551.20	10		$3d^2(a^3F)4s - 3d^2(a^1D)4p$	$b^2F - y^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1553.09	10		$3d^2(a^1D)4s - 3d^2(a^3F)4d$	$y^2D^o - e^2F$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1644.63	50		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1685.02	40		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$y^4D^o - e^2F$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1704.48	10		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$x^2D^o - e^2F$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1704.57	10		$3d^2(a^3F)4p - 3d^2(a^3F)4d$	$y^4D^o - e^2G$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1706.65	30h		$3d^2(a^3P)4p - 3d^2(a^3F)4d$	$y^4D^o - e^2F$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1709.89	50		$3d^2(a^1D)4p - 3d^2(a^3F)4d$	$y^2F^o - e^2F$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1713.69	50		$3d^2(a^1D)4p - 3d^2(a^3F)4d$	$y^2F^o - e^2G$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1715.04	30		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1722.84	100	14	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1726.82	30		$3d^2(a^3P)4p - 3d^2(a^3F)4d$	$x^2D^o - e^2G$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1729.93	50		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1731.22	100	14	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1733.93	200	14	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1734.12	P 100		$3d^2(a^1G)4s - 3d^2(a^1G)4p$	$b^2G - x^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1734.68	60		$3d^2(a^1G)4s - 3d^2(a^1G)4p$	$b^2G - x^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1739.22	250	14	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1741.10	P 75	13	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1741.93	30		$3d^2(a^1D)4p - 3d^2(a^3F)4d$	$y^2F^o - e^2G$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1756.94	350	13	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1754.51	P 250	13	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1755.65	100	13	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1758.47	100	13	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1762.61	P 250	13	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1775.90	70		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1784.18	P 150		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1791.04	200		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1796.09	50		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1797.92	20		$3d^2(a^1G)4p - 3d^2(a^3F)4d$	$y^2G^o - e^2G$? $\frac{3}{2} - \frac{1}{2}$	M25, K8
Cr IV	1802.30	30		$3d^2(a^1G)4p - 3d^2(a^3F)4d$	$y^2G^o - e^2G$? $\frac{3}{2} - \frac{1}{2}$	M25, K8
Cr IV	1810.46	P 150	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1815.05	P 150	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1818.90	100h		$3d^2(a^1G)4p - 3d^2(a^3F)4d$	$y^2G^o - e^2G$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1819.18	300	16	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1821.56	P 100	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1822.49	20		$3d^2(a^1G)4p - 3d^2(a^3F)4d$	$y^2G^o - e^2G$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1826.16	150	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1826.81	150	16	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1827.39	50	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1830.29	50	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1833.79	75	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1840.10	500	11	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2G^o$? $\frac{3}{2} - \frac{1}{2}$	M23
Cr IV	1842.84	P 125	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1843.42	P 75	12	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1844.34	P 30	16	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1851.82	250	11	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1862.99	500	11	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1868.29	P 50	11	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1873.86	125	11	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1876.00	P 60	11	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1883.10	P 175	11	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2G^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1909.86	P 50		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M22, W4
Cr IV	1918.59	20		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1934.13	20		$3d^2(a^1G)4p - 3d^2(a^3F)4d$	$z^2H^o - e^2F$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1937.65	200		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2L^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1939.64	P 100		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M22, B25
Cr IV	1946.59	150		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	B25
Cr IV	1948.28	20		$3d^2(a^1G)4p - 3d^2(a^3F)4d$	$z^2H^o - e^4H$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1951.00	40		$3d^2(a^1G)4p - 3d^2(a^3F)4d$	$z^2H^o - e^2F$? $\frac{3}{2} - \frac{3}{2}$	M25, K8
Cr IV	1968.27	P 150		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2D^o$? $\frac{3}{2} - \frac{3}{2}$	M22, B25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr IV	1985.58	75	15	$3d^3(a^3F)4s - 3d^3(a^3F)4p$	$b^3F - z^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1990.22	200	15	$3d^3(a^3F)4s - 3d^3(a^3F)4p$	$b^3F - z^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M23
Cr IV	1997.35	20		$3d^2(a^1G)4p - 3d^2(a^3F)4d$	$z^3H^{\circ} - c^3G$?	M25, K8

CHROMIUM V (Cr^{4+}), $Z = 24$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^3F_2$ (20 electrons)
 Ionization Potential [523 000] cm^{-1} ; [71] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr V	433.13	50		$3d^3 - 3d4p$	$ga^3F - z^3F^{\circ}$	3 - 4	W3, M22
Cr V	434.22			$3d^3 - 3d4p$	$ga^3F - z^3F^{\circ}$? 2 - 3	W3, M22
Cr V	434.33	400		$3d^2 - 3d4p$	$ga^3F - z^3F^{\circ}$? 4 - 4	W3, M27
Cr V	435.16	300		$3d^2 - 3d4p$	$ga^3F - z^3F^{\circ}$	3 - 3	W3, M22
Cr V	435.66	250		$3d^2 - 3d4p$	$ga^3F - z^3F^{\circ}$	2 - 2	W3, M22
Cr V	436.37	250		$3d^2 - 3d4p$	$ga^3F - z^3F^{\circ}$	4 - 3	W3, M22
Cr V	436.61	200		$3d^2 - 3d4p$	$ga^3F - z^3F^{\circ}$	3 - 2	W3, M22
Cr V	437.43	200		$3d^2 - 3d4p$	$ga^3F - z^3D^{\circ}$	3 - 3	W3, M22
Cr V	437.69	200		$3d^2 - 3d4p$	$ga^3F - z^3D^{\circ}$	2 - 2	W3, M22
Cr V	438.62	300		$3d^2 - 3d4p$	$ga^3F - z^3D^{\circ}$	2 - 1	W3, M22
Cr V	438.65	400		$3d^2 - 3d4p$	$ga^3F - z^3D^{\circ}$	3 - 2	W3, M22
Cr V	438.66	500		$3d^2 - 3d4p$	$ga^3F - z^3D^{\circ}$	4 - 3	W3, M22
Cr V	441.11	400		$3d^2 - 3d4p$	$a^1D - z^1P^{\circ}$	2 - 1	W3, M22
Cr V	446.71	50		$3d^2 - 3d4p$	$a^3P - z^1P^{\circ}$	2 - 1	W3, M22
Cr V	456.31	200		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	1 - 2	W3, M22
Cr V	456.36	100		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	0 - 1	W3, M22
Cr V	456.68	150		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	1 - 0	W3, M22
Cr V	456.79	150		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	1 - 1	W3, M22
Cr V	457.08	400		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	2 - 2	W3, M22
Cr V	457.56	150		$3d^2 - 3d4p$	$a^3P - z^3P^{\circ}$	2 - 1	W3, M22
Cr V	462.26	50		$3d^2 - 3d4p$	$a^1D - z^3F^{\circ}$	2 - 2	W3, M22
Cr V	464.03	1000		$3d^2 - 3d4p$	$a^1G - z^1F^{\circ}$	4 - 3	W3, M22
Cr V	469.34	300		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$	2 - 3	W3, M22
Cr V	469.65	300		$3d^2 - 3d4p$	$a^1D - z^1D^{\circ}$	2 - 2	W3, M22
Cr V	469.95	200		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$	1 - 2	W3, M22
Cr V	470.56	100		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$	0 - 1	W3, M22
Cr V	470.75	50		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$	2 - 2	W3, M22
Cr V	471.03	40		$3d^2 - 3d4p$	$a^3P - z^3D^{\circ}$	1 - 1	W3, M22
Cr V	1112.47	60		$3d4p - 3d4d$	$z^3F^{\circ} - c^3G$	2 - 3	W3, M22
Cr V	1117.55	80		$3d4p - 3d4d$	$z^3F^{\circ} - c^3G$	3 - 4	W3, M22
Cr V	1121.98	5		$3d4p - 3d4d$	$z^3F^{\circ} - c^3G$	3 - 3	W3, M22
Cr V	1123.62	100		$3d4p - 3d4d$	$z^3F^{\circ} - c^3G$	4 - 5	W3, M22
Cr V	1131.16	20		$3d4p - 3d4d$	$z^3F^{\circ} - c^3G$	4 - 4	W3, M22
Cr V	1481.69	300		$3d4s - 3d4p$	$a^3D - z^3P^{\circ}$	1 - 0	W3, M22
Cr V	1482.89	250		$3d4s - 3d4p$	$a^3D - z^3P^{\circ}$	1 - 1	W3, M22
Cr V	1484.67	150		$3d4s - 3d4p$	$a^3D - z^3P^{\circ}$	2 - 2	W3, M22
Cr V	1488.75	500		$3d4s - 3d4p$	$a^3D - z^3P^{\circ}$	2 - 1	W3, M22
Cr V	1498.02	700		$3d4s - 3d4p$	$a^3D - z^3P^{\circ}$	3 - 2	W3, M22
Cr V	1519.02	700		$3d4s - 3d4p$	$b^1D - z^1F^{\circ}$	2 - 3	W3, M22
Cr V	1579.67	800		$3d4s - 3d4p$	$a^3D - z^3F^{\circ}$	3 - 4	W3, M22
Cr V	1591.70	700		$3d4s - 3d4p$	$a^3D - z^3F^{\circ}$	2 - 3	W3, M22
Cr V	1603.17	600		$3d4s - 3d4p$	$a^3D - z^3F^{\circ}$	1 - 2	W3, M22
Cr V	1607.04	5		$3d4s - 3d4p$	$a^3D - z^3F^{\circ}$	3 - 3	W3, M22
Cr V	1611.27	5		$3d4s - 3d4p$	$a^3D - z^3F^{\circ}$	2 - 2	W3, M22
Cr V	1622.53	20		$3d4s - 3d4p$	$a^3D - z^3D^{\circ}$	2 - 3	W3, M22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr V	1630.91	100					
Cr V	1638.42	700		3d 4s - 3d 4p	$a^2D - z^2D^{\circ}$	1 - 2	W3, M22
Cr V	1639.35	500		3d 4s - 3d 4p	$a^2D - z^2D^{\circ}$	3 - 3	W3, M22
Cr V	1644.00	400		3d 4s - 3d 4p	$a^2D - z^2D^{\circ}$	2 - 2	W3, M22
Cr V	1652.52	200		3d 4s - 3d 4p	$a^2D - z^2D^{\circ}$	1 - 1	W3, M22
Cr V	1655.55	250		3d 4s - 3d 4p	$a^2D - z^2D^{\circ}$	2 - 1	W3, M22
Cr V?	1820.28	600		3d 4s - 3d 4p	$a^2D - z^2D^{\circ}$	3 - 2	W3, M22 W3

CHROMIUM VI (Cr^{5+}), $Z = 24$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 D_{3/2}$ (19 electrons)
 Ionization Potential $730\,400\text{ cm}^{-1}$; 90.56 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr VI	144.81	100					
Cr VI	145.01	200		3d - 10f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	146.82	200		3d - 10f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	147.02	300		3d - 9f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	149.72	300		3d - 9f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	149.93	400		3d - 8f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	154.19	400		3d - 7f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	154.41	500		3d - 7f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	161.65	600		$3p^6 3d - 3p^5 3d(^2D^{\circ}) 4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	161.68	600		$3p^6 3d - 3p^5 3d(^2D^{\circ}) 4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	161.90	200		$3p^6 3d - 3p^5 3d(^2D^{\circ}) 4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	161.93	100		$3p^6 3d - 3p^5 3d(^2D^{\circ}) 4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	162.76	400		3d - 6f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	163.01	500		3d - 6f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	163.80	400		$3p^6 3d - 3p^5 3d(^2D^{\circ}) 4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	164.30	100		$3p^6 3d - 3p^5 3d(^2D^{\circ}) 4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	164.56	300		$3p^6 3d - 3p^5 3d(^2D^{\circ}) 4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	164.84	300		$3p^6 3d - 3p^5 3d(^2D^{\circ}) 4s$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	168.09	700		$3p^6 3d - 3p^5 3d(^2F^{\circ}) 4s$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	168.35	300		$3p^6 3d - 3p^5 3d(^2F^{\circ}) 4s$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	169.44	800		$3p^6 3d - 3p^5 3d(^2F^{\circ}) 4s$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	170.57	200		$3p^6 3d - 3p^5 3d(^2F^{\circ}) 4s$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	171.39	400		$3p^6 3d - 3p^5 3d(^2F^{\circ}) 4s$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	172.20	200		$3p^6 3d - 3p^5 3d(^2P^{\circ}) 4s$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	172.48	600		$3p^6 3d - 3p^5 3d(^2P^{\circ}) 4s$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	172.83	500		$3p^6 3d - 3p^5 3d(^2P^{\circ}) 4s$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	174.17	300		$3p^6 3d - 3p^5 3d(^2P^{\circ}) 4s$	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F31, C16
Cr VI	175.75	600		3d - 5f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	176.04	800		3d - 5f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A1
Cr VI	200.94	600		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, F11
Cr VI	201.15	300		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, F11
Cr VI	201.33	300		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, F11
Cr VI	201.54	600		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, F11
Cr VI	207.44	200		3d - 4f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, K28
Cr VI	207.61	300		3d - 4f	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, K28
Cr VI	226.20	500		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, F11
Cr VI	227.20	400		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G1, F11
Cr VI	335.20			5d - 4p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G6
Cr VI	336.30			3d - 4p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G6
Cr VI	337.28			3d - 4p	$g^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr VI	942.75			4p - 4d	$^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	F4
Cr VI	957.01			4p - 4d	$^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	F4

CHROMIUM VII (Cr^{6+}), $Z = 24$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^1S_0$ (18 electrons)
 Ionization Potential $1\ 299\ 700\ cm^{-1}$; 161.1 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr VII	104.13	40		$3p^6 - 3p^5(^3P^o)5s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0-1	K27,M22
Cr VII	105.14	160		$3p^6 - 3p^5(^3P^o)5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	K27,M22
Cr VII	114.22	60		$3p^6 - 3p^5(^3P^o)4d$	$g^1S - (\frac{1}{2}, \frac{3}{2})^o$	0-1	A1
Cr VII	115.40	70		$3p^6 - 3p^5(^3P^o)4d$	$g^1S - (\frac{3}{2}, \frac{5}{2})^o$	0-1	A1
Cr VII	146.532	1000		$3p^6 - 3p^5(^3P^o)4s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0-1	K27,M22
Cr VII	148.736	600		$^1p^6 - 3p^5(^3P^o)4s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0-1	K27,M22
Cr VII	166.49	50		$3p^5 3d - 3p^5 4f$	$^3P^o - ^3D$	0-1	W1
Cr VII	166.57	70		$3p^5 3d - 3p^5 4f$	$^3P^o - ^3D$	1-2	W1
Cr VII	166.95	50		$^3p^5 3d - ^3p^5 4f$	$^3P^o - ^3D$	1-1	W1
Cr VII	167.07	80		$3p^5 3d - 3p^5 4f$	$^3P^o - ^3D$	2-3	W1
Cr VII	157.50	70		$3p^5 3d - 3p^5 4f$	$^3P^o - ^3D$	2-2	W1
Cr VII	170.39	100		$3p^5 3d - 3p^5 4f$	$^3F^o - ^3G$	4-5	W1
Cr VII	170.85	80		$3p^5 3d - 3p^5 4f$	$^3F^o - ^3G$	3-4	W1
Cr VII	170.98	70		$3p^5 3d - 3p^5 4f$	$^3F^o - ^3G$	2-3	W1
Cr VII	174.28	80		$3p^5 3d - 3p^5 4f$	$^1D^o - ^1F$	2-3	W1
Cr VII	175.31	80		$3p^5 3d - 3p^5 4f$	$^3D^o - ^3F$	2-3	W1
Cr VII	175.81	80		$3p^5 3d - 3p^5 4f$	$^1F^o - ^3F$	3-4	W1
Cr VII	176.61	100		$3p^5 3d - 3p^5 4f$	$^3D^o - ^1G$	3-4	W1
Cr VII	202.78	900		$3p^6 - 3p^5(^3P^o)3d$	$g^1S - ^1P^o$	0-1	G1,F11
Cr VII	259.18			$3p^6 - 3p^5 3d$	$g^1S - ^3D^o$	0-1	F2

CHROMIUM VIII (Cr^{7+}), $Z = 24$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 \ ^2P_{3/2}$ (17 electrons)
 Ionization Potential $[1\ 485\ 700]\ cm^{-1}$; [184.2] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr VIII	124.184	200		$3p^5 - 3p^4(^1S)4s$	$g^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	E20
Cr VIII	125.728	100		$3p^5 - 3p^4(^1S)4s$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	E20
Cr VIII	129.998	700		$3p^5 - 3p^4(^1D)4s$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{1}{2}$	E20
Cr VIII	131.638	600		$3p^5 - 3p^4(^1D)4s$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	E20
Cr VIII	132.321	200		$3p^5 - 3p^4(^3P)4s$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{1}{2}$	E20
Cr VIII	133.395	600		$3p^5 - 3p^4(^3P)4s$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{3}{2}$	E20
Cr VIII	134.076	300		$3p^5 - 3p^4(^3P)4s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{1}{2}$	E20
Cr VIII	134.942	400		$3p^5 - 3p^4(^3P)4s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E20
Cr VIII	135.185	100		$3p^5 - 3p^4(^3P)4s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	E20
Cr VIII	135.892	50		$3p^5 - 3p^4(^3P)4s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	E20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr VIII	201.54			$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F13
Cr VIII	205.01	700		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F13, F11
Cr VIII	205.65	400		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F13, F11
Cr VIII	207.07	300		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F13, F11
Cr VIII	208.63	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F13, F11
Cr VIII	211.42	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F13, F11
Cr VIII	213.03	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F13, F11
Cr VIII	216.67			$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F13
Cr VIII	221.41	200		$3p^5 - 3p^4(^1D)3d$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F13, F11
Cr VIII	412.9 ^a			$3s^23p^5 - 3s3p^6$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F4
Cr VIII	430.60			$3s^23p^5 - 3s3p^6$	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F4

CHROMIUM IX (Cr^{8+}), $Z = 24$
 Ground State $1s^22s^22p^63s^23p^4\ ^3P_2$ (16 electrons)
 Ionization Potential $1691\ 000\ cm^{-1}$; $209.8\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr IX	117.435	200		$3p^4 - 3p^3(^2P^{\circ})4s$	$^1D - ^1P^{\circ}$	2 - 1	E19
Cr IX	117.942	600		$3p^4 - 3p^3(^2D^{\circ})4s$	$g^2P^{\circ} - ^2D^{\circ}$	2 - 3	E19
Cr IX	118.165	200		$3p^4 - 3p^3(^2D^{\circ})4s$	$g^2P^{\circ} - ^2D^{\circ}$	2 - 2	E19
Cr IX	119.269	400		$3p^4 - 3p^3(^2D^{\circ})4s$	$g^2P^{\circ} - ^2D^{\circ}$	1 - 2	E19
Cr IX	119.320	200		$3p^4 - 3p^3(^2D^{\circ})4s$	$g^2P^{\circ} - ^2D^{\circ}$	1 - 1	E19
Cr IX	119.569	100		$3p^4 - 3p^3(^2D^{\circ})4s$	$g^2P^{\circ} - ^2D^{\circ}$	0 - 1	E19
Cr IX	121.293	600		$3p^4 - 3p^3(^2D^{\circ})4s$	$^1D - ^1D^{\circ}$	2 - 2	E19
Cr IX	121.781	400		$3p^4 - 3p^3(^4S^{\circ})4s$	$g^2P^{\circ} - ^2S^{\circ}$	2 - 1	E19
Cr IX	122.720	200		$3p^4 - 3p^3(^2P^{\circ})4s$	$^1S - ^1P^{\circ}$	0 - 1	E19
Cr IX	122.964	200		$3p^4 - 3p^3(^4S^{\circ})4s$	$g^2P^{\circ} - ^2S^{\circ}$	1 - 1	E19
Cr IX	123.226	50		$3p^4 - 3p^3(^4S^{\circ})4s$	$g^2P^{\circ} - ^2S^{\circ}$	0 - 1	E19
Cr IX	208.53			$3p^4 - 3p^3(^4S^{\circ})3d$	$g^2P^{\circ} - ^2D^{\circ}$	2 - 2	F7
Cr IX	209.44	200		$3p^4 - 3p^3(^2D^{\circ})3d$	$^1D - ^1F^{\circ}$	2 - 3	F7, F11
Cr IX	210.62			$3p^4 - 3p^3(^4S^{\circ})3d$	$g^2P^{\circ} - ^2D^{\circ}$	2 - 3	F7
Cr IX	211.32			$3p^4 - 3p^3(^4S^{\circ})3d$	$g^2P^{\circ} - ^2D^{\circ}$	0 - 1	F7
Cr IX	211.97			$3p^4 - 3p^3(^4S^{\circ})3d$	$g^2P^{\circ} - ^2D^{\circ}$	1 - 2	F7
Cr IX	215.04			$3p^4 - 3p^3(^2D^{\circ})3d$	$^1S - ^1P^{\circ}$	0 - 1	F7
Cr IX	215.97			$3p^4 - 3p^3(^2D^{\circ})3d$	$^1D - ^1D^{\circ}$	2 - 2	F7
Cr IX	220.02			$3p^4 - 3p^3(^2D^{\circ})3d$	$g^2P^{\circ} - ^2P^{\circ}$	2 - 2	F7
Cr IX	223.87			$3p^4 - 3p^3(^2D^{\circ})3d$	$g^2P^{\circ} - ^2P^{\circ}$	1 - 2	F7
Cr IX	363.26			$3s^23p^4 - 3s3p^5$	$^1D - ^1P^{\circ}$	2 - 1	F7
Cr IX	407.50			$3s^23p^4 - 3s3p^5$	$g^2P^{\circ} - ^2P^{\circ}$	2 - 1	F4
Cr IX	414.47			$3s^23p^4 - 3s3p^5$	$g^2P^{\circ} - ^2P^{\circ}$	1 - 0	F4
Cr IX	418.15			$3s^23p^4 - 3s3p^5$	$g^2P^{\circ} - ^2P^{\circ}$	2 - 2	F4
Cr IX	420.94			$3s^23p^4 - 3s3p^5$	$g^2P^{\circ} - ^2P^{\circ}$	1 - 1	F4
Cr IX	424.03			$3s^23p^4 - 3s3p^5$	$g^2P^{\circ} - ^2P^{\circ}$	0 - 1	F4
Cr IX	432.33			$3s^23p^4 - 3s3p^5$	$g^2P^{\circ} - ^2P^{\circ}$	1 - 2	F4
Cr IX	1694.4	f		$3p^4 - 3p^4$	$g^2P^{\circ} - ^1S$	1 - 0	S28

CHROMIUM X (Cr⁹⁺), Z = 24
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [952 000] cm⁻¹; [242] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr X	216.72	400		$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F7, F11
Cr X	218.88			$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F7
Cr X	220.42			$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	221.18			$3p^2 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	223.86			$3p^2 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F7
Cr X	224.74			$3p^2 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	226.24			$3p^2 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	227.42			$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	228.71			$3p^2 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	231.21			$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F7
Cr X	232.96			$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	233.80			$3p^2 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F7
Cr X	247.67			$3p^2 - 3p^2(^2F)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F7
Cr X	252.62			$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	254.15			$3p^2 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr X	332.97			$3s^2 3p^2 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F4
Cr X	340.05		$3s^2 3p^2 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F4	
Cr X	353.22		$3s^2 3p^2 - 3s 3p^4$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F4	
Cr X	354.96		$3s^2 3p^2 - 3s 3p^4$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F4	
Cr X	395.92		$3s^2 3p^2 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F4	
Cr X	398.09		$3s^2 3p^2 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F4	
Cr X	416.62		$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F4	
Cr X	427.51		$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F4	
Cr X	1488.9	f		$3p^2 - 3p^2$	$g^4S^{\circ} - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S28
Cr X	1564.1	f		$3p^2 - 3p^2$	$g^4S^{\circ} - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S28

CHROMIUM XI (Cr¹⁰⁺), Z = 24
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [2 177 800] cm⁻¹; [270] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XI	220.42			$3p^2 - 3p 3d$	$^1D - ^1P^{\circ}$	2 - 1	F7
Cr XI	226.45			$3p^2 - 3p 3d$	$^1D - ^1F^{\circ}$	2 - 3	F17
Cr XI	230.29			$3p^2 - 3p 3d$	$g^2P - ^2D^{\circ}$	0 - 1	F7
Cr XI	232.18			$3p^2 - 3p 3d$	$g^2P - ^2D^{\circ}$	1 - 2	F7
Cr XI	233.26			$3p^2 - 3p 3d$	$g^2P - ^2D^{\circ}$	1 - 1	F7
Cr XI	234.68			$3p^2 - 3p 3d$	$g^2P - ^2P^{\circ}$	0 - 1	F7
Cr XI	235.52			$3p^2 - 3p 3d$	$g^2P - ^2D^{\circ}$	2 - 3	F17
Cr XI	235.74			$3p^2 - 3p 3d$	$g^2P - ^2D^{\circ}$	2 - 2	F7
Cr XI	236.26			$3p^2 - 3p 3d$	$g^2P - ^2P^{\circ}$	1 - 0	F7
Cr XI	237.24			$3p^2 - 3p 3d$	$g^2P - ^1D^{\circ}$	1 - 2	F7
Cr XI	237.79			$3p^2 - 3p 3d$	$g^2P - ^2P^{\circ}$	1 - 1	F7
Cr XI	240.56			$3p^2 - 3p 3d$	$^1S - ^1P^{\circ}$	0 - 1	F2
Cr XI	241.48			$3p^2 - 3p 3d$	$g^2P - ^2P^{\circ}$	2 - 1	F7
Cr XI	241.87			$3p^2 - 3p 3d$	$g^2P - ^2P^{\circ}$	1 - 2	F7
Cr XI	245.70			$3p^2 - 3p 3d$	$g^2P - ^2P^{\circ}$	2 - 2	F7
Cr XI	256.32			$3p^2 - 3p 3d$	$^1D - ^1D^{\circ}$	2 - 2	F7
Cr XI	284.97			$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2S^{\circ}$	1 - 1	F7
Cr XI	290.27			$3s^2 3p^2 - 3s 3p^2$	$g^2P - ^2S^{\circ}$	2 - 1	F7
Cr XI	298.03			$3s^2 3p^2 - 3s 3p^2$	$^1D - ^1P^{\circ}$	2 - 1	F7
Cr XI	336.06			$3s^2 3p^2 - 3s 3p^2$	$^1S - ^1P^{\circ}$	0 - 1	K8

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XI	370.87			$3s^2 3p^2 - 3s 3p^3$	$^1D - ^1D^o$	2-2	F7
Cr XI	374.90			$3s^2 3p^2 - 3s 3p^3$	$^3P^o - ^3P^o$	2-2	F7
Cr XI	421.99			$3s^2 3p^2 - 3s 3p^3$	$^3P^o - ^3D^o$	1-2	F7
Cr XI	431.07			$3s^2 3p^2 - 3s 3p^3$	$^3P^o - ^3D^o$	2-3	F7
Cr XI	1440.4	f		$3p^o - 3p^3$	$^3P^o - ^1S$	1-0	S28

CHROMIUM XII (Cr^{11+}), $Z = 24$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^2P_{1/2}^o$ (13 electrons)
 Ionization Potential [2 395 600] cm^{-1} ; [297] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XII	75.815	200		$3p - 4f$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E18
Cr XII	76.488	100		$3p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E18
Cr XII	90.86			$3s 3p^2 - 3s 3p 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Cr XII	96.11			$3s 3p 3d - 3s 3p 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{1}{2}$	F10
Cr XII	96.35			$3s 3p 3d - 3s 3p 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$	F10
Cr XII	96.50			$3s 3p 3d - 3s 3p 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$	F10
Cr XII	101.39			$3d - 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Cr XII	101.46			$3d - 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Cr XII	244.70			$3p - 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F7
Cr XII	251.52			$3p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Cr XII	294.63			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F4
Cr XII	299.95			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F4
Cr XII	305.81			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F4
Cr XII	311.55			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F4
Cr XII	318.82			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F4
Cr XII	320.20			$3s 3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{1}{2} - \frac{3}{2}$	F4
Cr XII	325.13			$3s 3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	F4
Cr XII	331.95			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F4
Cr XII	332.06			$3s 3p^2 - 3p^3$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	F4
Cr XII	392.94			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F4
Cr XII	410.88			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F4

CHROMIUM XIII (Cr^{12+}), $Z = 24$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential [2 855 000] cm^{-1} ; [354] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XIII	53.506	50		$3s 3p - 3s 5d$	$^2P^o - ^2D$	1-2	E18
Cr XIII	53.765	100		$3s 3p - 3s 5d$	$^2P^o - ^2D$	2-3	E18
Cr XIII	65.968	50		$3s 3d - 3s 5f$	$^2D - ^2F^o$	3-4	E18
Cr XIII	66.983	200		$3s^2 - 3s 4p$	$g^1S - ^1P^o$	0-1	E18
Cr XIII	70.792	100		$3s 3p - 3s 4d$	$^2P^o - ^2D$	0-1	E18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XIII	70.973	300d		3s3p - 3s4d	$^3P^{\circ} - ^3D$	1 - 2	E18
Cr XIII	71.398	300		3s3p - 3s4d	$^3P^{\circ} - ^3D$	2 - 3	E18
Cr XIII	71.435	50		3s3p - 3s4d	$^3P^{\circ} - ^3D$	2 - 2	E18
Cr XIII	76.15			3s3p - 3s4d	$^1P^{\circ} - ^1D$	1 - 2	F10
Cr XIII	84.616	50		3s3p - 3s4s	$^3P^{\circ} - ^3S$	0 - 1	E18
Cr XIII	84.898	200		3s3p - 3s4s	$^3P^{\circ} - ^3S$	1 - 1	E18
Cr XIII	85.566	300		3s3p - 3s4s	$^3P^{\circ} - ^3S$	2 - 1	E18
Cr XIII	89.99			3p3d - 3p4f	$^3F^{\circ} - ^3G$	4 - 5	F10
Cr XIII	90.07			3p3d - 3p4f	$^3F^{\circ} - ^3G$	2 - 3	F10
Cr XIII	90.17			3p3d - 3p4f	$^3F^{\circ} - ^3G$	3 - 4	F10
Cr XIII	90.85			3p3d - 3p4f	$^1D^{\circ} - ^3F$	2 - 3	F10
Cr XIII	91.749	200		3s3d - 3s4f	$^3D - ^3F^{\circ}$	1 - 2	E18
Cr XIII	91.792	300		3s3d - 3s4f	$^3D - ^3F^{\circ}$	2 - 3	E18
Cr XIII	91.855	400b		3s3d - 3s4f	$^3D - ^3F^{\circ}$	3 - 4	E18
Cr XIII	92.01			3p3d - 3p4f	$^3P^{\circ} - ^3D$	0 - 1	F10
Cr XIII	92.16			3p3d - 3p4f	$^3P^{\circ} - ^3D$	1 - 1	F10
Cr XIII	92.54			3p3d - 3p4f	$^3D^{\circ} - ^3D$	2 - 2	F10
Cr XIII	92.61			3p3d - 3p4f	$^3D^{\circ} - ^3D$	3 - 3	F10
Cr XIII	93.42			3p3d - 3p4f	$^3D^{\circ} - ^3F$	3 - 4	F10
Cr XIII	96.86			3p3d - 3p4f	$^3P^{\circ} - ^3L$	1 - 2	F10
Cr XIII	97.25			3p3d - 3p4f	$^1F^{\circ} - ^1G$	3 - 4	F10
Cr XIII	259.59			3s3p - 3s3d	$^3P^{\circ} - ^3D$	0 - 1	F17
Cr XIII	261.83			3s3p - 3s3d	$^3P^{\circ} - ^3D$	1 - 2	F17
Cr XIII	262.22			3s3p - 3s3d	$^3P^{\circ} - ^3D$	1 - 1	F17
Cr XIII	267.65			3s3p - 3s3d	$^3P^{\circ} - ^3D$	2 - 3	F4
Cr XIII	276.5			3p ² - 3p3d	$^3P - ^3D^{\circ}$	2 - 3	F4
Cr XIII	279.32			3p ² - 3p3d	$^3P - ^3P^{\circ}$	2 - 2	F4
Cr XIII	297.6			3p ² - 3p3d	$^1D - ^1D^{\circ}$	2 - 2	F4
Cr XIII	316.6			3p ² - 3p3d	$^1S - ^1P^{\circ}$	0 - 1	F4
Cr XIII	328.29			3s ² - 3s3p	$g^1S - ^1P^{\circ}$	0 - 1	F22
Cr XIII	342.69			3s3p - 3p ²	$^3P^{\circ} - ^3P$	1 - 2	F22
Cr XIII	351.14			3s3p - 3p ²	$^3P^{\circ} - ^3P$	0 - 1	F22
Cr XIII	353.81			3s3p - 3p ²	$^3P^{\circ} - ^3P$	2 - 2	F22
Cr XIII	356.12			3s3p - 3p ²	$^3P^{\circ} - ^3P$	1 - 1	F22
Cr XIII	363.96			3s3p - 3p ²	$^3P^{\circ} - ^3P$	1 - 0	F22
Cr XIII	368.06			3s3p - 3p ²	$^3P^{\circ} - ^3P$	2 - 1	F22
Cr XIII	369.13			3s3d - 3p3d	$^3D - ^3D^{\circ}$	3 - 3	F4
Cr XIII	377.60			3s3p - 3p ²	$^1P^{\circ} - ^1S$	1 - 0	F4
Cr XIII	437.05			3s3d - 3p3d	$^3D - ^3F^{\circ}$	3 - 4	F4
Cr XIII	449.76			3s3d - 3p3d	$^3D - ^3F^{\circ}$	2 - 3	F4
Cr XIII	461.60			3s3d - 3p3d	$^3D - ^3F^{\circ}$	1 - 2	F4
Cr XIII	480.82	?		3s ² - 3s3p	$g^1S - ^3P^{\circ}$	0 - 1	K8
Cr XIII	560.11			3s3p - 3s3d	$^1P^{\circ} - ^1D$	1 - 2	F4

CHROMIUM XIV (Cr²⁺, Z = 24)Ground State 1s²2s²2p⁶3s²3s_{1,2} (11 electrons)Ionization Potential 3 099 630 cm⁻¹; 384.30 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XIV	21.467	-A		2p ⁶ 3s - 2p ⁵ 3s ²	$g^4S - ^3P^{\circ}$	1/2 - 1/2	F27
Cr XIV	21.770	-A		2p ⁶ 3s - 2p ⁵ 3s ²	$g^4S - ^3P^{\circ}$	1/2 - 3/2	F27
Cr XIV	46.468			3s - 5p	$g^4S - ^3P^{\circ}$	1/2 - 3/2	E16
Cr XIV	46.521			3s - 5p	$g^4S - ^3P^{\circ}$	1/2 - 1/2	E16
Cr XIV	50.812			3p - 5d	$^3P^{\circ} - ^3D$	1/2 - 3/2	E16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XIV	51.162			3p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F16
Cr XIV	52.363			3d - 6f	$^2F^{\circ} - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E16
Cr XIV	60.699			3d - 5f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E16
Cr XIV	60.756			3d - 5f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E16
Cr XIV	63.309			3s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	E16
Cr XIV	63.525			3s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E16
Cr XIV	68.565			3p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E16
Cr XIV	69.183			3p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E16
Cr XIV	69.221			3p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E16
Cr XIV	80.916			3p - 4s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E16
Cr XIV	81.838			3p - 4s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E16
Cr XIV	86.057			3d - 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E16
Cr XIV	86.164			3d - 4f	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E16
Cr XIV	101.05			3d - 4p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	F10
Cr XIV	101.42			3d - 4p	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	F10
Cr XIV	222.16	200		4d - 5p	$^2D - ^2P^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	F11, K8
Cr XIV	289.70			3p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F22
Cr XIV	300.23			3p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F22
Cr XIV	301.78			3p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F22
Cr XIV	389.81			3s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	F22
Cr XIV	411.99			3s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	F22

CHROMIUM XV (Cr^{14+}), $Z = 24$ Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)Ionization Potential $8\ 151\ 600\ cm^{-1}$; $1010.64\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XV	13.294	10		$2p^6 - 2p^5 6d$	$g^1S - ^1P^{\circ}$	0 - 1	S31
Cr XV	13.416	10		$2p^6 - 2p^5 6d$	$g^1S - ^3D^{\circ}$	0 - 1	S31
Cr XV	13.862	20		$2p^6 - 2p^5 5d$	$g^1S - ^1P^{\circ}$	0 - 1	S31
Cr XV	13.991	20		$2p^6 - 2p^5 5d$	$g^1S - ^3D^{\circ}$	0 - 1	S31
Cr XV	15.36	50		$2p^6 - 2p^5 4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	T14
Cr XV	15.21	50		$2p^6 - 2p^5 4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	T14
Cr XV	15.509	10		$2p^6 - 2p^5 4s$	$g^1S - ^1P^{\circ}$	0 - 1	S31
Cr XV	15.788	20		$2p^6 - 2p^5 4s$	$g^1S - ^3P^{\circ}$	0 - 1	S31
Cr XV	16.889	100		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^1P^{\circ}$	0 - 1	T14
Cr XV	16.965	50		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^3P^{\circ}$	0 - 1	T14
Cr XV	18.487	400		$2p^6 - 2p^5 3d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^{\circ}$	0 - 1	T14
Cr XV	18.782	200		$2p^6 - 2p^5 3d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	T14
Cr XV	19.015	50		$2p^6 - 2p^5 3d$	$g^1S - \frac{3}{2}[\frac{1}{2}]^{\circ}$	0 - 1	T14
Cr XV	20.863	400		$2p^6 - 2p^5 3s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^{\circ}$	0 - 1	T14
Cr XV	21.153	300		$2p^6 - 2p^5 3s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^{\circ}$	0 - 1	T14

CHROMIUM XVI (Cr¹⁵⁺), Z = 24
 Ground State 1s²2s²2p⁵ 2P_{3/2} (9 electrons)
 Ionization Potential [8 816 000] cm⁻¹; [1093] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XVI	13.556	10		2p ⁵ - 2p ⁴ (¹ S)4d	g ² P ^o - ² D		S31
Cr XVI	13.953	10		2p ⁵ - 2p ⁴ (¹ S)4d	g ² P ^o - ² D		S31
Cr XVI	14.084	20		2p ⁵ - 2p ⁴ (³ P)4d	g ² P ^o - ² D		S31
Cr XVI	17.09	10		2p ⁵ - 2p ⁴ (¹ S)3d	g ² P ^o - ² D	3/2 - 5/2	C10
Cr XVI	17.27	20		2p ⁵ - 2p ⁴ (¹ S)3d	g ² P ^o - ² D	1/2 - 3/2	C10
Cr XVI	17.38	50		2p ⁵ - 2p ⁴ (¹ D)3d	g ³ P ^o - ² P	3/2 - 5/2	C10
Cr XVI	17.46	20		2p ⁵ - 2p ⁴ (¹ D)3d	g ³ P ^o - ² P	3/2 - 1/2	C10
Cr XVI	17.54	40		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P ^o - ² D	3/2 - 5/2	C10
Cr XVI	17.62	40b		2p ⁵ - 2p ⁴ (³ P)3d	g ² P ^o - ² D	3/2 - 5/2	C10
Cr XVI	17.69	10		2p ⁵ - 2p ⁴ (³ P)3d	g ² P ^o - ² D	3/2 - 3/2	C10
Cr XVI	17.75	0		2p ⁵ - 2p ⁴ (³ P)3d	g ² P ^o - ² P	3/2 - 3/2	C10
Cr XVI	17.81	30		2p ⁵ - 2p ⁴ (³ P)3d	g ² P ^o - ² P	3/2 - 1/2	C10
Cr XVI	17.86	20		2p ⁵ - 2p ⁴ (³ P)3d	g ² P ^o - ⁴ D	3/2 - 3/2	C10
Cr XVI	17.96	10		2p ⁵ - 2p ⁴ (³ P)3d	g ² P ^o - ² P	1/2 - 3/2	C10
Cr XVI	18.01	0		2p ⁵ - 2p ⁴ (³ P)3d	g ² P ^o - ³ P	1/2 - 1/2	C10
Cr XVI	19.27	40		2p ⁵ - 2p ⁴ (¹ D)3s	g ³ P ^o - ³ D	3/2 - 5/2	C10
Cr XVI	19.46	0		2p ⁵ - 2p ⁴ (³ P)3s	g ² P ^o - ² P	3/2 - 1/2	C10
Cr XVI	19.53	40		2p ⁵ - 2p ⁴ (¹ D)3s	g ² P ^o - ² D	1/2 - 3/2	C10
Cr XVI	19.55	40		2p ⁵ - 2p ⁴ (¹ P)3s	g ² P ^o - ² P	3/2 - 3/2	C10
Cr XVI	19.72	50		2p ⁵ - 2p ⁴ (³ P)3s	g ² P ^o - ⁴ P	3/2 - 3/2	C10
Cr XVI	19.82	40		2p ⁵ - 2p ⁴ (³ P)3s	g ² P ^o - ⁴ P	3/2 - 5/2	C10
Cr XVI	19.96	10		2s 2p ⁵ - 2s 2p ⁵ (³ P ^o)3s	² S - ² P ^o	1/2 - 3/2	C10
Cr XVI	106.60			2s ² 2p ⁵ - 2s 2p ⁵	g ² P ^o - ³ S	3/2 - 1/2	F5
Cr XVI	115.27			2s ² 2p ⁵ - 2s 2p ⁵	g ² P ^o - ³ S	1/2 - 1/2	F5

CHROMIUM XVII (Cr¹⁶⁺), Z = 24
 Ground State 1s²2s²2p⁴ 3P₂ (8 electrons)
 Ionization Potential [9 533 700] cm⁻¹; [1182] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XVII?	13.143	0					S31
Cr XVII	16.455	90		2s ² 2p ⁴ - 2s ² 2p ² 3d	g ² P - ³ P ^o	2 - 2	S31
Cr XVII	18.34 ?			2s ² 2p ⁴ - 2s ² 2p ² (⁴ S ^o)3s	g ³ P - ³ S ^o	2 - 1	K8
Cr XVII	18.54 ?			2s ² 2p ⁴ - 2s ² 2p ² (⁴ S ^o)3s	g ² P - ² S ^o	1 - 1	K8
Cr XVII	101.91			2s ² 2p ⁴ - 2s 2p ⁵	¹ D - ¹ P ^o	2 - 1	F5
Cr XVII	116.53			2s ² 2p ⁴ - 2s 2p ⁵	g ³ P - ² P ^o	2 - 1	F5
Cr XVII	117.72 ?			2s ² 2p ⁴ - 2s 2p ⁵	¹ S - ¹ P ^o	0 - 1	K8
Cr XVII	120.84			2s ² 2p ⁴ - 2s 2p ⁵	g ³ P - ³ P ^o	1 - 0	F5
Cr XVII	122.51			2s ² 2p ⁴ - 2s 2p ⁵	g ² P - ³ P ^o	2 - 2	F5
Cr XVII	125.00			2s ² 2p ⁴ - 2s 2p ⁵	g ³ P - ³ P ^o	0 - 1	F5
Cr XVII	125.35			2s ² 2p ⁴ - 2s 2p ⁵	g ³ P - ³ P ^o	1 - 1	F5
Cr XVII	132.76			2s ² 2p ⁴ - 2s 2p ⁵	g ³ P - ³ P ^o	1 - 2	F5

CHROMIUM XVIII (Cr¹⁷⁺), Z = 24
 Ground State 1s²2s²2p³ ⁴S_{3/2} (7 electrons)
 Ionization Potential [10 445 000] cm⁻¹; [1295] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XVIII?	13.000						S31
Cr XVIII	95.76			2s ² 2p ³ - 2s2p ⁴	² D° - ² P	½ - ½	F5
Cr XVIII	104.94			2s ² 2p ³ - 2s2p ⁴	² D° - ² P	½ - ½	F5
Cr XVIII	123.60	?		2s ² 2p ³ - 2s2p ⁴	² P° - ² S	½ - ½	K8
Cr XVIII	124.38	?		2s ² 2p ³ - 2s2p ⁴	² P° - ² S	½ - ½	K8
Cr XVIII	125.44			2s ² 2p ³ - 2s2p ⁴	² D° - ² D	½ - ½	F5
Cr XVIII	128.10			2s ² 2p ³ - 2s2p ⁴	² D° - ² D	½ - ½	F5
Cr XVIII	152.74	?		2s ² 2p ³ - 2s2p ⁴	⁴ S° - ⁴ P	½ - ½	K8

CHROMIUM XIX (Cr¹⁸⁺), Z = 24
 Ground State 1s²2s²2p² ³P₀ (6 electrons)
 Ionization Potential [11 244 000] cm⁻¹; [1394] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XIX	14.775	10		2p ² - 2p3d	³ P - ¹ P°	? 2 - 1	S31, K8
Cr XIX	14.845	10		2p ² - 2p3d	¹ D - ¹ P°	2 - 1	S31, K8
Cr XIX	14.925	0		2p ² - 2p3d	¹ D - ¹ F°	2 - 3	S31, K8
Cr XIX	14.99	?		2p ² - 2p3d	³ P - ² P°	2 - 2	K8
Cr XIX	15.00	?		2p ² - 2p3d	² P - ² D°	2 - 3	K8
Cr XIX	15.08	?		2p ² - 2p3d	¹ S - ¹ P°	0 - 1	K8
Cr XIX	15.23	?		2p ² - 2p3d	¹ D - ¹ D°	2 - 2	K8
Cr XIX?	15.587	20					S31
Cr XIX	15.680	10		2p ² - 2p3s	³ P - ¹ P°	0 - 1	S31, K8
Cr XIX	15.888	30		2p ² - 2p3s	³ P - ² P°	2 - 2	S31, K8
Cr XIX	16.00	?		2p ² - 2p3s	¹ D - ¹ P°	2 - 1	K8
Cr XIX	119.67	?		2s ² 2p ² - 2s2p ²	¹ D - ¹ P°	2 - 1	K8
Cr XIX	127.41	?		2s ² 2p ² - 2s2p ²	³ P - ² S°	2 - 1	K8
Cr XIX	135.27	?		2s ² 2p ² - 2s2p ²	¹ D - ¹ D°	2 - 2	K8
Cr XIX	135.51	?		2s ² 2p ² - 2s2p ²	¹ S - ¹ P°	0 - 1	K8
Cr XIX	157.08	?		2s ² 2p ² - 2s2p ²	³ P - ² P°	1 - 2	K8
Cr XIX	166.67	?		2s ² 2p ² - 2s2p ²	³ P - ² P°	2 - 2	K8
Cr XIX	169.72	?		2s ² 2p ² - 2s2p ²	³ P - ² P°	2 - 1	K8
Cr XIX	202.42	?		2s ² 2p ² - 2s2p ²	³ P - ² D°	2 - 3	K8

CHROMIUM XX (Cr¹⁹⁺), Z = 24
 Ground State 1s²2s²2p²P_{1/2}^o (5 electrons)
 Ionization Potential [12 042 000] cm⁻¹; [1493] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XX	11.01 ?			2p - 4s	g ² P ^o - ² S	3/2 - 1/2	K8
Cr XX	14.26 ?			2p - 3d	g ² P ^o - ² D	3/2 - 1/2	K8
Cr XX	15.06 ?			2p - 3s	g ² P ^o - ² S	3/2 - 1/2	K8
Cr XX	138.21 ?			2s ² 2p - 2s2p ²	g ² P ^o - ² S	1/2 - 1/2	K8
Cr XX	156.01 ?			2s ² 2p - 2s2p ²	g ² P ^o - ² S	3/2 - 1/2	K8

CHROMIUM XXI (Cr²⁰⁺), Z = 24
 Ground State 1s²2s² ¹S₀ (4 electrons)
 Ionization Potential [13 123 000] cm⁻¹; [1627] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XXI	8.96 ?			2s ² - 2s5p	g ¹ S - ³ P ^o	0 - 1	K8
Cr XXI	9.98 ?			2s ² - 2s4p	g ¹ S - ³ P ^o	0 - 1	K8
Cr XXI	12.63 ?			2s ² - 2p3s	g ¹ S - ¹ P ^o	0 - 1	K8
Cr XXI	162.67 ?			2s ² - 2s2p	g ¹ S - ¹ P ^o	0 - 1	K8
Cr XXI	310.90 ?			2s ² - 2s2p	g ¹ S - ³ P ^o	0 - 1	K8

CHROMIUM XXII (Cr²¹⁺), Z = 24
 Ground State 1s²2s ²S_{1/2} (3 electrons)
 Ionization Potential [13 873 000] cm⁻¹; [1720] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XXII	8.29 P			2p - 6d	² P ^o - ² D	1/2 - 3/2	G15
Cr XXII	8.36 P			2p - 6d	² P ^o - ² D	3/2 - 5/2	G15
Cr XXII	8.51 P			2s - 5p	g ² S - ² P ^o	1/2 - 3/2	G15
Cr XXII	8.77 P			2p - 5d	² P ^o - ² D	1/2 - 3/2	G15
Cr XXII	8.84 P			2p - 5d	² P ^o - ² D	3/2 - 5/2	G15
Cr XXII	9.48 P			2s - 4p	g ² S - ² P ^o	1/2 - 3/2	G15
Cr XXII	9.80 P			2p - 4d	² P ^o - ² D	1/2 - 3/2	G15
Cr XXII	9.88 P			2p - 4d	² P ^o - ² D	3/2 - 5/2	G15
Cr XXII	12.620	100		2s - 3p	g ² S - ² P ^o	1/2 - 3/2	G15
Cr XXII	12.662	200		2s - 3p	g ² S - ² P ^o	1/2 - 1/2	G15
Cr XXII	13.147	200		2p - 3d	² P ^o - ² D	1/2 - 3/2	G15
Cr XXII	13.294	200		2p - 3d	² P ^o - ² D	3/2 - 5/2	G15
Cr XXII	13.393	20		2p - 3s	² P ^o - ² S	1/2 - 1/2	G15
Cr XXII	13.549	200		2p - 3s	² P ^o - ² S	3/2 - 1/2	G15
Cr XXII	216.51 P			2s - 2p	g ² S - ² P ^o	1/2 - 3/2	K8
Cr XXII	272.06 P			2s - 2p	g ² S - ² P ^o	1/2 - 1/2	K8

CHROMIUM XXIII (Cr^{23+}), $Z = 24$ Ground State $1s^2 \ ^1S_0$ (2 electrons)Ionization Potential [60 348 000] cm^{-1} ; [7482] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XXIII	1.87			$1s^2 - 1s3p$	$g^1S - ^3P^o$	0 - 1	C11
Cr XXIII	2.18 P			$1s^2 - 1s2p$	$g^1S - ^1D^o$	0 - 1	K8, C11
Cr XXIII	2.19			$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	C11
Cr XXIII	2.22 ?	f		$1s^2 - 1s2s$	$g^1S - ^2S$	0 - 1	K8

CHROMIUM XXIV (Cr^{23+}), $Z = 24$ Ground State $1s \ ^2S_{1/2}$ (1 electron)Ionization Potential [64 401 000] cm^{-1} ; [7894.5] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cr XXIV	2.10 P			$1s - 2p$	$g^2S - ^2P^o$	$1/2 - 3/2$	K8

MANGANESE, Z = 25

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn	12.742	30					S31
Mn	13.134	0					S31
Mn	13.814	10					S31
Mn	13.950	10					S31
Mn	14.816	30					S31
Mn	15.024	50					S31
Mn	181.37	300					F11
Mn	183.72	600					F11
Mn	184.19	700					F11
Mn	186.35	500					F11
Mn	187.45	500					F11
Mn	187.63	400					F11
Mn	187.76	500					F11
Mn	187.96	500					F11
Mn	188.09	500					F11
Mn	188.19	600					F11
Mn	188.67	600					F11
Mn	189.06	800					F11
Mn	189.49	500					F11
Mn	189.82	400					F11
Mn	190.73	600					F11
Mn	192.22	600					F11
Mn	192.42	500					F11
Mn	193.59	500					F11
Mn	194.88	600					F11
Mn	196.54	500					F11
Mn	197.64	500					F11
Mn	198.23	400					F11
Mn	205.27	900					F11

MANGANESE I (Mn⁰⁺), Z = 25Ground State 1s²2s²2p⁶3s²3p⁶3d⁵4s² ⁶S_{5/2} (25 electrons)Ionization Potential 59 970 cm⁻¹; 7.435 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn I	1785.355	7h		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁵ S)5p	g ⁴ S - s ⁶ P ^o	5/2 - 7/2	C5
Mn I	1785.465	5		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁵ S)5p	g ⁴ S - s ⁶ P ^o	5/2 - 7/2	C5
Mn I	1785.829	6h		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁵ S)5p	g ⁴ S - s ⁶ P ^o	5/2 - 7/2	C5
Mn I	1788.152	2h		3d ⁵ 4s ² -	g ⁴ S - x ¹ D ^o	5/2 - 7/2	C5
Mn I	1875.727	10r		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁷ S)6p	g ⁴ S - t ⁶ P ^o	5/2 - 7/2	C5
Mn I	1876.445	15r		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁷ S)6p	g ⁴ S - t ⁶ P ^o	5/2 - 7/2	C5
Mn I	1877.518	20r		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁷ S)6p	g ⁴ S - t ⁶ P ^o	5/2 - 7/2	C5
Mn I	1882.366	3		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁵ P)4p	g ⁴ S - y ⁴ D ^o	5/2 - 7/2	C5
Mn I	1882.900	1		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁵ P)4p	g ⁴ S - y ⁴ D ^o	5/2 - 7/2	C5
Mn I	1883.085	0		3d ⁵ 4s ² - 3d ⁵ 4s(a ⁵ P)4p	g ⁴ S - y ⁴ D ^o	5/2 - 7/2	C5
Mn I	1890.962	1		3d ⁵ 4s ² - 3d ⁵ 4s(b ⁵ D)4p	g ⁴ S - x ⁶ D ^o	5/2 - 7/2	C5
Mn I	1891.414	3		3d ⁵ 4s ² - 3d ⁵ 4s(b ⁵ D)4p	g ⁴ S - x ⁶ D ^o	5/2 - 7/2	C5
Mn I	1913.752	15		3d ⁵ 4s ² - 3d ⁵ 4s(b ⁵ D)4p	g ⁴ S - u ⁶ P ^o	5/2 - 7/2	C5
Mn I	1918.328	1f		3d ⁵ 4s ² - 3d ⁵ 4s(b ⁵ D)4p	g ⁴ S - u ⁶ P ^o	5/2 - 7/2	C5
Mn I	1922.516	1f		3d ⁵ 4s ² - 3d ⁵ 4s(b ⁵ D)4p	g ⁴ S - u ⁶ P ^o	5/2 - 7/2	C5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn I	1949.100	3		$3d^5 4s^2 - 3d^5 4s(a^6P)4p$	$g^4S - x^4P^o$	$\frac{1}{2} - \frac{1}{2}$	C5
Mn I	1996.056	50r		$3d^5 4s^2 - 3d^5 4s(a^6P)4p$	$g^4S - v^4P^o$	$\frac{1}{2} - \frac{1}{2}$	C5
Mn I	1959.511	100r		$3d^5 4s^2 - 3d^5 4s(a^6P)4p$	$g^4S - v^4P^o$	$\frac{1}{2} - \frac{1}{2}$	C5

MANGANESE II (Mn^{2+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s$ 6S_5 (24 electrons)
 Ionization Potential $126\,145.0\text{ cm}^{-1}$; 15.640 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	955.94	1		$3d^6 - 3d^5(a^6S)8f$	$a^5D - {}^5F^o$	4-5	I4
Mn II	955.48	0		$3d^6 - 3d^5(a^6S)8f$	$a^5D - {}^5F^o$	3-4	I4
Mn II	957.20	0		$3d^6 - 3d^5(a^6S)8f$	$a^5D - {}^5F^o$	2-3	I4
Mn II	972.55	10		$3d^6 - 3d^5(a^6S)7f$	$a^5D - {}^5F^o$	4-5	I4
Mn II	975.19	8		$3d^6 - 3d^5(a^6S)7f$	$a^5D - {}^5F^o$	3-4	I4
Mn II	976.96	7		$3d^6 - 3d^5(a^6S)7f$	$a^5D - {}^5F^o$	2-3	I4
Mn II	978.11	5		$3d^6 - 3d^5(a^6S)7f$	$a^5D - {}^5F^o$	1-2	I4
Mn II	978.70	0		$3d^6 - 3d^5(a^6S)7f$	$a^5D - {}^5F^o$	0-1	I4
Mn II	982.90	25	9	$3d^5(a^6S)4s -$	$a^5S - s^5P^o$	2-3	I4
Mn II	983.24	20	9	$3d^5(a^6S)4s -$	$a^5S - s^5P^o$	2-2	I4
Mn II	983.40	15	9	$3d^5(a^6S)4s -$	$a^5S - s^5P^o$	2-1	I4
Mn II	1000.96	25	8	$3d^5(a^6S)4s -$	$a^5S - t^5P^o$	2-3	I4
Mn II	1003.00	22	17	$3d^6 - 3d^5(a^6S)6f$	$a^5D - {}^5F^o$	4-5	I4
Mn II	1005.02	20	8	$3d^5(a^6S)4s -$	$a^5S - t^5P^o$	2-2	I4
Mn II	1005.70	22	17	$3d^6 - 3d^5(a^6S)6f$	$a^5D - {}^5F^o$	3-4	I4
Mn II	1006.72	7		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - s^5F^o$	4-5	I4
Mn II	1007.53	15	8	$3d^5(a^6S)4s -$	$a^5S - t^5P^o$	2-1	I4
Mn II	1007.61	15	17	$3d^6 - 3d^5(a^6S)6f$	$a^5D - {}^5F^o$	2-3	I4
Mn II	1008.85	12	17	$3d^6 - 3d^5(a^6S)6f$	$a^5D - {}^5F^o$	1-2	I4
Mn II	1009.45	10	17	$3d^6 - 3d^5(a^6S)6f$	$a^5D - {}^5F^o$	0-1	I4
Mn II	1009.56	6		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - s^5F^o$	3-4	I4
Mn II	1011.51	5		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - s^5F^o$	2-3	I4
Mn II	1012.71	4		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - s^5F^o$	1-2	I4
Mn II	1013.35	0		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - s^5F^o$	0-1	I4
Mn II	1023.55	20	7	$3d^5(a^6S)4s - 3d^4 4s(b^4D)4p$	$a^5S - u^5P^o$	2-3	I4
Mn II	1027.99	18	7	$3d^5(a^6S)4s - 3d^4 4s(b^4D)4p$	$a^5S - u^5P^o$	2-2	I4
Mn II	1030.87	10	7	$3d^5(a^6S)4s - 3d^4 4s(b^4D)4p$	$a^5S - u^5P^o$	2-1	I4
Mn II	1032.69	2		$3d^6 -$	$a^5D - t^5F^o$	4-5	I4
Mn II	1040.54	8		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - u^5D^o$	4-4	I4
Mn II	1042.98	3		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - u^5D^o$	4-3	I4
Mn II	1043.46	3		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - u^5D^o$	3-4	I4
Mn II	1045.89	4		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - u^5D^o$	3-3	I4
Mn II	1047.40	1		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - u^5D^o$	3-2	I4
Mn II	1047.95	4		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - u^5D^o$	2-3	I4
Mn II	1050.78	2h		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - u^5D^o$	1-2	I4
Mn II	1052.04	5		$3d^6 - 3d^4 4s(b^4D)4p$	$a^5D - u^5D^o$	1-0	I4
Mn II	1052.60	5		$3d^6 -$	$a^5D - u^5F^o$	4-5	I4
Mn II	1056.80	4		$3d^6 -$	$a^5D - u^5F^o$	3-4	I4
Mn II	1059.53	i		$3d^6 -$	$a^5D - t^5P^o$	3-2	I4
Mn II	1059.98	i		$3d^6 -$	$a^5D - u^5F^o$	2-3	I4
Mn II	1061.64	1		$3d^6 -$	$a^5D - t^5P^o$	2-2	I4
Mn II	1062.51	30	16	$3d^6 - 3d^5(a^6S)5f$	$a^5D - {}^5F^o$	4-5	I4
Mn II	1063.43	1		$3d^6 -$	$a^5D - u^5F^o$	0-1	I4
Mn II	1065.56	25	16	$3d^6 - 3d^5(a^6S)5f$	$a^5D - {}^5F^o$	3-4	I4
Mn II	1067.73	25	16	$3d^6 - 3d^5(a^6S)5f$	$a^5D - {}^5F^o$	2-3	I4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1069.11	20	16	3d ⁵ - 3d ⁴ (a ⁶ S)5f	a ⁶ D - ⁶ F ^o	1 - 2	14
Mn II	1069.77	10	16	3d ⁵ - 3d ⁴ (a ⁶ S)5f	a ⁶ D - ⁶ F ^o	0 - 1	14
Mn II	1077.02	3		3d ⁵ - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ D - u ⁶ P ^o	4 - 3	14
Mn II	1080.29	5		3d ⁵ - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ D - v ⁶ F ^o	4 - 5	14
Mn II	1085.62	2		3d ⁵ - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ D - v ⁶ F ^o	3 - 4	14
Mn II	1089.98	1		3d ⁵ - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ D - v ⁶ F ^o	2 - 3	14
Mn II	1093.22	0		3d ⁵ - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ D - v ⁶ F ^o	1 - 2	14
Mn II	1111.96	10	31	3d ⁵ (a ⁴ G)4s -	a ⁶ G - r ⁶ F ^o	6 - 5	14
Mn II	1112.19	0	31	3d ⁵ (a ⁴ G)4s -	a ⁶ G - r ⁶ F ^o	5 - 5	14
Mn II	1113.23	9	31	3d ⁵ (a ⁴ G)4s -	a ⁶ G - r ⁶ F ^o	5 - 4	14
Mn II	1113.39	0	31	3d ⁵ (a ⁴ G)4s -	a ⁶ G - r ⁶ F ^o	4 - 4	14
Mn II	1114.44	8	31	3d ⁵ (a ⁴ G)4s -	a ⁶ G - r ⁶ F ^o	4 - 3	14
Mn II	1114.50	0	31	3d ⁵ (a ⁴ G)4s -	a ⁶ G - r ⁶ F ^o	3 - 3	14
Mn II	1115.53	6	31	3d ⁵ (a ⁴ G)4s -	a ⁶ G - r ⁶ F ^o	3 - 2	14
Mn II	1116.37	6	31	3d ⁵ (a ⁴ G)4s -	a ⁶ G - r ⁶ F ^o	2 - 1	14
Mn II	1156.34	30	30	3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁶ S)6f	a ⁶ G - ⁶ F ^o	6 - 5	14
Mn II	1156.66	25	30	3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁶ S)6f	a ⁶ G - ⁶ F ^o	5 - 4	14
Mn II	1156.83	20	30	3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁶ S)6f	a ⁶ G - ⁶ F ^o	4 - 3	14
Mn II	1156.92	20	30	3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁶ S)6f	a ⁶ G - ⁶ F ^o	3 - 2	14
Mn II	1161.29	20	29	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - s ⁶ F ^o	6 - 5	14
Mn II	1161.61	3	29	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - s ⁶ F ^o	5 - 5	14
Mn II	1161.76	20	29	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - s ⁶ F ^o	5 - 4	14
Mn II	1162.02	50b	4	3d ⁵ (a ⁶ S)4s - 3d ⁵ (a ⁶ S)5p	ga ⁷ S - x ⁷ P ^o	3 - 4	14
Mn II	1162.02	50b	29	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - s ⁶ F ^o	3 - 2	14
Mn II	1163.32	40	4	3d ⁵ (a ⁶ S)4s - 3d ⁵ (a ⁶ S)5p	ga ⁷ S - x ⁷ P ^o	3 - 3	14
Mn II	1164.21	30	4	3d ⁵ (a ⁶ S)4s - 3d ⁵ (a ⁶ S)5p	ga ⁷ S - x ⁷ P ^o	3 - 2	14
Mn II	1165.82	25	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	6 - 6	14
Mn II	1166.16	10	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	5 - 6	14
Mn II	1166.81	8	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	6 - 5	14
Mn II	1167.13	20	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	5 - 5	14
Mn II	1167.31	9	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	4 - 5	14
Mn II	1168.07	5	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	5 - 4	14
Mn II	1168.25	15	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	4 - 4	14
Mn II	1169.28	15	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	3 - 3	14
Mn II	1169.53	15	28	3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - v ⁶ G ^o	2 - 2	14
Mn II	1177.52	20		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ⁶ G - w ⁶ G ^o	6 - 6	14
Mn II	1177.89	18		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ⁶ G - w ⁶ G ^o	5 - 5	14
Mn II	1178.14	15		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ⁶ G - w ⁶ G ^o	4 - 4	14
Mn II	1178.34	12		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ⁶ G - w ⁶ G ^o	3 - 3	14
Mn II	1178.76	5		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ⁶ G - w ⁶ G ^o	2 - 2	14
Mn II	1180.69	1		3d ⁵ (a ⁴ D)4s -	b ⁶ D - r ⁶ F ^o	4 - 5	14
Mn II	1188.502	50	15	3d ⁵ - 3d ⁵ (a ⁶ S)4f	a ⁶ D - ⁶ F ^o	4 - 5	14
Mn II	1192.313	40	15	3d ⁵ - 3d ⁵ (a ⁶ S)4f	a ⁶ D - ⁶ F ^o	3 - 4	14
Mn II	1195.00	30		3d ⁵ - 3d ⁵ (a ⁶ S)4f	a ⁶ D - ⁶ F ^o	2 - 3	14
Mn II	1195.97	30	27	3d ⁵ (a ⁴ G)4s -	a ⁶ G - t ⁶ F ^o	6 - 5	14
Mn II	1196.33	25	27	3d ⁵ (a ⁴ G)4s -	a ⁶ G - t ⁶ F ^o	5 - 4	14
Mn II	1196.52	20	27	3d ⁵ (a ⁴ G)4s -	a ⁶ G - t ⁶ F ^o	4 - 4	14
Mn II	1196.724	25	15	3d ⁵ - 3d ⁵ (a ⁶ S)4f	a ⁶ D - ⁶ F ^o	1 - 2	14
Mn II	1197.17	40b	3	3d ⁵ (a ⁴ G)4s -	a ⁶ G - t ⁶ F ^o	4 - 3	14
Mn II	1197.17	40b	27	3d ⁵ (a ⁶ S)4s - 3d ⁴ 4s(a ⁶ D)4p	ga ⁷ S - y ⁷ P ^o	3 - 4	14
Mn II	1197.57	10	15	3d ⁵ - 3d ⁵ (a ⁶ S)4f	a ⁶ D - ⁶ F ^o	0 - 1	14
Mn II	1198.00	10	27	3d ⁵ (a ⁴ G)4s -	a ⁶ G - t ⁶ F ^o	3 - 2	14
Mn II	1198.63	10	27	3d ⁵ (a ⁴ G)4s -	a ⁶ G - t ⁶ F ^o	2 - 1	14
Mn II	1199.34	30	26	3d ⁵ (a ⁴ G)4s -	a ⁶ G - y ⁶ H ^o	6 - 7	14
Mn II	1199.38	50	3	3d ⁵ (a ⁶ S)4s - 3d ⁴ 4s(a ⁶ D)4p	ga ⁷ S - y ⁷ P ^o	3 - 3	14
Mn II	1201.124	20	3	3d ⁵ (a ⁶ S)4s - 3d ⁴ 4s(a ⁶ D)4p	ga ⁷ S - y ⁷ P ^o	3 - 2	14
Mn II	1201.23	5	26	3d ⁵ (a ⁴ G)4s -	a ⁶ G - y ⁶ H ^o	6 - 6	14
Mn II	1201.57	40	26	3d ⁵ (a ⁴ G)4s -	a ⁶ G - y ⁶ H ^o	5 - 6	14
Mn II	1203.07	8	26	3d ⁵ (a ⁴ G)4s -	a ⁶ G - y ⁶ H ^o	5 - 5	14
Mn II	1203.25	30	26	3d ⁵ (a ⁴ G)4s -	a ⁶ G - y ⁶ H ^o	4 - 5	14
Mn II	1204.62	25	2	3d ⁵ (a ⁴ G)4s -	a ⁶ G - y ⁶ H ^o	3 - 4	14
Mn II	1204.95	15		3d ⁵ - 3d ⁴ 4s4p	a ⁶ H - t ⁶ G ^o	6 - 5	14
Mn II	1205.42	20	26	3d ⁵ (a ⁴ G)4s -	a ⁶ G - y ⁶ H ^o	2 - 3	14
Mn II	1206.55	10		3d ⁵ - 3d ⁴ 4s4p	a ⁶ H - t ⁶ G ^o	5 - 4	14
Mn II	1206.87	5		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁶ G - u ⁶ D ^o	5 - 4	14

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1207.05	2		$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^4G - u^5D^{\circ}$	4 - 4	14
Mn II	1207.12	2		$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^4G - u^5D^{\circ}$	3 - 4	14
Mn II	1208.83	8		$3d^5 - 3d^44s4p$	$a^2H - t^2G^{\circ}$	4 - 3	14
Mn II	1210.33	5		$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^4G - u^5D^{\circ}$	4 - 3	14
Mn II	1212.40	5		$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^4G - u^5D^{\circ}$	3 - 2	14
Mn II	1213.50	0		$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^4G - u^5D^{\circ}$	2 - 1	14
Mn II	1218.94	8		$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - v^5D^{\circ}$	5 - 4	14
Mn II	1219.50	0		$3d^5 - 3d^44s4p$	$a^2F - t^2G^{\circ}$	4 - 5	14
Mn II	1221.11	6		$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - v^5D^{\circ}$	4 - 3	14
Mn II	1222.785	30		$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - u^5F^{\circ}$	6 - 5	14
Mn II	1223.15	8	25	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - u^5F^{\circ}$	5 - 5	14
Mn II	1224.733	30	25	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - u^5F^{\circ}$	5 - 4	14
Mn II	1224.928	6	25	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - u^5F^{\circ}$	4 - 4	14
Mn II	1226.40	25	25	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - u^5F^{\circ}$	4 - 4	14
Mn II	1227.638	23	25	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - u^5F^{\circ}$	4 - 3	14
Mn II	1228.423	20	25	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - u^5F^{\circ}$	3 - 2	14
Mn II	1229.65	25	43	$3d^5(a^4G)4s - 3d^44s4p$	$a^5D - t^5F^{\circ}$	2 - 1	14
Mn II	1230.11	20	43	$3d^5(a^4P)4s - 3d^44s4p$	$a^5P - s^5P^{\circ}$	3 - 3	14
Mn II	1230.15	15	43	$3d^5(a^4P)4s - 3d^44s4p$	$a^5P - s^5P^{\circ}$	2 - 3	14
Mn II	1230.46	1		$3d^5(a^4P)4s - 3d^44s4p$	$a^5P - s^5P^{\circ}$	3 - 2	14
Mn II	1230.62	1	43	$3d^5(a^4P)4s - 3d^44s4p$	$a^5P - t^5F^{\circ}$	3 - 4	14
Mn II	1230.87	10	43	$3d^5(a^4P)4s - 3d^44s4p$	$a^5P - s^5P^{\circ}$	2 - 2	14
Mn II	1231.10	8	43	$3d^5(a^4P)4s - 3d^44s4p$	$a^5P - s^5P^{\circ}$	2 - 1	14
Mn II	1231.35	5	43	$3d^5(a^4P)4s - 3d^44s4p$	$a^5P - s^5P^{\circ}$	1 - 2	14
Mn II	1233.952	30	24	$3d^5(a^4G)4s - 3d^44s4p$	$a^5P - s^5P^{\circ}$	1 - 1	14
Mn II	1234.30	5	24	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	6 - 6	14
Mn II	1234.51	8	24	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	5 - 6	14
Mn II	1234.871	25	34	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	6 - 5	14
Mn II	1235.06	8	24	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	5 - 5	14
Mn II	1235.27	10	24	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	4 - 5	14
Mn II	1235.46	25		$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	5 - 4	14
Mn II	1235.79	10	24	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	4 - 4	14
Mn II	1235.87	25	24	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	4 - 3	14
Mn II	1236.15	25b	24	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	3 - 3	14
Mn II	1236.15	25b	23	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - x^5G^{\circ}$	2 - 2	14
Mn II	1236.54	15	23	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - s^5F^{\circ}$	6 - 5	14
Mn II	1236.77	20	23	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - s^5F^{\circ}$	5 - 4	14
Mn II	1236.87	20	23	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - s^5F^{\circ}$	4 - 3	14
Mn II	1237.59	2		$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$a^4G - s^5F^{\circ}$	3 - 2	14
Mn II	1237.78	1		$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$a^4P - y^5S^{\circ}$	2 - 1	14
Mn II	1237.95	1		$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - s^5F^{\circ}$	3 - 4	14
Mn II	1238.35	5		$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - s^5F^{\circ}$	2 - 3	14
Mn II	1238.84	7		$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$a^5P - y^5S^{\circ}$	2 - 1	14
Mn II	1239.51	1		$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$a^5P - y^5S^{\circ}$	1 - 1	14
Mn II	1240.04	0		$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - s^5G^{\circ}$	4 - 4	14
Mn II	1241.63	10	42	$3d^5(a^4S)4p - 3d^44s(a^4S)10s$	$z^7P^{\circ} - ^7S$	3 - 3	14
Mn II	1244.10	0		$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5D - u^5D^{\circ}$	3 - 4	14
Mn II	1244.28	15		$3d^5(a^4S)4p - 3d^44s(a^4S)10s$	$z^7P^{\circ} - ^7S$	4 - 3	14
Mn II	1245.14	20		$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - t^2G^{\circ}$	5 - 5	14
Mn II	1245.55	15	42	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - t^2G^{\circ}$	4 - 4	14
Mn II	1246.24	12		$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^{\circ}$	2 - 3	14
Mn II	1247.66	15	42	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^4G - t^2G^{\circ}$	3 - 3	14
Mn II	1248.15	5	42	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^{\circ}$	2 - 2	14
Mn II	1248.83	4	42	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^{\circ}$	1 - 2	14
Mn II	1249.31	6	42	$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^{\circ}$	2 - 1	14
Mn II	1250.22	1		$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$a^5P - u^5D^{\circ}$	1 - 1	14
Mn II	1250.681	7		$3d^5(a^4S)4s - 3d^44s(a^4S)10s$	$a^5P - y^5S^{\circ}$	1 - 1	14
Mn II	1252.91	15		$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$a^5S - v^5P^{\circ}$	3 - 2	14
Mn II	1253.37	15		$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$a^5P - y^5S^{\circ}$	2 - 3	14
Mn II	1253.880	15		$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$a^5P - y^5S^{\circ}$	2 - 2	14
Mn II	1254.20	10		$3d^5(a^4P)4s - 3d^44s(b^4P)4p$	$a^5P - y^5S^{\circ}$	1 - 2	14
Mn II	1254.410	15	41	$3d^5(a^4G)4s - 3d^44s4p$	$a^4G - q^5F^{\circ}$	5 - 4	14
Mn II	1255.01	1		$3d^5(a^4P)4s - 3d^44s4p$	$a^5P - v^5D^{\circ}$	1 - 4	14
Mn II	1256.18	6		$3d^5(a^4S)4s - 3d^44s(a^4S)10s$	$b^5D - w^5G^{\circ}$	4 - 5	14
Mn II	1256.47	8	41	$3d^5(a^4P)4s - 3d^44s4p$	$a^5S - v^5P^{\circ}$	2 - 2	14
					$a^5P - v^5D^{\circ}$	3 - 3	14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1256.96	10	41	3d ⁵ (a ⁴ P)4s -	a ⁵ P - v ⁶ D°	2 - 3	14
Mn II	1258.028	15	40	3d ⁵ (a ⁴ P)4s -	a ⁵ P - t ⁵ P°	3 - 3	14
Mn II	1258.51	15	40	3d ⁵ (a ⁴ P)4s -	a ⁵ P - t ⁵ P°	2 - 3	14
Mn II	1259.05	12		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - q ³ F°	4 - 3	14
Mn II	1259.56	8	41	3d ⁵ (a ⁴ P)4s -	a ⁵ P - v ⁶ D°	1 - 2	14
Mn II	1259.97	6		3d ⁵ (a ⁴ S)4s - 3d ⁴ 4s(a ⁴ D)4p	a ² S - v ⁵ P°	2 - 1	14
Mn II	1260.52	1		3d ⁶ - 3d ⁴ 4s4p	b ² G - s ² G°	5 - 5	14
Mn II	1260.77	1	41	3d ⁵ (a ⁴ P)4s -	a ⁵ P - v ⁶ D°	2 - 1	14
Mn II	1261.27	8		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - q ³ F°	3 - 2	14
Mn II	1262.35	4	41	3d ⁵ (a ⁴ P)4s -	a ⁵ P - v ⁶ D°	1 - 0	14
Mn II	1262.57	4		3d ⁵ (a ⁴ F)4s -	a ⁵ P - u ⁵ F°	2 - 3	14
Mn II	1263.79	1		3d ⁵ (a ⁴ P)4s -	a ⁵ P - u ⁵ F°	2 - 2	14
Mn II	1264.45	12		3d ⁵ (a ⁴ F)4s -	a ⁵ P - t ⁵ P°	3 - 2	14
Mn II	1265.39	10		3d ⁵ (a ⁴ P)4s -	a ⁵ P - t ⁵ P°	1 - 2	14
Mn II	1265.57	2		3d ⁶ - 3d ⁴ 4s4p	b ² G - s ² G°	4 - 4	14
Mn II	1266.13	8		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - u ³ H°	5 - 6	14
Mn II	1268.90	10	40	3d ⁵ (a ⁴ P)4s -	a ⁵ P - t ⁵ P°	2 - 1	14
Mn II	1269.42	5	40	3d ⁵ (a ⁴ P)4s -	a ⁵ P - t ⁵ P°	1 - 1	14
Mn II	1269.54	0		3d ⁶ - 3d ⁴ 4s4p	b ² G - s ² G°	3 - 3	14
Mn II	1271.22	2		3d ⁵ (a ⁴ S)4p - 3d ⁵ (a ⁴ S)9s	z ⁷ P° - ⁷ S	2 - 3	14
Mn II	1272.18	6		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - u ³ H°	4 - 5	14
Mn II	1274.08	2		3d ⁶ (a ⁴ S)4p - 3d ⁵ (a ⁴ S)9s	z ⁷ P° - ⁷ S	3 - 3	14
Mn II	1274.84	2		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - u ³ H°	3 - 4	14
Mn II	1275.10	20	59	3d ⁵ (a ⁴ D)4s -	b ⁵ D - s ⁵ P°	4 - 3	14
Mn II	1275.97	40	58	3d ⁵ (a ⁴ D)4s -	b ⁵ D - t ⁵ F°	4 - 5	14
Mn II	1276.24	20	59	3d ⁵ (a ⁴ D)4s -	b ⁵ D - s ⁵ P°	2 - 3	14
Mn II	1276.45	8	59	3d ⁵ (a ⁴ D)4s -	b ⁵ D - s ⁵ P°	1 - 2	14
Mn II	1276.77	10	59	3d ⁵ (a ⁴ D)4s -	b ⁵ D - s ⁵ P°	3 - 2	14
Mn II	1277.12	20b	59	3d ⁵ (a ⁴ D)4s -	b ⁵ D - s ⁵ P°	2 - 1	14
Mn II	1277.12	20b	58	3d ⁵ (a ⁴ D)4s -	b ⁵ D - t ⁵ F°	3 - 4	14
Mn II	1277.82	20	58	3d ⁵ (a ⁴ D)4s -	b ⁵ D - t ⁵ F°	2 - 3	14
Mn II	1278.369	10		3d ⁵ (a ⁴ S)4p - 3d ⁵ (a ⁴ S)9s	z ⁷ P° - ⁷ S	4 - 3	14
Mn II	1278.75	15	58	3d ⁵ (a ⁴ D)4s -	b ⁵ D - t ⁵ F°	2 - 2	14
Mn II	1278.90	2		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(a ⁴ H)4p	a ² G - x ³ I°	5 - 6	14
Mn II	1279.09	10	58	3d ⁵ (a ⁴ D)4s -	b ⁵ D - t ⁵ F°	1 - 1	14
Mn II	1279.44	2	58	3d ⁵ (a ⁴ D)4s -	b ⁵ D - t ⁵ F°	2 - 1	14
Mn II	1280.11	10		3d ⁶ - 3d ⁴ 4s4p	b ² G - q ³ F°	5 - 4	14
Mn II	1284.76	2		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s(a ⁴ H)4p	a ² G - x ³ I°	4 - 5	14
Mn II	1285.95	8		3d ⁶ - 3d ⁴ 4s4p	b ² G - q ³ F°	4 - 3	14
Mn II	1287.978	15	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	4 - 4	14
Mn II	1289.13	15	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	3 - 4	14
Mn II	1289.35	8		3d ⁶ - 3d ⁴ 4s4p	b ² G - q ³ F°	3 - 2	14
Mn II	1290.52	8	6	3d ⁵ (a ⁴ S)4s - 3d ⁵ (a ⁴ S)5p	a ⁴ S - w ⁵ P°	2 - 1	14
Mn II	1290.93	10	6	3d ⁵ (a ⁴ S)4s - 3d ⁵ (a ⁴ S)5p	a ⁴ S - w ⁵ P°	2 - 2	14
Mn II	1291.58	10	6	3d ⁵ (a ⁴ S)4s - 3d ⁵ (a ⁴ S)5p	a ⁴ S - v ⁵ P°	2 - 3	14
Mn II	1291.70	10		3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	4 - 3	14
Mn II	1292.57	10		3d ⁶ - 3d ⁴ 4s4p	b ² G - u ³ H°	5 - 6	14
Mn II	1292.87	15	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	3 - 3	14
Mn II	1293.92	1		3d ⁵ (a ⁴ P)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ P - u ⁵ P°	3 - 3	14
Mn II	1294.437	2		3d ⁶ (a ⁴ P)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ P - u ⁵ P°	2 - 3	14
Mn II	1294.803	10	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	1 - 2	14
Mn II	1295.15	10	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	3 - 2	14
Mn II	1295.74	6	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	0 - 1	14
Mn II	1296.03	3	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	1 - 1	14
Mn II	1296.43	6	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	2 - 1	14
Mn II	1296.67	5	57	3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ D)4p	b ⁵ D - u ⁵ D°	1 - 0	14
Mn II	1298.800	6		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - r ³ F°	5 - 4	14
Mn II	1299.09	5		3d ⁵ (a ⁴ P)4s - 3d ⁴ 4s4p	b ² P - s ² D°	2 - 3	14
Mn II	1299.66	5		3d ⁶ - 3d ⁴ 4s4p	b ² G - u ³ H°	4 - 5	14
Mn II	1300.52	1		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - r ³ F°	4 - 4	14
Mn II	1301.06	4		3d ⁵ (a ⁴ P)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ P - u ⁵ P°	3 - 2	14
Mn II	1301.31	3		3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(b ⁴ P)4p	b ⁵ D - y ⁵ S°	2 - 2	14
Mn II	1302.12	1		3d ⁵ (a ⁴ P)4s - 3d ⁴ 4s(b ⁴ D)4p	a ⁵ P - u ⁵ P°	1 - 2	14
Mn II	1302.61	9		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - r ³ F°	4 - 3	14
Mn II	1303.12	1		3d ⁵ (a ⁴ G)4s - 3d ⁴ 4s4p	a ² G - r ³ F°	3 - 3	14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1303.52	4		$3d^5 - 3d^4 4s 4p$	$b^4G - u^4H^{\circ}$	3-4	I4
Mn II	1305.136	10		$3d^5(a^4G)4s - 3d^4 4s 4p$	$a^4G - r^4F^{\circ}$	3-2	I4
Mn II	1305.63	15	56	$3d^5(a^4D)4s -$	$b^4D - t^4P^{\circ}$	4-3	I4
Mn II	1305.87	5		$3d^5 - 3d^4 4s(a^4H)4p$	$b^4G - x^4I^{\circ}$	5-6	I4
Mn II	1306.17	5		$3d^5(a^4P)4s - 3d^4 4s(b^4D)4p$	$a^4P - u^4P^{\circ}$	2-1	I4
Mn II	1306.81	10		$3d^5(a^4D)4s -$	$b^4D - t^4P^{\circ}$	3-3	I4
Mn II	1307.41	1		$3d^5(a^4D)4s -$	$b^4D - v^4D^{\circ}$	3-2	I4
Mn II	1308.16	1		$3d^5(a^4P)4s - 3d^4 4s 4p$	$b^4P - s^4D^{\circ}$	2-2	I4
Mn II	1308.29	1		$3d^5(a^4D)4s -$	$b^4D - v^4D^{\circ}$	2-1	I4
Mn II	1309.72	3		$3d^5(a^4P)4s - 3d^4 4s 4p$	$b^4P - s^4D^{\circ}$	1-2	I4
Mn II	1312.80	2		$3d^5 - 3d^4 4s(a^4H)4p$	$b^4G - x^4I^{\circ}$	4-5	I4
Mn II	1313.41	2	56	$3d^5(a^4D)4s -$	$b^4D - t^4P^{\circ}$	1-2	I4
Mn II	1313.77	10	56	$3d^5(a^4D)4s -$	$b^4D - t^4P^{\circ}$	3-2	I4
Mn II	1316.16	9	80	$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^7P^{\circ} - ^7D$	2-3	I4
Mn II	1317.39	3	55	$3d^5(a^4D)4s -$	$b^4D - t^4P^{\circ}$	0-1	I4
Mn II	1317.70	4	56	$3d^5(a^4D)4s -$	$b^4D - t^4P^{\circ}$	1-1	I4
Mn II	1318.09	3	56	$3d^5(a^4D)4s -$	$b^4D - t^4P^{\circ}$	2-1	I4
Mn II	1319.21	10	80	$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^7P^{\circ} - ^7D$	3-4	I4
Mn II	1323.76	15	80	$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^7P^{\circ} - ^7D$	4-5	I4
Mn II	1323.78	P	80	$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^7P^{\circ} - ^7D$	4-4	I4
Mn II	1323.81	P	80	$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^7P^{\circ} - ^7D$	4-3	I4
Mn II	1326.63	10		$3d^5 - 3d^4 4s 4p$	$b^4G - r^4F^{\circ}$	5-4	I4
Mn II	1327.48	12	79	$3d^5(a^4S)4p - 3d^5(a^4S)8s$	$z^7P^{\circ} - ^7S$	2-3	I4
Mn II	1329.25	1		$3d^5 - 3d^4 4s 4p$	$b^4G - r^4F^{\circ}$	4-4	I4
Mn II	1330.61	12	79	$3d^5(a^4S)4p - 3d^5(a^4S)8s$	$z^7P^{\circ} - ^7S$	3-3	I4
Mn II	1331.42	8		$3d^5 - 3d^4 4s 4p$	$b^4G - r^4F^{\circ}$	4-3	I4
Mn II	1335.27	25	79	$3d^5(a^4S)4p - 3d^5(a^4S)8s$	$z^7P^{\circ} - ^7S$	4-3	I4
Mn II	1344.14	50		$3d^5(a^4P)4s - 3d^4 4s(b^4P)4p$	$b^4P - y^4S^{\circ}$	2-1	I4
Mn II	1344.35	6		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - u^4P^{\circ}$	4-3	I4
Mn II	1345.62	2		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - u^4P^{\circ}$	3-3	I4
Mn II	1345.77	15		$3d^5(a^4P)4s - 3d^4 4s(b^4P)4p$	$b^4P - y^4S^{\circ}$	1-1	I4
Mn II	1346.94	1		$3d^5(a^4P)4s - 3d^4 4s(b^4P)4p$	$b^4P - y^4S^{\circ}$	0-1	I4
Mn II	1349.41	5		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - v^4F^{\circ}$	4-5	I4
Mn II	1352.17	4		$3d^5(a^4F)4s -$	$a^4F - r^4F^{\circ}$	5-5	I4
Mn II	1352.83	1		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - v^4F^{\circ}$	4-4	I4
Mn II	1353.33	6		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - u^4P^{\circ}$	3-2	I4
Mn II	1353.90	1		$3d^5(a^4F)4s -$	$a^4F - r^4F^{\circ}$	4-4	I4
Mn II	1354.08	5		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - v^4F^{\circ}$	3-4	I4
Mn II	1355.90	1		$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^4D - t^4G^{\circ}$	3-4	I4
Mn II	1356.74	1		$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^4D - t^4G^{\circ}$	2-3	I4
Mn II	1357.45	5		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - v^4F^{\circ}$	2-3	I4
Mn II	1357.91	1		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - u^4P^{\circ}$	1-1	I4
Mn II	1358.32	1		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - u^4P^{\circ}$	2-1	I4
Mn II	1359.86	2		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - v^4F^{\circ}$	1-2	I4
Mn II	1360.24	0		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^4D - v^4F^{\circ}$	2-2	I4
Mn II	1361.60	2		$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^4D - s^4D^{\circ}$	3-3	I4
Mn II	1368.53	2		$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^4D - q^4F^{\circ}$	3-4	I4
Mn II	1371.73	5		$3d^5(a^4I)4s - 3d^4 4s 4p$	$a^4I - s^4G^{\circ}$	6-5	I4
Mn II	1372.48	2		$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^4D - q^4F^{\circ}$	2-3	I4
Mn II	1373.17	2		$3d^5 - 3d^4 4s(b^4P)4p$	$a^4D - y^4S^{\circ}$	2-i	I4
Mn II	1374.81	1		$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^4D - q^4F^{\circ}$	1-2	I4
Mn II	1375.11	4		$3d^5(a^4I)4s - 3d^4 4s 4p$	$a^4I - s^4G^{\circ}$	5-4	I4
Mn II	1377.94	15	14	$3d^5 - 3d^5(a^4S)5p$	$a^4D - w^4P^{\circ}$	4-3	I4
Mn II	1380.32	1		$3d^5(a^4D)4s - 3d^4 4s 4p$	$b^4D - s^4D^{\circ}$? 1-1	I4
Mn II	1382.30	10	14	$3d^5 - 3d^5(a^4S)5p$	$a^4D - w^4P^{\circ}$	3-2	I4
Mn II	1383.05	4	14	$3d^5 - 3d^5(a^4S)5p$	$a^4D - w^4P^{\circ}$	3-3	I4
Mn II	1385.43	4	14	$3d^5 - 3d^5(a^4S)5p$	$a^4D - w^4P^{\circ}$	2-1	I4
Mn II	1385.89	10	14	$3d^5 - 3d^5(a^4S)5p$	$a^4D - w^4P^{\circ}$	2-2	I4
Mn II	1387.75	6	14	$3d^5 - 3d^5(a^4S)5p$	$a^4D - w^4P^{\circ}$	1-1	I4
Mn II	1388.21	2	14	$3d^5 - 3d^5(a^4S)5p$	$a^4D - w^4P^{\circ}$	1-2	I4
Mn II	1388.87	3	14	$3d^5 - 3d^5(a^4S)5p$	$a^4D - w^4P^{\circ}$	0-1	I4
Mn II	1397.17	3		$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^5P^{\circ} - ^5D$	3-3	I4
Mn II	1397.39	6		$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^5P^{\circ} - ^5D$	3-4	I4
Mn II	1399.15	2		$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^5P^{\circ} - ^5D$	2-1	I4
Mn II	1399.24	3		$3d^5(a^4S)4p - 3d^5(a^4S)7d$	$z^5P^{\circ} - ^5D$	2-2	I4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1399.39	4		$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^6D$	2-3	I4
Mn II	1400.54	2		$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^6D$	1-0	I4
Mn II	1400.57	3		$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^6D$	1-1	I4
Mn II	1400.66	2		$3d^5(a^6S)4p - 3d^5(a^6S)7d$	$z^3P^o - ^6D$	1-2	I4
Mn II	1409.51	25		$3d^5(a^6I)4s - 3d^54s4p$	$a^6I - u^6H^o$	7-6	I4
Mn II	1409.50	5		$3d^5(a^6I)4s - 3d^54s4p$	$a^6I - u^6H^o$	6-6	I4
Mn II	1410.913	25b	78	$3d^5(a^6S)4p - 3d^5(a^6S)6d$	$z^7P^o - ^7D$	2-3	I4
Mn II	1411.28	4		$3d^5(a^6D)4s - 3d^54s(b^6P)4p$	$b^6D - y^6S^o$	2-1	I4
Mn II	1411.55	4		$3d^5(a^6D)4s - 3d^54s(b^6P)4p$	$b^6D - y^6S^o$	1-1	I4
Mn II	1414.18	4	88	$3d^5(a^6F)4s - 3d^5(a^6S)6f$	$a^6F - ^6F^o$	1-1	I4
Mn II	1414.40	30	78	$3d^5(a^6S)4p - 3d^5(a^6S)6d$	$z^7P^o - ^7D$	3-4	I4
Mn II	1414.73	6		$3d^5(a^6D)4s - 3d^5(a^6S)6f$	$c^6D - ^6F^o$	2-2	I4
Mn II	1415.15	30		$3d^5(a^6I)4s - 3d^54s4p$	$a^6I - u^6H^o$	6-5	I4
Mn II	1415.43	6		$3d^5(a^6I)4s - 3d^54s4p$	$a^6I - u^6H^o$	5-5	I4
Mn II	1415.75	35		$3d^5(a^6I)4s - 3d^54s(a^6H)4p$	$a^6I - x^6I^o$	7-7	I4
Mn II	1417.95	10	93	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^6P^o - ^6S$	3-2	I4
Mn II	1418.13	18		$3d^5(a^6I)4s - 3d^54s4p$	$a^6I - u^6H^o$	5-4	I4
Mn II	1418.48	15	88	$3d^5(a^6F)4s - 3d^5(a^6S)6f$	$a^6F - ^6F^o$	5-5	I4
Mn II	1418.63	12	88	$3d^5(a^6F)4s - 3d^5(a^6S)6f$	$a^6F - ^6F^o$	4-4	I4
Mn II	1419.61	40	78	$3d^5(a^6S)4p - 3d^5(a^6S)6d$	$z^7P^o - ^7D$	4-5	I4
Mn II	1420.24	8	93	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^6P^o - ^6S$	2-2	I4
Mn II	1421.71	5	93	$3d^5(a^6S)4p - 3d^5(a^6S)8s$	$z^6P^o - ^6S$	1-7	I4
Mn II	1421.77	2		$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - s^6F^o$	1-1	I4
Mn II	1421.87	3		$3d^5(a^6F)4s - 3d^5(a^6S)6f$	$a^6F - ^6F^o$	3-3	I4
Mn II	1422.36	3		$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - s^6F^o$	2-2	I4
Mn II	1422.42	2		$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - s^6F^o$	2-3	I4
Mn II	1423.48	2		$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - s^6F^o$	3-2	I4
Mn II	1423.55	4		$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - s^6F^o$	3-3	I4
Mn II?	1424.49	5					I4
Mn II	1425.03	3		$3d^5(a^6F)4s - 3d^5(a^6S)6f$	$a^6F - ^6F^o$	2-2	I4
Mn II	1425.40	12		$3d^5(a^6I)4s - 3d^54s(a^6H)4p$	$a^6I - x^6I^o$	7-6	I4
Mn II	1425.544	20		$3d^5(a^6I)4s - 3d^54s(a^6H)4p$	$a^6I - x^6I^o$	6-6	I4
Mn II	1425.93	12	87	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - s^6F^o$	5-5	I4
Mn II	1426.15	1	87	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - s^6F^o$	5-4	I4
Mn II	1426.32	10	87	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - s^6F^o$	4-4	I4
Mn II	1426.43	3	87	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - s^6F^o$	4-3	I4
Mn II	1428.19	0					I4
Mn II	1428.85	2		$3d^5(a^6F)4s - 3d^54s4p$	$a^6F - t^6G^o$	5-5	I4
Mn II	1429.02	2		$3d^5(a^6F)4s - 3d^54s4p$	$a^6F - t^6G^o$	4-5	I4
Mn II	1429.60	1		$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - s^6F^o$	3-4	I4
Mn II	1429.66	2		$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - s^6F^o$	3-3	I4
Mn II	1430.37	0		$3d^5(a^6D)4s - 3d^54s4p$	$c^6D - s^6D^o$	2-3	I4
Mn II	1430.77	10		$3d^5(a^6I)4s - 3d^54s(a^6H)4p$	$a^6I - x^6I^o$	6-5	I4
Mn II	1431.046	20		$3d^5(a^6I)4s - 3d^54s(a^6H)4p$	$a^6I - x^6I^o$	5-5	I4
Mn II	1431.36	3		$3d^5(a^6F)4s - 3d^54s4p$	$a^6F - t^6G^o$	3-4	I4
Mn II	1431.52	2		$3d^5(a^6D)4s - 3d^54s4p$	$c^6D - s^6D^o$	3-3	I4
Mn II	1432.18	1		$3d^5(a^6F)4s - 3d^54s4p$	$a^6F - t^6G^o$	3-3	I4
Mn II	1432.78	40	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	5-6	I4
Mn II	1432.95	5		$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - v^6G^o$	3-4	I4
Mn II	1433.08	4	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	1-2	I4
Mn II	1433.27	4		$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - v^6G^o$	2-3	I4
Mn II	1433.50	15	77	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^7P^o - ^7S$	2-3	I4
Mn II	1433.63	6		$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - v^6G^o$	2-2	I4
Mn II	1434.26	10	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	5-5	I4
Mn II	1434.44	30	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	4-5	I4
Mn II	1434.79	1h	86	$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - v^6G^o$	3-2	I4
Mn II	1435.68	1h	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	5-4	I4
Mn II	1435.87	4	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	4-4	I4
Mn II	1437.13	15	77	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^7P^o - ^7S$	3-3	I4
Mn II	1437.32	i	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	4-3	I4
Mn II	1437.42	4		$3d^5(a^6F)4s - 3d^54s4p$	$b^6F - s^6G^o$	4-5	I4
Mn II	1437.70	3		$3d^5(a^6F)4s - 3d^54s4p$	$a^6F - s^6D^o$	3-3	I4
Mn II	1438.71	1		$3d^5(a^6D)4s - 3d^54s(b^6D)4p$	$c^6D - s^6F^o$	1-2	I4
Mn II	1439.16	15	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	3-4	I4
Mn II	1440.63	8	86	$3d^5(a^6F)4s - 3d^54s(b^6D)4p$	$a^6F - v^6G^o$	3-3	I4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1440.81	0		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - s^2G^{\circ}$	4 - 4	I4
Mn II	1440.96	1	86	$3d^5(a^2F)4s - 3d^4 4s (b^2D)4p$	$a^2F - v^2G^{\circ}$	3 - 2	I4
Mn II	1441.37	1		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - s^2D^{\circ}$	2 - 2	I4
Mn II	1442.78	16		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - c^2F^{\circ}$	2 - 3	I4
Mn II	1442.594	25	77	$3d^5(a^2S)4p - 3d^5(a^2S)7s$	$z^2P^{\circ} - ^7S$	4 - 3	I4
Mn II	1443.46	7		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - q^2F^{\circ}$	3 - 3	I4
Mn II	1443.85	10		$3d^5(a^2F)4s - 3d^4 4s (b^2E)4p$	$a^2F - v^2G^{\circ}$	2 - 3	I4
Mn II	1444.01	6		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - s^2G^{\circ}$	4 - 3	I4
Mn II	1444.19	6		$3d^5(a^2F)4s - 3d^4 4s (b^2D)4p$	$a^2F - v^2G^{\circ}$	2 - 2	I4
Mn II	1444.58	3		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - q^2F^{\circ}$	2 - 2	I4
Mn II	1445.43	2		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - q^2F^{\circ}$	3 - 4	I4
Mn II	1446.908	20		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - w^2G^{\circ}$	1 - 2	I4
Mn II	1447.49	15		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - w^2G^{\circ}$	2 - 2	I4
Mn II	1447.86	10		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - w^2G^{\circ}$	3 - 4	I4
Mn II	1448.08	15		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - w^2G^{\circ}$	3 - 3	I4
Mn II	1448.47	4		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - t^2G^{\circ}$	4 - 4	I4
Mn II	1448.714	15		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - s^2G^{\circ}$	3 - 4	I4
Mn II	1448.83	12		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - s^2D^{\circ}$	3 - 2	I4
Mn II	1449.74	4		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - q^2F^{\circ}$	3 - 3	I4
Mn II	1450.23	10		$3d^5(a^2D)4s - 3d^4 4s (b^2D)4p$	$c^2D - v^2G^{\circ}$? 1 - 2	I4
Mn II	1450.46	12		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - w^2G^{\circ}$	5 - 6	I4
Mn II	1450.71	15		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - w^2G^{\circ}$	4 - 5	I4
Mn II	1450.82	4		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - w^2G^{\circ}$	4 - 4	I4
Mn II	1452.05	6		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - s^2D^{\circ}$	2 - 2	I4
Mn II	1452.99	3		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - q^2F^{\circ}$	2 - 3	I4
Mn II	1454.03	6		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - t^2G^{\circ}$	2 - 3	I4
Mn II	1454.18	6		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - w^2G^{\circ}$	3 - 4	I4
Mn II	1454.40	1		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - w^2G^{\circ}$	3 - 3	I4
Mn II	1454.97	20		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - s^2D^{\circ}$	4 - 3	I4
Mn II	1455.33	5		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - q^2F^{\circ}$	2 - 2	I4
Mn II	1456.45	2		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - t^2G^{\circ}$	3 - 4	I4
Mn II	1457.30	5		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - t^2G^{\circ}$	3 - 3	I4
Mn II	1457.67	7		$3d^5(a^2F)4s - 3d^4 4s 4p$	$a^2F - w^2G^{\circ}$	2 - 3	I4
Mn II	1458.18	3		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - s^2D^{\circ}$	1 - 2	I4
Mn II	1459.72	2h		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - s^2D^{\circ}$	2 - 3	I4
Mn II	1461.48	5		$3d^5(a^2D)4s - 3d^4 4s 4p$	$c^2D - q^2F^{\circ}$	1 - 2	I4
Mn II	1462.27	3		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	4 - 3	I4
Mn II	1462.87	5		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - q^2F^{\circ}$	4 - 4	I4
Mn II	1463.02	8		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - s^2D^{\circ}$	2 - 3	I4
Mn II	1464.572	30		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	4 - 4	I4
Mn II	1467.31	1		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - q^2F^{\circ}$	4 - 3	I4
Mn II	1467.53	10		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	3 - 2	I4
Mn II	1468.03	20		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	3 - 3	I4
Mn II	1470.33	0		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	3 - 4	I4
Mn II	1470.73	8		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	2 - 1	I4
Mn II	1471.024	5		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - q^2F^{\circ}$	3 - 4	I4
Mn II	1471.19	7		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - s^2D^{\circ}$	2 - 2	I4
Mn II	1471.586	8		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	2 - 2	I4
Mn II	1471.93	2		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	1 - 0	I4
Mn II	1472.08	2		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	2 - 3	I4
Mn II	1472.62	3		$3d^6 - 3d^5(a^2F)4p$	$a^5D - y^5G^{\circ}$	4 - 5	I4
Mn II	1473.32	0		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	1 - 1	I4
Mn II	1474.18	1		$3d^6 - 3d^5(a^2F)4p$	$a^5D - x^5D^{\circ}$	1 - 2	I4
Mn II	1474.54	10		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - q^2F^{\circ}$	2 - 2	I4
Mn II	1475.11	3		$3d^6 - 3d^5(a^2F)4p$	$a^5D - y^5G^{\circ}$	4 - 5	I4
Mn II	1475.46	6		$3d^5(a^2F)4s - 3d^4 4s 4p$	$b^2F - q^2F^{\circ}$	3 - 3	I4
Mn II	1475.72	5		$3d^5(a^2D)4s -$	$c^2D - t^2F^{\circ}$	3 - 4	I4
Mn II	1476.04	12	85	$3d^5(a^2F)4s -$	$a^2F - t^2F^{\circ}$	1 - 2	I4
Mn II	1476.64	12		$3d^5(a^2D)4s -$	$c^2D - t^2F^{\circ}$	2 - 2	I4
Mn II	1476.98	5	85	$3d^5(a^2F)4s -$	$a^2F - t^2F^{\circ}$	1 - 1	I4
Mn II	1477.61	3		$3d^5(a^2D)4s -$	$c^2D - t^2F^{\circ}$	2 - 1	I4
Mn II	1477.83	5h		$3d^5(a^2D)4s -$	$c^2D - t^2F^{\circ}$	3 - 2	I4
Mn II	1478.59	25	85	$3d^5(a^2F)4s -$	$a^2F - t^2F^{\circ}$	5 - 5	I4
Mn II	1478.79	20	85	$3d^5(a^2F)4s -$	$a^2F - t^2F^{\circ}$	4 - 4	I4
Mn II	1479.76	1	85	$3d^5(a^2F)4s -$	$a^2F - t^2F^{\circ}$	4 - 3	I4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1480.16	2		$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5F^o$	4-5	14
Mn II	1480.85	10		$3d^5(a^2F)4s - 3d^44s4p$	$b^3F - s^3D^o$	2-1	14
Mn II	1481.35	5		$3d^6 - 3d^5(a^2F)4p$	$a^5D - y^3G^o$	3-4	14
Mn II	1482.40	0h		$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5F^o$	3-3	14
Mn II	1483.25	3	85	$3d^5(a^4F)4s -$	$a^5F - t^5F^o$	3-1	14
Mn II	1483.685	10		$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^3F^o$	3-4	14
Mn II	1484.45	0	85	$3d^5(a^2F)4s -$	$a^5F - t^5F^o$	3-2	14
Mn II	1486.068	8		$3d^6 - 3d^5(a^4F)4p$	$z^5D - y^5G^o$	1-2	14
Mn II	1486.40	1		$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5F^o$	0-1	14
Mn II	1486.55	12		$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5F^o$	2-3	14
Mn II	1486.66	3	85	$3d^5(a^4F)4s -$	$a^5F - t^5F^o$	2-3	14
Mn II	1487.86	50	85	$3d^5(a^4F)4s -$	$a^5F - t^5F^o$	2-2	14
Mn II	1489.13	12		$3d^6 - 3d^5(a^4F)4p$	$a^5D - x^5F^o$	1-2	14
Mn II	1494.754	20	84	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$z^3F - u^5D^o$	5-4	14
Mn II	1494.97	7		$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^5F - u^5D^o$	4-4	14
Mn II	1495.26	1		$3d^6 - 3d^5(a^2D)4p$	$a^5D - x^5D^o$	2-3	14
Mn II	1496.78	4		$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^5D - u^5D^o$	3-3	14
Mn II	1498.60	8		$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^5D - u^5D^o$	2-2	14
Mn II	1499.61	1	84	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$a^5F - u^5D^o$	1-1	14
Mn II	1499.84	8		$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^5D - u^5D^o$	3-2	14
Mn II	1499.95	20	84	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$a^5F - u^5D^o$	4-3	14
Mn II	1500.26	5		$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^5D - u^5D^o$	2-1	14
Mn II	1500.41	0	84	$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$a^5F - u^5D^o$	1-0	14
Mn II	1500.99	4		$3d^5(a^2D)4s - 3d^44s4p$	$c^5D - r^3F^o$	3-3	14
Mn II	1501.44	0		$3d^5(a^2F)4s - 3d^44s4p$	$a^5F - r^3F^o$	4-4	14
Mn II	1502.38	1		$3d^5(a^2D)4s - 3d^44s4p$	$c^5D - r^3F^o$	2-2	14
Mn II	1503.02	3		$3d^5(a^2D)4s - 3d^44s(b^4P)4p$	$c^5D - y^3S^o$	1-1	14
Mn II	1503.54	1	84	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^5F - u^5D^o$	3-3	14
Mn II	1504.99	1		$3d^5(a^4F)4s - 3d^44s4p$	$a^5F - r^3F^o$	3-4	14
Mn II	1506.63	7	84	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^5F - u^5D^o$	3-2	14
Mn II	1507.78	4		$3d^5(a^4F)4s - 3d^44s4p$	$a^5F - r^3F^o$	3-3	14
Mn II	1510.14	0	84	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^5F - u^5D^o$	2-2	14
Mn II	1511.84	4	84	$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$a^5F - u^5D^o$	2-1	14
Mn II	1513.32	2		$3d^5(a^4F)4s -$	$a^5F - v^5D^o$	5-4	14
Mn II	1514.03	1		$3d^5(a^4F)4s - 3d^44s4p$	$a^5F - r^3F^o$	2-2	14
Mn II	1516.36	5		$3d^5(a^2D)4s -$	$c^5D - v^5D^o$	3-2	14
Mn II	1516.75	8		$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^5D - u^5D^o$	1-2	14
Mn II	1518.48	0		$3d^5(a^2D)4s - 3d^44s(b^4D)4p$	$c^5D - u^5D^o$	1-1	14
Mn II	1519.79	5		$3d^5(a^2F)4s -$	$a^5F - u^5F^o$	5-5	14
Mn II	1521.42	2		$3d^5(a^2D)4s -$	$c^5D - u^5F^o$	3-3	14
Mn II	1522.423	3		$3d^5(a^4F)4s -$	$a^5F - u^5F^o$	4-4	14
Mn II	1523.14	12		$3d^5(a^2H)4s - 3d^44s4p$	$b^5H - s^3G^o$	6-5	14
Mn II	1523.92	10		$3d^5(a^2F)4s - 3d^44s4p$	$b^3F - r^3F^o$	4-4	14
Mn II	1524.55	10		$3d^5(a^2H)4s - 3d^44s4p$	$b^5H - s^3G^o$	5-4	14
Mn II	1524.71	4		$3d^5(a^4F)4s -$	$a^5F - u^5F^o$	4-3	14
Mn II	1527.76	7		$3d^5(a^2H)4s - 3d^44s4p$	$b^5H - s^3C^o$	4-3	14
Mn II	1531.01	8		$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5F - w^5D^o$	3-4	14
Mn II	1533.10	2		$3d^5(a^2H)4s - 3d^44s4p$	$b^5H - t^3G^o$	5-4	14
Mn II	1533.68	5		$3d^5(a^2H)4s - 3d^44s4p$	$b^5H - t^3G^o$	4-3	14
Mn II	1534.34	0		$3d^5(a^4F)4s -$	$a^5F - t^3G^o$	1-2	14
Mn II	1534.58	0		$3d^5(a^2D)4s -$	$c^5D - x^5G^o$	2-2	14
Mn II	1534.80	5		$3d^5(a^2F)4s - 3d^44s4p$	$b^5F - r^3F^o$	2-2	14
Mn II	1535.42	1		$3d^5(a^2D)4s -$	$c^5D - x^5G^o$	2-2	14
Mn II	1535.66	6		$3d^5(a^2F)4s - 3d^44s4p$	$b^5F - r^3F^o$	2-2	14
Mn II	1535.91	0		$3d^5(a^2F)4s -$	$c^5D - x^5C^o$	2-2	14
Mn II	1536.10	3		$3d^5(a^2D)4s - 3d^44s(a^6D)4p$	$a^5P - w^5D^o$	3-3	14
Mn II	1536.63	7	92	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^5P^o - ^5S$	3-2	14
Mn II	1536.868	3		$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^5D^o$	2-3	14
Mn II	1537.070	1		$3d^5(a^4F)4s -$	$a^5F - x^5G^o$	5-6	14
Mn II	1537.56	2		$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^5P - t^3D^o$	2-3	14
Mn II	1538.14	1		$3d^5(a^4F)4s -$	$a^5F - x^5G^o$	4-5	14
Mn II	1538.43	0		$3d^5(a^2F)4s - 3d^44s4p$	$b^5F - r^3F^o$	3-2	14
Mn II	1539.24	3		$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^5D^o$	2-2	14
Mn II	1539.33	5	92	$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^5P^o - ^5S$	2-2	14
Mn II	1539.99	0		$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^5P - w^5D^o$	1-2	14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1540.47	0	92	$3d^5(a^4F)4s - 3d^5(a^6S)5f$	$a^6F - ^6F^{\circ}$	5-5	I4
Mn II	1541.06	4		$3d^5(a^6S)4p - 3d^5(a^6S)7s$	$z^6P^{\circ} - ^6S^{\circ}$	1-2	I4
Mn II	1541.30	0		$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^6P - w^3D^{\circ}$	2-1	I4
Mn II	1542.16	1		$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^6P - w^3D^{\circ}$	1-1	I4
Mn II	1542.52	1		$3d^5(a^4F)4s -$	$a^6F - x^6G^{\circ}$	3-4	I4
Mn II	1542.98	0		$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - t^3D^{\circ}$	2-2	I4
Mn II	1543.28	0		$3d^5(a^4P)4s - 3d^44s(a^6D)4p$	$a^6P - w^3D^{\circ}$	1-0	I4
Mn II	1545.13	1		$3d^5(a^4P)4s - 3d^44s(b^4D)4p$	$b^3P - t^3D^{\circ}$	1-2	I4
Mn II	1546.22	8		$3d^6 - 3d^5(a^3D)4p$	$a^3D - x^3F^{\circ}$	2-2	I4
Mn II	1546.87	4		$3d^6 - 3d^44s4p$	$a^1F - u^3H^{\circ}$	3-4	I4
Mn II	1548.834	4		$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - s^3G^{\circ}$	5-5	I4
Mn II	1549.25	0		$3d^5(a^2H)4s - 3d^44s4p$	$b^3H - q^3F^{\circ}$	5-4	I4
Mn II	1550.41	4		$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - ^3G^{\circ}$	4-4	I4
Mn II	1550.82	2		$3d^5(a^2F)4s - 3d^44s4p$	$b^1F - s^3G^{\circ}$	3-3	I4
Mn II	1552.60	2		$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - s^3G^{\circ}$	5-4	I4
Mn II	1553.85	0		$3d^5(a^3H)4s - 3d^44s4p$	$b^3H - q^3F^{\circ}$	4-3	I4
Mn II	1555.01	1		$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - s^3G^{\circ}$	3-3	I4
Mn II	1556.94	2		$3d^5(a^2F)4s - 3d^44s4p$	$b^1F - t^3G^{\circ}$	3-3	I4
Mn II	1557.43	1		$3d^5(a^4F)4s - 3d^44s4p$	$c^3F - s^3G^{\circ}$	4-5	I4
Mn II	1559.24	3		$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - t^3G^{\circ}$	4-4	I4
Mn II	1561.17	4	$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - t^3G^{\circ}$	5-3	I4	
Mn II	1561.61	4	$3d^5(a^4F)4s - 3d^44s4p$	$c^3F - s^3G^{\circ}$	3-4	I4	
Mn II	1562.57	1	$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - t^3G^{\circ}$	5-5	I4	
Mn II	1563.61	6	$3d^5(a^4F)4s - 3d^44s4p$	$c^3F - s^3G^{\circ}$	2-3	I4	
Mn II	1564.897	30	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^3G - s^3F^{\circ}$	5-4	I4	
Mn II	1566.47	40	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^{\circ}$	6-5	I4	
Mn II	1567.06	2	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^{\circ}$	5-5	I4	
Mn II	1568.51	20	$3d^5(a^4G)4s - 3d^5(b^2F)4p$	$a^5G - u^3G^{\circ}$	6-5	I4	
Mn II	1569.08	1	$3d^5(a^4G)4s - 3d^5(b^3F)4p$	$a^5G - u^3G^{\circ}$	5-5	I4	
Mn II	1570.05	7	$3d^5(a^2H)4s - 3d^44s4p$	$b^3H - u^3H^{\circ}$	6-6	I4	
Mn II	1572.13	1	$3d^5(a^4G)4s - 3d^5(b^2F)4p$	$a^5G - u^3G^{\circ}$	5-4	I4	
Mn II	1573.53	30	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^3G - s^3F^{\circ}$	4-3	I4	
Mn II	1574.276	6	$3d^5(a^3H)4s - 3d^44s4p$	$b^3H - u^3H^{\circ}$	5-5	I4	
Mn II	1575.642	40	$3d^5(a^4G)4s - 3d^44s(a^6F)4p$	$a^5G - w^5F^{\circ}$	5-4	I4	
Mn II	1575.75	3	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - t^3D^{\circ}$	3-3	I4	
Mn II	1575.94	10	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^{\circ}$	4-4	I4	
Mn II	1577.22	3	$3d^5(a^2H)4s - 3d^44s4p$	$b^3H - u^3H^{\circ}$	4-4	I4	
Mn II	1577.774	10	$3d^5(a^3H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^{\circ}$	6-7	I4	
Mn II	1578.90	20	$3d^5(a^4G)4s - 3d^44s(b^4D)4p$	$a^3G - s^3F^{\circ}$	3-2	I4	
Mn II	1581.39	3	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - t^3D^{\circ}$	2-2	I4	
Mn II	1582.23	40	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^{\circ}$	4-3	I4	
Mn II	1582.35	10	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^{\circ}$	3-3	I4	
Mn II	1584.38	1	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - t^3D^{\circ}$	1-1	I4	
Mn II	1585.30	1	$3d^6 - 3d^44s(b^4D)4p$	$a^3D - t^3D^{\circ}$	2-1	I4	
Mn II	1587.11	50	$3d^5(a^4G)4s - 3d^5(b^2F)4p$	$a^5G - x^1D^{\circ}$	3-2	I4	
Mn II	1587.15	7	$3d^5(a^3H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^{\circ}$	5-6	I4	
Mn II	1587.38	1	$3d^5(a^4F)4s - 3d^44s4p$	$c^3F - q^3F^{\circ}$	4-4	I4	
Mn II	1587.46	15	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^{\circ}$	3-2	I4	
Mn II	1589.74	1	$3d^5(a^3H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^{\circ}$	6-6	I4	
Mn II	1590.009	20	$3d^5(a^4G)4s - 3d^44s(a^6D)4p$	$a^5G - w^5F^{\circ}$	2-1	I4	
Mn II	1592.76	0	$3d^5(a^4F)4s - 3d^44s4p$	$c^3F - q^3F^{\circ}$	3-3	I4	
Mn II	1593.224	5	$3d^5(a^3H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^{\circ}$	4-5	I4	
Mn II	1593.61	0	$3d^5(a^3H)4s - 3d^44s(a^4H)4p$	$b^3H - x^3I^{\circ}$	5-5	I4	
Mn II	1597.18	2	$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - u^3H^{\circ}$	5-6	I4	
Mn II	1601.84	5	$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - u^3H^{\circ}$	4-5	I4	
Mn II	1602.10	30	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^{\circ}$	4-4	I4	
Mn II	1603.87	5	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^{\circ}$	3-4	I4	
Mn II	1604.19	0	$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - u^3H^{\circ}$	5-5	I4	
Mn II	1605.33	0	$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - u^3H^{\circ}$	4-4	I4	
Mn II	1605.467	60	$3d^6 - 3d^44s(b^4D)4p$	$b^3G - s^3F^{\circ}$	5-4	I4	
Mn II	1607.37	2	$3d^6 - 3d^5(b^2F)4p$	$a^3P - u^3D^{\circ}$	2-3	I4	
Mn II	1607.67	5	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^{\circ}$	4-3	I4	
Mn II	1609.50	30	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^{\circ}$	2-3	I4	
Mn II	1611.61	5	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^{\circ}$	1-2	I4	
Mn II	1612.15	10	$3d^5(a^4D)4s - 3d^44s(a^6D)4p$	$b^5D - w^5D^{\circ}$	3-2	I4	

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1613.50	1		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - w^6D^o$	0 - 1	14
Mn II	1613.62	3		$3d^5(a^4F)4s - 3d^44s4p$	$c^3F - u^3H^o$	4 - 5	14
Mn II	1614.56	5		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - w^6D^o$	2 - 1	14
Mn II	1615.050	2		$3d^5(a^4S)4s - 3d^4(a^4D)4p$	$a^4S - x^4P^o$	2 - 3	14
Mn II	1615.22	1		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - w^6D^o$	1 - 0	14
Mn II	1615.79	60		$3d^5 - 3d^44s(b^4D)4p$	$b^3G - s^3F^o$	4 - 3	14
Mn II	1616.79	5		$3d^5(a^4S)4s - 3d^4(a^4D)4p$	$a^4S - x^4P^o$	2 - 2	14
Mn II	1617.34	4		$3d^5(a^4F)4s - 3d^44s4p$	$c^3F - u^3H^o$	3 - 4	14
Mn II	1618.34	2h		$3d^5(a^4S)4s - 3d^4(a^4D)4p$	$a^4S - x^4P^o$	2 - 1	14
Mn II	1623.14	40		$3d^5 - 3d^44s(b^4D)4p$	$b^3G - s^3F^o$	3 - 2	14
Mn II	1625.28	10	76	$3d^5(a^4S)4p - 3d^5(a^4S)5d$	$z^7P^o - ^7D$	2 - 3	14
Mn II	1625.35	20	76	$3d^5(a^4S)4p - 3d^5(a^4S)5d$	$z^7P^o - ^7D$	2 - 1	14
Mn II	1625.89	10		$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - t^5D^o$	3 - 3	14
Mn II	1629.84	20	76	$3d^5(a^4S)4p - 3d^5(a^4S)5d$	$z^7P^o - ^7D$	3 - 4	14
Mn II	1629.94	10	76	$3d^5(a^4S)4p - 3d^5(a^4S)5d$	$z^7P^o - ^7D$	3 - 3	14
Mn II	1630.00	7	76	$3d^5(a^4S)4p - 3d^5(a^4S)5d$	$z^7P^o - ^7D$	3 - 2	14
Mn II	1632.10	2		$3d^5(a^4D)4s - 3d^44s(b^4D)4p$	$b^5D - t^5D^o$	2 - 2	14
Mn II	1636.75	25	76	$3d^5(a^4S)4p - 3d^5(a^4S)5d$	$z^7P^o - ^7D$	4 - 5	14
Mn II	1636.87	15	76	$3d^5(a^4S)4p - 3d^5(a^4S)5d$	$z^7P^o - ^7D$	4 - 4	14
Mn II	1636.96	6	76	$3d^5(a^4S)4p - 3d^5(a^4S)5d$	$z^7P^o - ^7D$	4 - 3	14
Mn II	1642.90	1		$3d^5(b^2F)4s - 3d^44s4p$	$d^3F - s^3D^o$	4 - 3	14
Mn II	1643.08	2		$3d^5 - 3d^44s(a^4D)4p$	$a^3H - w^3F^o$	6 - 5	14
Mn II	1645.32	10		$3d^5 - 3d^5(b^2F)4p$	$a^3H - u^3G^o$	6 - 5	14
Mn II	1647.07	1		$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - r^3F^o$	4 - 4	14
Mn II	1649.52	1		$3d^5(a^2G)4s - 3d^44s4p$	$c^3G - r^3F^o$	5 - 4	14
Mn II	1651.02	30		$3d^5 - 3d^5(b^2F)4p$	$a^3F - u^3D^o$	4 - 3	14
Mn II	1652.91	10		$3d^5 - 3d^5(b^2F)4p$	$a^3H - u^3G^o$	5 - 4	14
Mn II	1653.00	2		$3d^5(b^2F)4s - 3d^44s4p$	$d^3F - q^3F^o$	4 - 4	14
Mn II	1655.04	1		$3d^5 - 3d^5(b^2F)4p$	$a^3F - u^3D^o$	3 - 3	14
Mn II	1658.37	3		$3d^5 - 3d^5(b^2F)4p$	$a^3F - u^3D^o$	2 - 1	14
Mn II	1659.50	0		$3d^5(a^4F)4s - 3d^44s4p$	$c^3F - r^3F^o$	4 - 4	14
Mn II	1660.06	10		$3d^5 - 3d^44s(a^4D)4p$	$a^3H - w^3F^o$? 4 - 4	14
Mn II	1660.516	10		$3d^5 - 3d^5(b^2F)4p$	$a^3H - u^3G^o$	4 - 3	14
Mn II	1661.576	0		$3d^5(b^2F)4s - 3d^44s4p$	$d^3F - q^3F^o$	2 - 2	14
Mn II	1663.653	3		$3d^5(a^2H)4s - 3d^5(a^2S)5f$	$b^5H - s^5F^o$? 5 - 4	14
Mn II	1678.63	2		$3d^5(a^4S)4s - 3d^5(a^4P)4p$	$a^4S - z^4P^o$	2 - 2	14
Mn II	1679.55	60	39	$3d^5(a^4P)4s - 3d^44s(a^4D)4p$	$a^4P - v^4P^o$	3 - 3	14
Mn II	1680.401	40	39	$3d^5(a^4P)4s - 3d^44s(a^4D)4p$	$a^4P - v^4P^o$	2 - 3	14
Mn II	1684.58	10	75	$3d^5(a^4S)4p - 3d^5(a^4S)6s$	$z^7P^o - ^7S$	2 - 3	14
Mn II	1684.71	10		$3d^5 - 3d^5(b^2F)4p$	$a^3F - u^3G^o$	3 - 3	14
Mn II	1688.13	2		$3d^5 - 3d^5(a^2H)4p$	$a^3H - x^3H^o$	6 - 5	14
Mn II	1689.25	2		$3d^5 - 3d^44s(b^4D)4p$	$a^3D - s^3F^o$	3 - 4	14
Mn II	1689.48	50	39	$3d^5(a^4P)4s - 3d^44s(a^4D)4p$	$a^4P - v^4P^o$	3 - 2	14
Mn II	1689.611	15	75	$3d^5(a^4S)4p - 3d^5(a^4S)6s$	$z^7P^o - ^7S$	3 - 3	14
Mn II	1689.84	4	102	$3d^44s^2 - 3d^5(a^4S)6f$	$c^5D - s^5F^o$	0 - 1	14
Mn II	1690.32	0	39	$3d^5(a^4P)4s - 3d^44s(a^4D)4p$	$a^4P - v^4P^o$	2 - 2	14
Mn II	1691.248	40	39	$3d^5(a^4P)4s - 3d^44s(a^4D)4p$	$a^4P - v^4P^o$	1 - 2	14
Mn II	1691.45	1		$3d^5 - 3d^44s4p$	$c^3P - s^3D^o$	2 - 2	14
Mn II	1692.34	2		$3d^5 - 3d^5(a^4D)4p$	$a^4D - y^4F^o$	3 - 4	14
Mn II	1692.46	10	102	$3d^44s^2 - 3d^5(a^4S)6f$	$c^5D - s^5F^o$	1 - 2	14
Mn II	1694.24	50		$3d^5(a^4S)4s - 3d^5(a^4P)4p$	$a^4S - y^4P^o$	2 - 1	14
Mn II	1696.51	60		$3d^5(a^4S)4s - 3d^5(a^4P)4p$	$a^4S - y^4P^o$	2 - 2	14
Mn II	1697.19	80b	75	$3d^5(a^4S)4p - 3d^5(a^4S)6s$	$z^7P^o - ^7S$	4 - 3	14
Mn II	1697.19	80b	39	$3d^5(a^4P)4s - 3d^44s(a^4D)4p$	$a^4P - v^4P^o$	2 - 1	14
Mn II	1697.53	12	102	$3d^44s^2 - 3d^5(a^4S)6f$	$c^5D - s^5F^o$	2 - 3	14
Mn II	1698.127	10	39	$3d^5(a^4P)4s - 3d^44s(a^4D)4p$	$a^4P - v^4P^o$	1 - 1	14
Mn II	1700.34	100		$3d^5(a^4S)4s - 3d^5(a^4P)4p$	$a^4S - y^4P^o$	2 - 3	14
Mn II	1700.60	1		$3d^5 - 3d^44s(b^4D)4p$	$a^3D - s^3F^o$	1 - 2	14
Mn II	1700.69	3	101	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - s^5F^o$	0 - 1	14
Mn II	1703.37	5	101	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - s^5F^o$	1 - 2	14
Mn II	1704.87	15	102	$3d^44s^2 - 3d^5(a^4S)6f$	$c^5D - s^5F^o$	3 - 4	14
Mn II	1706.57	10		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - w^5F^o$	4 - 5	14
Mn II	1708.267	100		$3d^5 - 3d^5(a^2G)4p$	$a^3H - v^3G^o$	6 - 5	14
Mn II	1708.53	4	101	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - s^5F^o$	2 - 2	14
Mn II	1708.65	6	101	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - s^5F^o$	2 - 3	14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1711.83	100		$3d^6 - 3d^5(a^2G)4p$	$a^3H - v^2G^o$	5-4	I4
Mn II	1714.38	100	102	$3d^4 4s^2 - 3d^5(a^2S)6f$	$c^5D - s^2F^o$	4-5	I4
Mn II	1715.25	1		$3d^6 - 3d^5(a^2G)4p$	$a^3H - v^2G^o$	4-4	I4
Mn II	1715.69	10		$3d^6 - 3d^5(b^2F)4p$	$a^2F - t^2F^o$	4-4	I4
Mn II	1715.98	12	101	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - s^2F^o$	3-4	I4
Mn II	1716.14	12	101	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - s^2F^o$	3-3	I4
Mn II	1716.78	80		$3d^6 - 3d^5(a^2G)4p$	$a^3H - y^2H^o$	6-5	I4
Mn II	1718.56	2		$3d^5(a^4G)4s - 3d^5(a^2F)4p$	$a^2G - v^2F^o$	5-4	I4
Mn II	1718.79	15		$3d^5(a^4D)4s - 3d^4 4s(a^2D)4p$	$b^2D - w^2F^o$	3-4	I4
Mn II	1725.29	15	101	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - s^2F^o$	4-5	I4
Mn II	1725.441	20		$3d^5(a^4P)4s - 3d^5(a^2S)4p$	$b^2P - v^2P^o$	2-2	I4
Mn II	1725.61	10	101	$3d^4 4s^2 - 3d^4 4s(b^4D)4p$	$c^5D - s^2F^o$	4-4	I4
Mn II	1726.29	10		$3d^5(a^4D)4s - 3d^4 4s(a^2D)4p$	$b^2D - w^2F^o$	2-3	I4
Mn II	1726.47	200	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	4-3	I4
Mn II	1726.81	30		$3d^6 - 3d^5(b^2F)4p$	$a^2F - t^2F^o$	3-3	I4
Mn II	1728.12	1		$3d^5(a^4P)4s - 3d^5(a^2S)4p$	$b^2P - v^2P^o$	1-2	I4
Mn II	1729.57	5		$3d^6 - 3d^5(a^2D)4p$	$a^2P - v^2P^o$	0-1	I4
Mn II	1731.36	40		$3d^5(b^2F)4s - 3d^4 4s4p$	$d^2F - r^2F^o$	4-4	I4
Mn II	1731.75	0		$3d^5(a^4D)4s - 3d^4 4s(a^2D)4p$	$b^2D - w^2F^o$	1-2	I4
Mn II	1732.702	300	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	3-2	I4
Mn II	1733.55	500	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	4-4	I4
Mn II	1733.87	30		$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^2H^o$	6-6	I4
Mn II	1734.49	400	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	3-3	I4
Mn II	1734.72	30		$3d^5(b^2F)4s - 3d^4 4s4p$	$d^2F - r^2F^o$	3-3	I4
Mn II	1737.43	5		$3d^5(a^4P)4s - 3d^4 4s(b^4D)4p$	$b^2P - w^2P^o$	1-2	I4
Mn II	1737.929	300	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	2-1	I4
Mn II	1738.347	100	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	2-2	I4
Mn II	1738.51	10		$3d^5(b^2F)4s - 3d^4 4s4p$	$d^2F - r^2F^o$	2-2	I4
Mn II	1740.156	200	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	2-3	I4
Mn II	1741.50	40	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	1-0	I4
Mn II	1741.65	50	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	3-4	I4
Mn II	1742.00	200	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	1-2	I4
Mn II	1743.347	100	13	$3d^6 - 3d^5(a^2D)4p$	$a^5D - y^2D^o$	0-1	I4
Mn II	1744.54	2	91	$3d^5(a^2S)4p - 3d^5(a^2S)5d$	$z^5P^o - s^2D$	3-2	I4
Mn II	1744.69	20		$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^2H^o$	5-5	I4
Mn II	1744.86	10	91	$3d^5(a^2S)4p - 3d^5(a^2S)5d$	$z^5P^o - s^2D$	3-4	I4
Mn II	1746.99	10		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^2D - s^2F^o$	3-4	I4
Mn II	1747.92	2h	91	$3d^5(a^2S)4p - 3d^5(a^2S)5d$	$z^5P^o - s^2D$	2-1	I4
Mn II	1747.995	2h	91	$3d^5(a^2S)4p - 3d^5(a^2S)5d$	$z^5P^o - s^2D$	2-2	I4
Mn II	1748.13	10h	91	$3d^5(a^2S)4p - 3d^5(a^2S)5d$	$z^5P^o - s^2D$	2-3	I4
Mn II	1749.93	40		$3d^6 - 3d^5(a^2H)4p$	$a^3H - w^2H^o$	4-4	I4
Mn II	1750.18	8h	91	$3d^5(a^2S)4p - 3d^5(a^2S)5d$	$z^5P^o - s^2D$	1-2	I4
Mn II	1751.60	20b		$3d^5(a^4P)4s - 3d^4 4s(b^4D)4p$	$b^2P - w^2P^o$	2-1	I4
Mn II	1752.40	8		$3d^6 - 3d^5(a^2D)4p$	$a^5D - x^2P^o$	4-3	I4
Mn II	1752.92	0		$3d^5(a^4P)4s - 3d^5(a^2S)5p$	$a^2P - w^2P^o$	3-2	I4
Mn II	1754.12	1		$3d^5(a^4P)4s - 3d^5(a^2S)5p$	$a^2P - w^2P^o$	3-3	I4
Mn II	1754.34	5		$3d^5(a^4F)4s - 3d^4 4s(b^4D)4p$	$b^2P - w^2P^o$	1-1	I4
Mn II	1754.65	0		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^2D - s^2F^o$	3-3	I4
Mn II	1754.81	8		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^2D - s^2F^o$	2-3	I4
Mn II	1755.04	0		$3d^5(a^4P)4s - 3d^5(a^2S)5p$	$a^2P - w^2P^o$	2-3	I4
Mn II	1756.30	10		$3d^5(a^4P)4s - 3d^4 4s(b^4D)4p$	$b^2P - w^2P^o$	0-1	I4
Mn II	1756.80	1		$3d^6 - 3d^5(a^2G)4p$	$a^3H - u^2F^o$	4-3	I4
Mn II	1757.44	2		$3d^6 - 3d^5(a^2G)4p$	$a^3H - u^2F^o$	5-4	I4
Mn II	1760.678	100		$3d^6 - 3d^5(a^2D)4p$	$a^5D - x^2P^o$	3-3	I4
Mn II	1760.96	5		$3d^5(a^4D)4s - 3d^4 4s(b^4D)4p$	$b^2D - s^2F^o$	1-2	I4
Mn II	1762.75	10		$3d^6 - 3d^5(a^2D)4p$	$a^5D - x^2P^o$	3-2	I4
Mn II	1763.94	15		$3d^5(a^4P)4s - 3d^4 4s(b^4D)4p$	$b^2P - w^2P^o$	1-0	I4
Mn II	1765.502	100		$3d^5(a^4D)4s - 3d^4 4s(a^2D)4p$	$b^2D - v^2P^o$	4-3	I4
Mn II	1766.50	50		$3d^6 - 3d^5(a^2D)4p$	$a^5D - x^2P^o$	2-3	I4
Mn II	1767.67	60		$3d^5(a^4D)4s - 3d^4 4s(a^2D)4p$	$b^2D - v^2P^o$	3-3	I4
Mn II	1768.596	80		$3d^6 - 3d^5(a^2D)4p$	$a^5D - x^2P^o$	2-2	I4
Mn II	1769.08	8		$3d^6 - 3d^5(b^2D)4p$	$a^2F - w^2D^o$	3-2	I4
Mn II	1770.444	10		$3d^6 - 3d^5(a^2D)4p$	$a^5D - x^2P^o$	2-1	I4
Mn II	1772.00	2		$3d^6 - 3d^5(a^2F)4p$	$a^2P - v^2D^o$	2-3	I4
Mn II	1772.35	30		$3d^6 - 3d^5(a^2D)4p$	$a^5D - x^2P^o$	1-2	I4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1772.45	5		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^3D^o$	4 - 3	14
Mn II	1773.70	2		$3d^6 - 3d^5(a^2S)4p$	$a^3D - v^3P^o$	3 - 2	14
Mn II	1774.21	50		$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^3P^o$	1 - 1	14
Mn II	1774.75	15		$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^1I^o$	6 - 6	14
Mn II	1775.21	50d		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	4 - 5	14
Mn II	1775.52	0		$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3D^o$	2 - 2	14
Mn II	1775.69	6		$3d^44s^2 -$	$c^5D - s^5P^o$	0 - 1	14
Mn II	1776.06	20		$3d^6 - 3d^5(a^4D)4p$	$a^5D - x^3P^o$	0 - 1	14
Mn II	1777.23	0		$3d^6 - 3d^5(b^2F)4p$	$b^2G - u^2G^o$	4 - 4	14
Mn II	1778.01	10		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - v^5I^o$	1 - 2	14
Mn II	1778.09	6		$3d^44s^2 -$	$c^5D - s^5P^o$	1 - 2	14
Mn II	1778.59	20	100	$3d^44s^2 -$	$c^5D - s^5P^o$	1 - 1	14
Mn II	1778.692	100		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - v^5P^o$	3 - 2	14
Mn II	1779.308	20		$3d^6 - 3d^44s4p$	$e^3F - r^3F^o$	2 - 2	14
Mn II	1779.59	1		$3d^6 - 3d^5(a^2F)4p$	$a^3P - y^1F^o$	2 - 3	14
Mn II	1780.25	8		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	4 - 4	14
Mn II	1781.82	1		$3d^44s^2 -$	$c^5D - t^5I^o$	1 - 2	14
Mn II	1781.93	1		$3d^6 - 3d^44s4p$	$e^3F - r^3F^o$	3 - 2	14
Mn II	1782.626	8		$3d^6 - 3d^5(a^2G)4p$	$a^3F - u^3F^o$	2 - 2	14
Mn II	1783.06	1		$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3F^o$	2 - 3	14
Mn II	1783.18	0		$3d^44s^2 -$	$c^5D - t^5F^o$	1 - 1	14
Mn II	1783.38	2		$3d^6 - 3d^44s(b^4D)4p$	$a^3D - w^3P^o$	2 - 2	14
Mn II	1783.51	15		$3d^6 - 3d^44s(b^4D)4p$	$a^3D - w^3P^o$	3 - 2	14
Mn II	1783.63	10		$3d^6 - 3d^5(a^2G)4p$	$a^3F - u^3F^o$	4 - 4	14
Mn II	1783.72	20	100	$3d^44s^2 -$	$c^5D - s^5P^o$	2 - 2	14
Mn II	1783.94	10		$3d^6 - 3d^5(a^2G)4p$	$a^3F - u^3F^o$	3 - 3	14
Mn II	1784.24	15	100	$3d^44s^2 -$	$c^5D - s^5P^o$	2 - 1	14
Mn II	1784.46	10		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^3D^o$	1 - 2	14
Mn II	1785.032	20		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - v^5P^o$	0 - 1	14
Mn II	1785.31	1h		$3d^6 - 3d^5(b^2F)4p$	$b^3G - u^3G^o$	3 - 3	14
Mn II	1785.618	20		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - v^5P^o$	1 - 1	14
Mn II	1785.73	1		$3d^44s^2 -$	$c^5D - t^5F^o$	2 - 3	14
Mn II	1786.31	20		$3d^5(a^4D)4s - 3d^44s(a^4D)4p$	$b^5D - v^5P^o$	2 - 1	14
Mn II	1786.86	10		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^3D^o$	2 - 3	14
Mn II	1786.97	3		$3d^5(b^2F)4s - 3d^44s4p$	$c^1F - u^3H^o$	3 - 4	14
Mn II	1787.23	2		$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^3G^o$	3 - 4	14
Mn II	1787.36	3		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	5 - 4	14
Mn II	1787.48	2		$3d^44s^2 -$	$c^5D - t^5F^o$	2 - 2	14
Mn II	1788.43	40h		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	5 - 5	14
Mn II	1788.786	40h		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	3 - 4	14
Mn II	1789.63	8		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	4 - 3	14
Mn II	1790.60	80		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	4 - 4	14
Mn II	1790.79	20	100	$3d^44s^2 -$	$c^5D - s^5P^o$	3 - 3	14
Mn II	1791.54	1		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	3 - 4	14
Mn II	1791.67	2		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - v^3G^o$	4 - 5	14
Mn II	1791.88	25	100	$3d^44s^2 -$	$c^5D - s^5P^o$	3 - 2	14
Mn II	1792.52	0		$3d^44s^2 -$	$c^5D - t^5F^o$	3 - 4	14
Mn II	1793.753	30		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	3 - 3	14
Mn II	1793.89	1		$3d^44s^2 -$	$c^5D - t^5F^o$	3 - 3	14
Mn II	1797.35	2		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	3 - 2	14
Mn II	1797.76	20		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - y^1H^o$	5 - 5	14
Mn II	1799.81	40		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	2 - 3	14
Mn II	1800.959	2		$3d^6 -$	$c^3P - u^3F^o$? 2 - 3	14
Mn II	1801.04	1		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - y^1H^o$	4 - 5	14
Mn II	1801.23	16		$3d^6 - 3d^44s(b^4D)4p$	$a^3D - w^3P^o$	2 - 1	14
Mn II	1801.27	50	100	$3d^44s^2 -$	$c^5D - s^5P^o$	4 - 3	14
Mn II	1801.63	8		$3d^6 - 3d^5(a^4F)4p$	$a^3P - v^3D^o$	1 - 2	14
Mn II	1803.00	10		$3d^44s^2 -$	$c^5D - t^5F^o$	4 - 5	14
Mn II	1803.43	20		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	2 - 2	14
Mn II	1804.446			$3d^44s^2 -$	$c^5D - t^5F^o$? 4 - 3	C20,14
Mn II	1807.34	30		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	1 - 2	14
Mn II	1808.72	40		$3d^6 - 3d^5(a^2H)4p$	$a^3H - y^3I^o$	6 - 7	14
Mn II	1808.96	40		$3d^6 - 3d^5(b^2F)4p$	$a^3G - w^1F^o$	4 - 3	14
Mn II	1809.43	30		$3d^6 - 3d^5(a^2F)4p$	$a^3H - y^1F^o$	4 - 3	14
Mn II	1809.97	30		$3d^6 - 3d^5(a^4D)4p$	$a^5D - y^3F^o$	1 - 1	14

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1810.12	2		3d ⁶ - 3d ⁴ 4s(b ⁴ D)4p	a ³ D - w ² P°	1 - 0	14
Mn II	1811.89	10		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ⁵ D - y ⁵ F°	0 - 1	14
Mn II	1812.04	2		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ P - v ³ D°	0 - 1	14
Mn II	1813.03	10		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ H - v ³ F°	4 - 3	14
Mn II	1813.283	8	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	0 - 1	14
Mn II	1813.866	30	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	1 - 2	14
Mn II	1814.47	25		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - y ³ I°	6 - 6	14
Mn II	1815.24	40	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	2 - 3	14
Mn II	1815.57	5h		3d ⁵ (a ⁴ D)4s - 3d ⁴ 4s(a ⁴ D)4p	b ³ D - w ³ D°	3 - 2	14
Mn II	1816.284	25	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	3 - 4	14
Mn II	1816.52	25		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² H)4p	a ² G - w ² H	5 - 6	14
Mn II	1816.87	10	90	3d ⁵ (a ⁴ S)4p - 3d ⁵ (a ⁴ S)6s	z ⁵ P° - ⁴ S	3 - 2	14
Mn II	1816.91	10		3d ⁶ - 3d ⁵ (b ² F)4p	b ² G - t ² F°	5 - 4	14
Mn II	1817.53	150d	99	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - w ³ G°	6 - 5	14
Mn II	1818.38	100		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - w ³ G°	5 - 4	14
Mn II	1819.62	15		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - y ³ I°	5 - 6	14
Mn II	1819.75	9	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	2 - 2	14
Mn II	1820.22	50		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - w ³ G°	4 - 3	14
Mn II	1820.65	9	90	3d ⁵ (a ⁴ S)4p - 3d ⁵ (a ⁴ S)6s	z ⁵ P° - ⁴ S	2 - 2	14
Mn II	1822.213	30	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	2 - 1	14
Mn II	1822.71	10		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - w ³ G°	5 - 5	14
Mn II	1823.06	8	90	3d ⁵ (a ⁴ S)4p - 3d ⁵ (a ⁴ S)6s	z ⁵ P° - ⁴ S	1 - 2	14
Mn II	1823.22	1		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² H)4p	a ² G - w ² H°	5 - 5	14
Mn II	1823.69	30	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	3 - 3	14
Mn II	1825.22	3		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ F - v ³ D°	4 - 3	14
Mn II	1826.59	20		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² H)4p	a ² G - w ² H°	4 - 5	14
Mn II	1827.076	100	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	4 - 4	14
Mn II	1828.251	10	99	3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	3 - 2	14
Mn II	1829.43	60		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² H)4p	a ² G - w ² H°	3 - 4	14
Mn II	1829.75	20		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - y ³ I°	4 - 5	14
Mn II	1830.15	10		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ F - v ³ D°	3 - 3	14
Mn II	1831.05	10h		3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ S)4f	a ⁵ F - ⁵ F°	2 - 3	14
Mn II	1831.66	40		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ² G - y ² G°	6 - 6	14
Mn II	1832.19	50		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² G)4p	a ² G - u ² F°	3 - 2	14
Mn II	1832.47	1		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ G - y ⁵ G°	5 - 6	14
Mn II	1833.30	20		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ G - y ⁵ G°	5 - 5	14
Mn II	1833.47	1		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ F - v ³ D°	2 - 3	14
Mn II	1833.91	15		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ F - v ³ D°	3 - 2	14
Mn II	1834.47	15		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² F)4p	a ² G - y ² G°	3 - 4	14
Mn II	1834.57	30		3d ⁴ 4s ² - 3d ⁴ 4s(b ⁴ D)4p	c ⁵ D - u ⁵ D°	4 - 3	14
Mn II	1835.91	100		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ G - x ⁵ F°	4 - 3	14
Mn II	1836.508	50		3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ⁵ D - z ⁵ P°	9 - 2	14
Mn II	1836.92	20		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² G)4p	a ² G - u ² F°	3 - 3	14
Mn II	1837.13	80		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² G)4p	a ² G - u ² F°	5 - 4	14
Mn II	1837.25	2		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ F - v ³ D°	2 - 2	14
Mn II	1837.48	60		3d ⁵ (a ⁴ D)4s - 3d ⁵ (a ² S)4p	b ³ D - v ³ P°	3 - 2	14
Mn II	1837.65	10		3d ⁵ (a ⁴ D)4s - 3d ⁵ (a ² S)4p	b ³ D - v ³ P°	2 - 2	14
Mn II	1837.86	1		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ G - x ⁵ F°	4 - 4	14
Mn II	1838.05	10	98	3d ⁴ 4s ² -	c ⁵ D - v ⁵ D°	1 - 2	14
Mn II	1838.25	2		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ F - y ³ I°	3 - 3	14
Mn II	1838.604	30	98	3d ⁴ 4s ² -	c ⁵ D - v ⁵ D°	0 - 1	14
Mn II	1839.59	15	98	3d ⁴ 4s ² -	c ⁵ D - v ⁵ D°	2 - 3	14
Mn II	1840.29	100		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ G - x ⁵ F°	6 - 5	14
Mn II	1840.45	2h		3d ⁶ - 3d ⁵ (a ² G)4p	b ³ G - v ³ G°	5 - 4	14
Mn II	1840.56	3h		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² G)4p	a ² G - u ² F°	4 - 4	14
Mn II	1840.91	5		3d ⁶ - 3d ⁵ (a ² S)4p	a ¹ S - y ¹ P°	0 - 1	14
Mn II	1841.12	30		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ G - x ⁵ F°	5 - 5	14
Mn II	1841.33	10		3d ⁵ (a ² F)4s - 3d ⁵ (b ² D)4p	b ³ F - w ¹ D°	3 - 2	14
Mn II	1841.61	40		3d ⁶ - 3d ⁵ (a ² G)4p	b ³ G - v ³ G°	5 - 5	14
Mn II	1841.72	3	98	3d ⁴ 4s ² -	c ⁵ D - v ⁵ D°	1 - 1	14
Mn II	1841.947	100		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ F - v ³ F°	3 - 3	14
Mn II	1842.33	10		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ G - y ⁵ G°	4 - 4	14
Mn II	1842.49	1		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ G - y ⁵ G°	3 - 4	14
Mn II	1842.863	50		3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ⁵ D - z ⁵ P°	2 - 2	14
Mn II	1843.117	20		3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ⁵ D - z ⁵ P°	0 - 1	14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1843.505	100		$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3F^\circ$	4-4	I4
Mn II	1843.78	1	98	$3d^44s^2 -$	$c^5D - v^5D^\circ$	3-4	I4
Mn II	1843.94	20		$3d^6 - 3d^5(b^7r)4p$	$a^3D - u^3D^\circ$	3-3	I4
Mn II	1844.027	6	98	$3d^44s^2 -$	$c^5D - v^5D^\circ$? 2-2	C20,14
Mn II	1844.086	50		$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3F^\circ$	2-2	I4
Mn II	1844.794	20					I4
Mn II	1845.29	30		$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - y^3G^\circ$	3-3	I4
Mn II	1845.51	40		$3d^5(a^4P)4s - 3d^44s(a^4D)4p$	$b^3P - w^3P^\circ$	2-1	I4
Mn II	1846.66	10		$3d^6 - 3d^5(a^2G)4p$	$b^3G - v^3G^\circ$	4-5	I4
Mn II	1846.78	4		$3d^44s^2 -$	$c^5D - u^5F^\circ$	0-1	I4
Mn II	1846.93	10		$3d^6 - 3d^5(a^4P)4p$	$a^3D - z^3P^\circ$	1-2	I4
Mn II	1847.73	150		$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^\circ$	6-6	I4
Mn II	1848.16	10	97	$3d^44s^2 -$	$c^5D - u^5F^\circ$	1-2	I4
Mn II	1848.26	40	98	$3d^44s^2 -$	$c^5D - v^5D^\circ$	3-3	I4
Mn II	1848.52	2		$3d^6 - 3d^5(a^4F)4p$	$a^3F - v^3F^\circ$	3-4	I4
Mn II	1849.94	3	97	$3d^44s^2 -$	$c^5D - u^5F^\circ$	1-1	I4
Mn II	1850.00	20		$3d^5(a^4D)4s - 3d^5(a^2S)4p$	$b^3D - v^3P^\circ$	2-1	I4
Mn II	1850.43	3		$3d^5(a^4D)4s - 3d^5(a^2S)4p$	$b^3D - v^3P^\circ$	1-1	I4
Mn II	1850.60	1	96	$3d^44s^2 -$	$c^5D - t^5P^\circ$	1-2	I4
Mn II	1850.88	100		$3d^6 - 3d^5(a^2H)4p$	$a^3F - w^3G^\circ$	4-5	I4
Mn II	1851.44	60		$3d^6 - 3d^5(a^2H)4p$	$a^3F - w^3G^\circ$	3-4	I4
Mn II	1851.61	10b	97	$3d^44s^2 -$	$c^5D - u^5F^\circ$	2-3	I4
Mn II	1851.61	10b	96	$3d^44s^2 -$	$c^5D - t^5P^\circ$	3-3	I4
Mn II	1852.11	10		$3d^5(b^4F)4s - 3d^44s(b^4D)4p$	$d^3F - v^3F^\circ$? 2-2	I4
Mn II	1852.78	60	98	$3d^44s^2 -$	$c^5D - v^5D^\circ$	3-2	I4
Mn II	1853.05	2		$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^\circ$	5-6	I4
Mn II	1853.272	300	12	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^\circ$	4-3	I4
Mn II	1854.24	2	97	$3d^44s^2 -$	$c^5D - u^5F^\circ$	2-2	I4
Mn II	1854.89	40	98	$3d^44s^2 -$	$c^5D - v^5D^\circ$	4-4	I4
Mn II	1855.14	8		$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^\circ$	6-5	I4
Mn II	1855.54	8		$3d^5(a^4D)4s - 3d^5(a^2S)4p$	$b^3D - v^3P^\circ$	1-0	I4
Mn II	1855.947	5h	96	$3d^44s^2 -$	$c^5D - t^5P^\circ$	0-1	I4
Mn II	1856.70	12	96	$3d^44s^2 -$	$c^5D - t^5P^\circ$	2-2	I4
Mn II	1857.01	30h		$3d^44s^2 -$	$c^5D - u^5F^\circ$	3-4	I4
Mn II	1857.923	200	12	$3d^5 - 3d^5(a^4P)4p$	$a^5D - y^5P^\circ$	3-2	I4
Mn II	1859.11	10h	96	$3d^44s^2 -$	$c^5D - t^5P^\circ$	1-1	I4
Mn II	1859.44	8		$3d^44s^2 -$	$c^5D - v^5D^\circ$	4-3	I4
Mn II	1860.42	3	97	$3d^44s^2 -$	$c^5D - u^5F^\circ$	3-3	I4
Mn II	1860.51	100		$3d^5 - 3d^5(a^2G)4p$	$a^3H - x^3H^\circ$	5-5	I4
Mn II	1861.44	1		$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^3G - y^3I^\circ$	5-6	I4
Mn II	1861.667	100	12	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^\circ$	2-1	I4
Mn II	1862.515	80	12	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^\circ$	3-3	I4
Mn II	1862.80	20h	96	$3d^44s^2 -$	$c^5D - t^5P^\circ$	4-3	I4
Mn II	1863.48	20		$3d^5(a^4D)4s - 3d^5(a^2G)4p$	$b^3D - y^3G^\circ$? 4-4	I4
Mn II	1864.400	80	12	$3d^5 - 3d^5(a^4P)4p$	$a^5D - y^5P^\circ$	2-2	I4
Mn II	1864.615	40	97	$3d^44s^2 -$	$c^5D - u^5F^\circ$	4-5	I4
Mn II	1865.16	5		$3d^6 - 3d^5(a^2H)4p$	$a^3G - w^3I^\circ$	4-4	I4
Mn II	1865.30	2h	96	$3d^44s^2 -$	$c^5D - t^5P^\circ$	2-1	I4
Mn II	1865.52	10h	96	$3d^44s^2 -$	$c^5D - t^5P^\circ$	3-2	I4
Mn II	1865.832	150	12	$3d^6 - 3d^5(a^4F)4p$	$a^5D - y^5P^\circ$	1-1	I4
Mn II	1866.25	1		$3d^5 - 3d^5(a^2D)4p$	$a^3P - z^3P^\circ$	1-1	I4
Mn II	1867.880	80	12	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^\circ$	0-1	I4
Mn II	1868.33	0	97	$3d^44s^2 -$	$c^5D - u^5F^\circ$	4-4	I4
Mn II	1868.58	20	12	$3d^6 - 3d^5(a^4P)4p$	$a^5D - y^5P^\circ$	1-2	I4
Mn II	1868.78	40		$3d^6 - 3d^5(a^2G)4p$	$a^3H - x^3H^\circ$	4-4	I4
Mn II	1869.03	15	12	$3d^5 - 3d^5(a^4P)4p$	$a^5D - y^5P^\circ$	2-3	I4
Mn II	1869.55	1		$3d^5(a^4P)4s - 3d^44s(a^5D)4p$	$a^5P - v^7P^\circ$? 3-3	I4
Mn II	1871.39	20		$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3H^\circ$	5-6	I4
Mn II	1873.07	40		$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3G^\circ$	6-5	I4
Mn II	1875.59	30		$3d^6 - 3d^5(a^4G)4p$	$a^3D - z^3H^\circ$	3-4	I4
Mn II	1876.11	1		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^3G - y^3I^\circ$	5-4	I4
Mn II	1877.16	30		$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^3F^\circ$	3-4	I4
Mn II	1878.52	3h		$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3G^\circ$	5-5	I4
Mn II	1879.09	5		$3d^6 - 3d^5(a^4G)4p$	$a^3D - z^3F^\circ$	3-3	I4
Mn II	1879.66	1		$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^\circ$	2-2	I4

Element	Wavelength	Intensity	Multiplicity	Configuration	Term	J - J	References
Mn II	1879.85	40		$3d^6 - 3d^5(a^4F)4p$	$a^3I - x^3G^\circ$	5 - 4	I4
Mn II	1881.90	30		$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3G^\circ$	4 - 3	I4
Mn II	1883.78	10		$3d^6 - 3d^5(a^2H)4p$	$b^2G - w^2H^\circ$	4 - 5	I4
Mn II	1883.98	10		$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3G^\circ$	4 - 4	I4
Mn II	1885.05	1		$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3F^\circ$	2 - 2	I4
Mn II	1885.70	20					
Mn II	1887.31	2		$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	2 - 3	I4
Mn II	1887.87	10	11	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	2 - 2	I4
Mn II	1889.05	20		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	4 - 4	I4
Mn II	1889.88	8		$3d^6 - 3d^5(a^2H)4p$	$b^2G - w^2H^\circ$	3 - 4	I4
Mn II	1889.88	8		$3d^6 - 3d^5(a^2G)4p$	$a^3F - x^3H^\circ$	4 - 5	I4
Mn II	1890.17	5					
Mn II	1891.18	8		$3d^6 - 3d^5(a^4F)4p$	$a^3P - x^5D^\circ$	2 - 1	I4
Mn II	1891.55	30h		$3d^5(a^4D)4s - 3d^5(a^2H)4p$	$b^3D - w^3G^\circ$	2 - 3	I4
Mn II	1892.02	50		$3d^6 - 3d^5(a^4F)4p$	$a^3P - x^5D^\circ$	2 - 2	I4
Mn II	1892.40	10		$3d^6 - 3d^5(a^2G)4p$	$b^2G - u^3F^\circ$	3 - 2	I4
Mn II	1892.40	10		$3d^6 - 3d^5(a^4F)4p$	$a^3P - x^5D^\circ$	2 - 3	I4
Mn II	1893.288	50					
Mn II	1893.49	30		$3d^6 - 3d^5(a^2G)4p$	$b^2G - u^3F^\circ$	5 - 4	I4
Mn II	1893.70	50		$3d^5(a^4G)4s - 3d^5(a^2F)4p$	$a^2G - y^1F^\circ$	4 - 3	I4
Mn II	1894.19	0		$3d^6 - 3d^5(a^2G)4p$	$b^2G - u^3F^\circ$	4 - 3	I4
Mn II	1897.06	20		$3d^5(a^4P)4s - 3d^5(a^4F)4p$	$a^3P - x^5D^\circ$	2 - 3	I4
Mn II	1897.06	20		$3d^6 - 3d^5(a^2G)4p$	$b^2G - u^3F^\circ$	3 - 3	I4
Mn II	1897.48	100					
Mn II	1898.12	30		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	3 - 4	I4
Mn II	1898.64	30		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	4 - 3	I4
Mn II	1899.51	10		$3d^6 - 3d^5(a^2G)4p$	$b^2G - u^3F^\circ$	4 - 4	I4
Mn II	1902.04	10		$3d^6 - 3d^5(a^4G)4p$	$a^3F - x^3H^\circ$	3 - 4	I4
Mn II	1902.04	10		$3d^6 - 3d^5(a^2G)4p$	$b^2G - u^3F^\circ$	3 - 4	I4
Mn II	1902.948	500					
Mn II	1906.37	20		$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^\circ$	2 - 3	I4
Mn II	1907.49	20		$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^2G - w^3G^\circ$	3 - 3	I4
Mn II	1907.84C	200	11	$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^2G - w^3G^\circ$	4 - 4	I4
Mn II	1908.47	20		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	3 - 3	I4
Mn II	1908.47	20		$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^3G^\circ$	4 - 5	I4
Mn II	1908.54	20					
Mn II	1908.91	100		$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$a^2G - w^3G^\circ$	5 - 5	I4
Mn II	1909.830	60	10	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^\circ$	1 - 2	I4
Mn II	1911.41	300	10	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	4 - 3	I4
Mn II	1911.76	2h	11	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	4 - 4	I4
Mn II	1911.76	2h	11	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	3 - 2	I4
Mn II	1912.15	1					
Mn II	1912.96	30		$3d^5(a^2F)4s - 3d^5(b^2D)4p$	$b^1F - u^1F^\circ$	3 - 3	I4
Mn II	1913.73	20		$3d^5(a^4D)4s - 3d^5(b^2F)4p$	$b^3D - u^3D^\circ$	3 - 3	I4
Mn II	1914.68	200d	11	$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^\circ$	1 - 1	I4
Mn II	1915.10	1000	10	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	2 - 3	I4
Mn II	1915.10	1000	10	$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	4 - 5	I4
Mn II	1915.21	20					
Mn II	1916.34	0		$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^3G^\circ$	3 - 4	I4
Mn II	1916.71	30		$3d^6 - 3d^44s4p$	$c^1G - u^3H^\circ$	4 - 4	I4
Mn II	1917.38	3		$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^3G^\circ$	2 - 3	I4
Mn II	1917.61	100		$3d^6 - 3d^5(a^4F)4p$	$a^3P - x^5D^\circ$	1 - 0	I4
Mn II	1917.61	100		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5S^\circ$	2 - 2	I4
Mn II	1918.643	200	11				
Mn II	1918.909	30	11	$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	2 - 2	I4
Mn II	1919.639	300		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	2 - 1	I4
Mn II	1920.03	100		$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	3 - 3	I4
Mn II	1920.95	2		$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	3 - 2	I4
Mn II	1920.95	2		$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - u^5P^\circ$	2 - 3	I4
Mn II	1921.250	800					
Mn II	1922.031	100		$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	3 - 4	I4
Mn II	1923.07	200		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5S^\circ$	1 - 2	I4
Mn II	1923.34	200		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	1 - 2	I4
Mn II	1924.96	5		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	1 - 1	I4
Mn II	1924.96	5		$3d^6 - 3d^5(b^2F)4p$	$a^5D - t^3F^\circ$	3 - 4	I4
Mn II	1925.17	5					
Mn II	1925.52	300		$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3D^\circ$	2 - 2	I4
Mn II	1925.728	1h		$3d^6 - 3d^5(a^4P)4p$	$a^5D - z^5D^\circ$	0 - 1	I4
Mn II	1926.167	40		$3d^5(a^4G)4s - 3d^5(a^2D)4p$	$a^5G - x^3F^\circ$	4 - 3	I4
Mn II	1926.585	500		$3d^6 - 3d^5(a^2F)4p$	$a^3P - w^3D^\circ$	0 - 1	I4
Mn II	1926.585	500		$3d^6 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	2 - 3	I4
Mn II	1926.948	50					
Mn II	1927.33	10		$3d^5 - 3d^5(a^4G)4p$	$a^5D - z^5F^\circ$	2 - 2	I4
Mn II	1928.15	40		$3d^5(a^2G)4s - 3d^44s(b^4D)4p$	$c^3G - t^3D^\circ$	4 - 3	I4
Mn II	1930.06	3h	95	$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3D^\circ$	2 - 1	I4
Mn II	1930.45	30		$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - u^5P^\circ$	1 - 2	I4
Mn II	1930.45	30		$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - u^5P^\circ$	3 - 3	I4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1931.404	300		$3d^6 - 3d^6(a^4G)4p$	$a^5D - z^5F^o$	1 - 2	14
Mn II	1932.27	10		$3d^6 - 3d^6(a^4F)4p$	$a^3P - x^5D^o$	0 - 1	14
Mn II	1932.600	20		$3d^6 - 3d^6(a^4G)4p$	$a^5D - z^5F^o$	1 - 1	14
Mn II	1933.32	15		$3d^6 - 3d^6(b^3F)4p$	$a^3D - t^3F^o$	2 - 3	14
Mn II	1933.93	80b		$3d^6 - 3d^6(b^3F)4p$	$a^3D - t^3F^o$	1 - 2	14
Mn II	1933.93	80b		$3d^6 - 3d^6(a^2F)4p$	$a^3H - y^3G^o$	6 - 5	14
Mn II	1934.78	20h		$3d^6 - 3d^6(a^4G)4p$	$a^5D - z^5F^o$	0 - 1	14
Mn II	1935.068	100		$3d^6(a^4F)4s - 3d^44s(a^6D)4p$	$a^5F - w^5D^o$	5 - 4	14
Mn II	1935.384	20		$3d^6(a^4F)4s - 3d^44s(a^6D)4p$	$a^5F - w^5D^o$	4 - 4	14
Mn II	1936.089	1		$3d^6(a^2D)4s - 3d^44s(a^6D)4p$	$c^3D - w^5D^o$	2 - 3	14
Mn II	1936.74	10	95	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - u^5P^o$	0 - 1	14
Mn II	1937.28	2		$3d^6 - 3d^6(a^4F)4p$	$a^3H - y^3G^o$	6 - 6	14
Mn II	1937.46	15		$3d^6 - 3d^6(b^3F)4p$	$a^3D - x^3G^o$	3 - 4	14
Mn II	1938.20	20		$3d^6(a^2D)4s - 3d^44s(a^6D)4p$	$c^3D - w^5D^o$	3 - 3	14
Mn II	1938.27	10		$3d^6 - 3d^6(a^2F)4p$	$a^3H - y^3G^o$	4 - 3	14
Mn II	1938.92	1		$3d^6(a^4F)4s - 3d^44s(a^6D)4p$	$a^5F - w^5D^o$	1 - 2	14
Mn II	1939.77	1		$3d^6 - 3d^6(a^2F)4p$	$a^3H - y^3G^o$	5 - 5	14
Mn II	1939.96	20		$3d^6(a^2D)4s - 3d^44s(a^6D)4p$	$c^3D - w^5D^o$	2 - 2	14
Mn II	1940.19	8b	95	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - u^5P^o$	1 - 1	14
Mn II	1941.89	20		$3d^6(a^4G)4s - 3d^5(a^2G)4p$	$a^2G - x^2H^o$	5 - 6	14
Mn II	1942.08	20		$3d^5(a^2D)4s - 3d^44s(a^6D)4p$	$c^3D - w^5D^o$	3 - 2	14
Mn II	1942.35	5		$3d^5(a^4F)4s - 3d^44s(a^6D)4p$	$a^5F - w^5D^o$	1 - 1	14
Mn II	1942.65	40	95	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - u^5P^o$	4 - 3	14
Mn II	1943.541	100		$3d^5(a^4F)4s - 3d^44s(a^6D)4p$	$a^5F - w^5D^o$	4 - 3	14
Mn II	1944.16	100	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	1 - 2	14
Mn II	1944.36	20		$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$c^3F - t^3D^o$	4 - 3	14
Mn II	1944.77	40	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	0 - 1	14
Mn II	1945.15	200	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	2 - 3	14
Mn II	1945.83	5		$3d^6 - 3d^6(a^4F)4p$	$b^3G - v^3F^o$	4 - 3	14
Mn II	1946.34	30	95	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - u^5P^o$	3 - 2	14
Mn II	1946.94	20	95	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - u^5P^o$	2 - 1	14
Mn II	1947.932	200	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	3 - 4	14
Mn II	1948.28	10	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	1 - 1	14
Mn II	1948.72	80		$3d^6 - 3d^6(a^2F)4p$	$a^3F - w^3F^o$	4 - 4	14
Mn II	1949.56	10		$3d^5(a^4F)4s - 3d^44s(a^6D)4p$	$a^5F - w^5D^o$	3 - 3	14
Mn II	1950.143	200		$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	2 - 2	14
Mn II	1950.31	30		$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	3 - 3	14
Mn II	1950.69	2		$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$c^3F - t^3D^o$	2 - 2	14
Mn II	1950.922	40	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	2 - 2	14
Mn II	1952.86	2		$3d^6 - 3d^5(a^4F)4p$	$a^3H - x^3F^o$	5 - 5	14
Mn II	1953.23	300	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	4 - 5	14
Mn II	1953.35	3		$3d^5(a^4F)4s - 3d^44s(b^4D)4p$	$c^3F - t^3D^o$	3 - 2	14
Mn II	1953.51	10		$3d^5(a^4F)4s - 3d^44s(a^6D)4p$	$a^5F - w^5D^o$	3 - 2	14
Mn II	1953.90	10		$3d^5(a^4G)4s - 3d^5(a^2G)4p$	$a^2G - x^2H^o$	4 - 5	14
Mn II	1953.98	5		$3d^6 - 3d^5(r^3F)4p$	$a^3F - w^3D^o$	2 - 1	14
Mn II	1954.10	5		$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	2 - 3	14
Mn II	1954.32	30		$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3F^o$	3 - 4	14
Mn II	1954.81	200d	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	3 - 3	14
Mn II	1955.06	1	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	2 - 1	14
Mn II	1957.98	40		$3d^5(b^2D)4s - 3d^44s(b^4D)4p$	$d^3D - s^5F^o$	2 - 2	14
Mn II	1958.58	5h		$3d^6 - 3d^5(a^2F)4p$	$b^3G - y^3F^o$	3 - 3	14
Mn II	1958.932	80		$3d^6 - 3d^5(a^2G)4p$	$a^1G - x^1F^o$	4 - 3	14
Mn II	1959.246	300		$3d^6 - 3d^5(a^2H)4p$	$a^1I - x^1H^o$	6 - 5	14
Mn II	1959.69	5		$3d^6 - 3d^5(a^2D)4p$	$a^3P - x^3P^o$	1 - 0	14
Mn II	1960.27	10		$3d^6 - 3d^5(a^4F)4p$	$a^3F - x^3D^o$	2 - 1	14
Mn II	1960.37	10	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	4 - 4	14
Mn II	1960.67	0	94	$3d^44s^2 - 3d^44s(b^4D)4p$	$c^5D - v^5F^o$	3 - 2	14
Mn II	1960.90	5		$3d^6 - 3d^5(a^4F)4p$	$b^3G - v^3F^o$	5 - 4	14
Mn II	1961.39	20		$3d^6 - 3d^5(a^4F)4p$	$b^3G - v^3F^o$	3 - 2	14
Mn II	1962.80	30		$3d^6 - 3d^5(a^4F)4p$	$b^3G - v^3F^o$	3 - 3	14
Mn II	1964.19	10		$3d^6 - 3d^5(a^2H)4p$	$b^3G - w^3G^o$	5 - 4	14
Mn II	1964.45	80		$3d^6 - 3d^5(a^2F)4p$	$a^3F - w^3D^o$	4 - 3	14
Mn II	1964.70	20		$3d^6 - 3d^5(b^2F)4p$	$a^1G - t^3F^o$	4 - 4	14
Mn II	1965.68	60		$3d^6 - 3d^5(a^2F)4p$	$a^3F - y^3G^o$	4 - 3	14
Mn II	1966.04	20		$3d^6 - 3d^5(a^2D)4p$	$a^3H - x^3D^o$	4 - 3	14

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn II	1966.24	2		$3d^6 - 3d^6(a^2H)4p$	$a^4G - x^1I^{\circ}$	4 - 5	14
Mn II	1967.59	30		$3d^6 - 3d^6(a^2H)4p$	$b^2G - w^2G^{\circ}$	4 - 3	14
Mn II	1969.24	200		$3d^6 - 3d^6(a^2H)4p$	$b^2G - w^2G^{\circ}$	5 - 5	14
Mn II	1969.87	50		$3d^6(a^4G)4s - 3d^6(a^4F)4p$	$a^4G - x^2G^{\circ}$	5 - 5	14
Mn II	1969.95	100		$3d^6 - 3d^6(a^2H)4p$	$b^2G - w^2G^{\circ}$	4 - 4	14
Mn II	1970.16	5		$3d^6 - 3d^6(a^2F)4p$	$a^2F - w^2D^{\circ}$	3 - 3	14
Mn II	1970.947	5		$3d^6 - 3d^6(a^2S)4p$	$a^1D - v^2P^{\circ}$	2 - 1	14
Mn II	1971.22	100		$3d^6 - 3d^6(a^2H)4p$	$b^2G - w^2G^{\circ}$	3 - 3	14
Mn II	1971.71	20		$3d^6 - 3d^6(a^2F)4p$	$a^2F - y^2G^{\circ}$	4 - 5	14
Mn II	1974.10	100b		$3d^6(a^4G)4s - 3d^6(a^4F)4p$	$a^4G - x^2G^{\circ}$	3 - 3	14
Mn II	1974.82	80		$3d^6 - 3d^6(a^2D)4p$	$a^2P - x^2P^{\circ}$	1 - 1	14
Mn II	1975.24	30		$3d^6(a^4G)4s - 3d^6(a^4F)4p$	$a^4G - x^2G^{\circ}$	4 - 4	14
Mn II	1976.002	10		$3d^6(a^2D)4s - 3d^6(a^2D)4p$	$c^2D - w^2D^{\circ}$	1 - 0	14
Mn II	1976.18	2		$3d^6 - 3d^6(a^4F)4p$	$a^2F - y^2G^{\circ}$	4 - 5	14
Mn II	1976.27	2		$3d^6 - 3d^6(a^2F)4p$	$a^2H - z^1G^{\circ}$	5 - 4	14
Mn II	1976.87	40		$3d^6 - 3d^6(a^2F)4p$	$a^2F - y^2G^{\circ}$	4 - 4	14
Mn II	1977.72	40		$3d^6 - 3d^6(b^2F)4p$	$a^1G - x^1G^{\circ}$	4 - 4	14
Mn II	1978.75	20		$3d^6 - 3d^6(a^4F)4p$	$a^2F - x^2F^{\circ}$	4 - 3	14
Mn II	1980.84	2		$3d^6 - 3d^6(a^2F)4p$	$a^2H - z^1G^{\circ}$	4 - 4	14
Mn II	1981.91	10		$3d^6 - 3d^6(a^4F)4p$	$a^2F - x^2F^{\circ}$	4 - 4	14
Mn II	1981.16	20		$3d^6 - 3d^6(a^4F)4p$	$a^2F - x^2F^{\circ}$	2 - 1	14
Mn II	1981.67	20		$3d^6 - 3d^6(a^2D)4p$	$a^2P - x^2P^{\circ}$	1 - 2	14
Mn II	1982.60	10		$3d^6 - 3d^6(a^2F)4p$	$a^2F - y^2G^{\circ}$	3 - 4	14
Mn II	1983.17	60		$3d^6 - 3d^6(a^2D)4p$	$a^2H - z^1F^{\circ}$	4 - 3	14
Mn II	1984.43	20		$3d^6 - 3d^6(a^4F)4p$	$a^2F - x^2F^{\circ}$	3 - 2	14
Mn II	1985.25	2		$3d^6 - 3d^6(a^4F)4p$	$a^2F - x^2F^{\circ}$	4 - 5	14
Mn II	1986.40	20		$3d^6 - 3d^6(a^2G)4p$	$a^1I - v^2G^{\circ}$	6 - 5	14
Mn II	1988.06	30		$3d^6 - 3d^6(a^2D)4p$	$a^2P - x^2P^{\circ}$	0 - 1	14
Mn II	1989.41	50		$3d^6 - 3d^6(a^4F)4p$	$a^2F - y^2G^{\circ}$	4 - 3	14
Mn II	1992.30	20		$3d^6 - 3d^6(a^4G)4p$	$a^2D - z^2G^{\circ}$	4 - 5	14
Mn II	1993.60	1		$3d^6 - 3d^6(a^2G)4p$	$a^1G - v^2G^{\circ}$	4 - 5	14
Mn II	1993.99	10C		$3d^6 - 3d^6(a^2D)4p$	$a^2F - x^2D^{\circ}$	3 - 2	14
Mn II	1994.23	300		$3d^6 - 3d^6(a^2D)4p$	$a^2F - x^2D^{\circ}$	4 - 3	14
Mn II	1995.275	1		$3d^6 - 3d^6(a^4F)4p$	$a^2F - y^2G^{\circ}$	3 - 3	14
Mn II	1997.94	20		$3d^6 - 3d^6(a^2D)4p$	$a^2F - x^2D^{\circ}$	2 - 2	14
Mn IV	1999.92	80		$3d^6 - 3d^6(b^2D)4p$	$c^2P - w^1D^{\circ}$	2 - 2	14

MANGANESE III (Mn^{2+}), Z = 25Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)Ionization Potential 271 550 cm^{-1} ; 33.667 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	594.872	0h		$3d^4(a^5D)4s - 3d^4(a^5D)5f$	$a^5D - y^5H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	C4, G3
Mn III	601.035	5h		$3d^6 - 3d^4(a^5D)5p$	$a^4P - v^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	C4, G3
Mn III	655.804	0		$3d^6 - 3d^4(a^5D)5p$	$a^2F - v^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	Y1
Mn III	658.481	0		$3d^6 - 3d^4(a^5D)5p$	$a^2F - v^4F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	Y1
Mn III?	661.385	0					C4
Mn III	733.298	20		$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$	Y1
Mn III	734.066	10		$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	Y1
Mn III	734.407	0		$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	Y1
Mn III	734.519	0		$3d^5 - 3d^4(b^3F)4p$	$a^4G - v^4F^{\circ}$	$\frac{9}{2} - \frac{3}{2}$	Y1
Mn III	770.997	0		$3d^4(a^5D)4s - 3d^4(a^5D)5p$	$a^5D - y^5I^{\circ}$	$\frac{9}{2} - \frac{11}{2}$	Y1

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	803.447	0		$3d^5 - 3d^4(b^2F)4p$	$a^2D - t^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III?	805.578	2					C4
Mn III	829.635	2		$3d^4(a^2D)4s - 3d^4(a^2D)5p$	$b^4D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C4, G3
Mn III	835.971	40		$3d^5 - 3d^4(b^2F)4p$	$a^2F - v^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	836.994	20		$3d^5 - 3d^4(b^2F)4p$	$a^2F - v^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	837.854	0		$3d^5 - 3d^4(b^2F)4p$	$a^2F - v^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	838.049	0		$3d^5 - 3d^4(b^2F)4p$	$a^2F - v^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	846.475	0		$3d^5 - 3d^4(2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	846.662	0		$3d^5 - 3d^4(2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	847.691	0		$3d^5 - 3d^4(2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	849.175	0		$3d^5 - 3d^4(2D)4p$	$a^4G - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	852.691	0		$3d^5 - 3d^4(a^1G)4p$	$a^4G - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	865.276	0		$3d^5 - 3d^4(a^1F)4p$	$a^2D - u^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	866.471	0		$3d^5 - 3d^4(a^1F)4p$	$a^2F - v^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	870.155	20		$3d^5 - 3d^4(b^2F)4p$	$b^2F - t^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	870.596	10		$3d^5 - 3d^4(b^2F)4p$	$b^2F - t^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	871.851	0		$3d^5 - 3d^4(b^2F)4p$	$b^2F - t^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	872.261	20		$3d^5 - 3d^4(b^2F)4p$	$b^2F - t^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	875.627	0		$3d^5 - 3d^4(a^1F)4p$	$a^2F - u^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	877.561	30		$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	877.777	0		$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	879.466	10		$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	879.642	0		$3d^5 - 3d^4(2D)4p$	$a^2D - x^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	879.693	180		$3d^5 - 3d^4(a^2D)4p$	$ga^2S - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	880.648	0		$3d^5 - 3d^4(a^2G)4p$	$a^4G - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	881.553	0		$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	882.227	0		$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	884.301	0		$3d^5 - 3d^4(a^2G)4p$	$a^4G - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	884.341	200		$3d^5 - 3d^4(a^2D)4p$	$ga^2S - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	884.697	0		$3d^5 - 3d^4(a^2G)4p$	$a^4G - y^4H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	884.978	0		$3d^5 - 3d^4(a^2G)4p$	$a^4G - y^4H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	887.681	0		$3d^5 - 3d^4(2D)4p$	$a^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	889.608	20		$3d^5 - 3d^4(a^1G)4p$	$a^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	892.393	20		$3d^5 - 3d^4(a^2D)4p$	$ga^2S - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	893.786	10	1	$3d^5 - 3d^4(a^2D)4p$	$ga^2S - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	894.586	350		$3d^5 - 3d^4(a^2G)4p$	$a^4G - y^4H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	894.544	8	1	$3d^5 - 3d^4(a^2D)4p$	$ga^2S - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	896.781	40		$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	896.975	120		$3d^5 - 3d^4(a^2G)4p$	$a^4G - x^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	897.714	100		$3d^5 - 3d^4(a^2G)4p$	$a^4G - y^4H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	898.103	0		$3d^5 - 3d^4(a^1F)4p$	$a^2H - v^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	900.286	120		$3d^5 - 3d^4(a^2G)4p$	$a^4G - y^4H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	900.594	80		$3d^5 - 3d^4(2D)4p$	$a^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	902.316	80		$3d^5 - 3d^4(2D)4p$	$a^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	902.502	150		$3d^5 - 3d^4(a^2G)4p$	$a^4G - y^4H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	902.832	60		$3d^5 - 3d^4(2D)4p$	$a^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	903.901	80		$3d^5 - 3d^4(a^1D)4p$	$a^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	908.607	10		$3d^5 - 3d^4(a^1D)4p$	$a^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	908.826	0		$3d^5 - 3d^4(a^2P)4p$	$a^4P - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	909.628	0		$3d^4(a^2P)4s - 3d^4(a^2D)5p$	$b^4P - w^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	914.199	0		$3d^5 - 3d^4(1D)4p$	$a^2I - w^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	915.206	0		$3d^5 - 3d^4(a^1D)4p$	$a^2F - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	916.428	4		$3d^5 - 3d^4(a^2F)4p$	$a^4G - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	916.649	90		$3d^5 - 3d^4(a^2F)4p$	$a^4G - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	917.175	2		$3d^5 - 3d^4(1D)4p$	$a^2I - w^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	917.275	4		$3d^5 - 3d^4(a^2F)4p$	$a^4G - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	917.334	1		$3d^5 - 3d^4(a^2F)4p$	$a^4G - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	917.797	8		$3d^5 - 3d^4(a^2H)4p$	$a^4G - y^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	918.201	0		$3d^5 - 3d^4(a^2H)4p$	$a^4G - y^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	918.43	1		$3d^5 - 3d^4(a^2H)4p$	$a^4G - y^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	918.678	3		$3d^5 - 3d^4(a^2H)4p$	$a^4G - y^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	918.771	0		$3d^5 - 3d^4(a^2H)4p$	$a^4G - y^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	918.849	3		$3d^5 - 3d^4(a^2H)4p$	$a^4G - y^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	919.078	0		$3d^5 - 3d^4(a^1F)4p$	$a^2G - u^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	919.288	0		$3d^5 - 3d^4(a^1F)4p$	$a^2G - u^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1

Mn III

Mn III

Element	Wavelength	Intensity	Multiplic.	Configuration	Term	J - J	References
Mn III	925.974	50		3d ⁵ - 3d ⁴ (³ D)4p	a ² D - r ² D°	½ - ½	Y1
Mn III	926.183	80		3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - z ⁴ S°	½ - ½	Y1
Mn III	928.672	150		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ P - x ⁴ D°	½ - ½	Y1
Me III	928.886	250		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ P - x ⁴ D°	½ - ½	Y1
Mn III	933.555	20		3d ⁵ - 3d ⁴ (³ D)4p	a ² D - x ² F°	½ - ½	Y1
Mn III	934.594	10		3d ⁵ - 3d ⁴ (³ D)4p	a ² D - x ² F°	½ - ½	Y1
Mn III	934.950	20		3d ⁵ - 3d ⁴ (a ³ F)4p	b ² F - v ² G°	½ - ½	Y1
Mn III	935.36	1		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ G - z ⁴ G°	½ - ½	G3
Mn III	935.563	0		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ G - z ⁴ G°	½ - ½	Y1
Mn III	939.396	40		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ G - z ⁴ G°	½ - ½	Y1
Mn III	939.543	70		3d ⁵ - 3d ⁴ (³ D)4p	a ² F - x ² D°	½ - ½	Y1
Mn III	939.618	50		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ G - z ⁴ G°	½ - ½	Y1
Mn III	940.650	0		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - y ⁴ D°	½ - ½	Y1
Mn III	940.922	0		3d ⁵ - 3d ⁴ (¹ D)4p	a ² I - z ² K°	½ - ½	G3
Mn III	942.794	50		3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - y ⁴ P°	½ - ½	Y1
Mn III	942.903	50		3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ D - x ⁴ F°	½ - ½	Y1
Mn III	943.052	150		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ G - z ⁴ G°	½ - ½	Y1
Mn III	943.347	6		3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ D - x ⁴ F°	½ - ½	G3
Mn III	943.565	3		3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ D - x ⁴ F°	½ - ½	G3
Mn III	943.796	2		3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ D - x ⁴ F°	½ - ½	G3
Mn III	944.573	80		3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ D - x ⁴ F°	½ - ½	Y1
Mn III	944.746	30		3d ⁵ - 3d ⁴ (a ³ G)4p	a ⁴ D - x ⁴ F°	½ - ½	Y1
Mn III	944.862	0		3d ⁵ - 3d ⁴ (¹ I)4p	a ² I - z ² K°	½ - ½	G3
Mn III	944.906	1		3d ⁵ - 3d ⁴ (¹ I)4p	a ² I - z ² K°	½ - ½	G3
Mn III	945.124	0		3d ⁵ - 3d ⁴ (a ³ F)4p	b ² F - u ² F°	½ - ½	Y1
Mn III	945.632	200		3d ⁵ - 3d ⁴ (³ D)4p	a ² F - x ² F°	½ - ½	Y1
Mn III	946.050	3		3d ⁵ - 3d ⁴ (¹ G)4p	a ² I - x ² H°	½ - ½	G3
Mn III	946.802	120		3d ⁵ - 3d ⁴ (a ³ F)4p	b ² F - u ² F°	½ - ½	Y1
Mn III	947.156	30		3d ⁵ - 3d ⁴ (a ³ P)4p	z ⁴ P - z ⁴ P°	½ - ½	Y1
Mn III	949.235	2		3d ⁵ - 3d ⁴ (¹ G)4p	a ² I - x ² H°	½ - ½	G3
Mn III	949.741	0		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - z ⁴ F°	½ - ½	G3
Mn III	950.114	20		3d ⁵ - 3d ⁴ (³ D)4p	a ² F - x ² F°	½ - ½	Y1
Mn III	951.140	5		3d ⁵ - 3d ⁴ (¹ I)4p	a ² I - y ² I°	½ - ½	G3
Mn III	951.630	3		3d ⁵ - 3d ⁴ (¹ I)4p	a ² I - y ² I°	½ - ½	G3
Mn III	953.309	0		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - z ⁴ F°	½ - ½	G3
Mn III	956.061	3		3d ⁵ - 3d ⁴ (a ³ H)4p	a ⁴ G - z ⁴ H°	½ - ½	G3
Mn III	956.316	0		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - x ⁴ D°	½ - ½	Y1
Mn III	956.906	80		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - x ⁴ D°	½ - ½	Y1
Mn III	957.488	20		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - x ⁴ D°	½ - ½	Y1
Mn III	957.748	180		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - x ⁴ D°	½ - ½	Y1
Mn III	958.387	0		3d ⁵ - 3d ⁴ (b ² F)4p	b ² D - t ² F°	½ - ½	Y1
Mn III	958.794	0		3d ⁵ - 3d ⁴ (a ³ H)4p	a ⁴ G - z ⁴ H°	½ - ½	Y1
Mn III	959.021	2		3d ⁵ - 3d ⁴ (a ³ H)4p	a ⁴ G - z ⁴ H°	½ - ½	G3
Mn III	959.468	0		3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - y ⁴ D°	½ - ½	Y1
Mn III	959.866	10		3d ⁵ - 3d ⁴ (a ³ G)4p	a ² F - w ² G°	½ - ½	Y1
Mn III	960.611	10		3d ⁵ - 3d ⁴ (b ² F)4p	b ² D - t ² F°	½ - ½	Y1
Mn III	961.209	0		3d ⁵ - 3d ⁴ (a ³ H)4p	a ⁴ G - z ⁴ H°	½ - ½	G3
Mn III	962.71	0		3d ⁵ - 3d ⁴ (a ³ H)4p	a ⁴ G - z ⁴ H°	½ - ½	G3
Mn III	963.353	1		3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - y ⁴ D°	½ - ½	G3
Mn III	964.208	0		3d ⁵ - 3d ⁴ (a ³ D)4p	a ⁴ D - y ⁴ D°	½ - ½	Y1
Mn III	966.361	0		3d ⁵ - 3d ⁴ (a ³ G)4p	a ² D - x ² F°	½ - ½	Y1
Mn III	968.951	0		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - z ⁴ D°	½ - ½	Y1
Mn III	969.478	10		3d ⁵ - 3d ⁴ (a ³ G)4p	a ² D - x ² F°	½ - ½	Y1
Mn III	969.661	120		3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - y ⁴ D°	½ - ½	Y1
Mn III	971.903	60		3d ⁵ - 3d ⁴ (a ³ G)4p	a ² D - x ² F°	½ - ½	Y1
Mn III	973.386	0		3d ⁵ - 3d ⁴ (a ³ F)4p	a ⁴ D - z ⁴ D°	½ - ½	Y1
Mn III	975.284	0		3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - y ⁴ D°	½ - ½	Y1
Mn III	975.665	80		3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - y ⁴ D°	½ - ½	Y1
Mn III	975.934	30		3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - y ⁴ D°	½ - ½	Y1
Mn III	979.636	40		3d ⁵ - 3d ⁴ (a ³ P)4p	a ⁴ P - y ⁴ D°	½ - ½	Y1
Mn III	979.963	500		3d ⁵ - 3d ⁴ (¹ I)4p	a ² H - w ² H°	½ - ½	Y1
Mn III	981.462	0		3d ⁵ - 3d ⁴ (¹ I)4p	a ² H - w ² H°	½ - ½	Y1
Mn III	983.369	20		3d ⁵ - 3d ⁴ (¹ I)4p	a ² H - w ² H°	½ - ½	Y1
Mn III	984.123	450		3d ⁵ - 3d ⁴ (a ³ G)4p	a ² F - x ² F°	½ - ½	Y1
Mn III	984.572	0		3d ⁵ - 3d ⁴ (³ D)4p	a ² F - w ² F°	½ - ½	Y1

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	984.883	600		$3d^5 - 3d^4(1I)4p$	$a^3H - w^3H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	Y1
Mn III	984.904	6		$3d^4(a^3D)4p - 3d^4(a^3D)5d$	$z^4F^{\circ} - h^4G$	$\frac{3}{2} - \frac{1}{2}$	G3
Mn III	984.982	5		$3d^4(a^3D)4p - 3d^4(a^3D)5d$	$z^4F^{\circ} - h^4G$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	984.988	750		$3d^5 - 3d^4(a^1G)4p$	$a^2F - x^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	985.974	2		$3d^4(a^3D)4p - 3d^4(a^3D)5d$	$z^4F^{\circ} - h^4G$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	986.239	0		$3d^4(a^3D)4p - 3d^4(a^3D)5d$	$z^4F^{\circ} - h^4G$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	986.322	60		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	987.994	0		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	989.414	0		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	990.065	10		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	991.942	350		$3d^5 - 3d^4(a^1D)4p$	$b^3F - w^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	992.868	80		$3d^5 - 3d^4(1I)4p$	$a^2G - w^3H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	993.212	120		$3d^5 - 3d^4(a^2G)4p$	$a^2I - y^3I^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	Y1
Mn III	993.789	150		$3d^5 - 3d^4(a^1D)4p$	$b^3F - w^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	994.470	400		$3d^5 - 3d^4(a^2G)4p$	$a^2F - x^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	995.122	50		$3d^5 - 3d^4(a^2G)4p$	$a^2F - x^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	996.510	80		$3d^5 - 3d^4(3D)4p$	$a^2G - x^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	997.995	70		$3d^5 - 3d^4(1I)4p$	$a^2G - w^3H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	Y1
Mn III	998.818	700		$3d^5 - 3d^4(a^1G)4p$	$a^3H - w^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	Y1
Mn III	999.236	600		$3d^5 - 3d^4(a^1G)4p$	$a^3H - w^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1000.091	40		$3d^5 - 3d^4(a^2G)4p$	$a^2F - x^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1002.779	100		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1002.578	0		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1003.940	30		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1004.605	0		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1005.244	10		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1005.501	0		$3d^5 - 3d^4(3D)4p$	$a^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1008.437	10		$3d^5 - 3d^4(a^2G)4p$	$a^2D - y^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1012.324	500		$3d^5 - 3d^4(a^1G)4p$	$a^2G - w^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1012.662	100		$3d^5 - 3d^4(a^1G)4p$	$a^2G - w^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1012.844	1		$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	G3
Mn III	1014.836	180		$3d^5 - 3d^4(a^3D)4p$	$b^3F - x^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1016.518	60		$3d^5 - 3d^4(a^2G)4p$	$a^2D - y^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1017.674	2		$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2H^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G3
Mn III	1018.239	300		$3d^5 - 3d^4(1G)4p$	$a^3H - x^3H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	Y1
Mn III	1018.605	250		$3d^5 - 3d^4(3D)4p$	$b^3F - x^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1020.049	350		$3d^5 - 3d^4(a^3P)4p$	$a^2D - y^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1020.337	300		$3d^5 - 3d^4(1G)4p$	$a^3H - x^3H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1022.536	150		$3d^5 - 3d^4(1I)4p$	$a^2H - y^3I^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	Y1
Mn III	1023.502	40		$3d^5 - 3d^4(a^3P)4p$	$z^3D - y^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1023.797	0		$3d^4(a^2G)4s - 3d^4(a^3D)5p$	$c^2G - y^6F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	Y1
Mn III	1024.717	80		$3d^5 - 3d^4(1I)4p$	$a^2H - y^3I^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	Y1
Mn III	1024.950	10		$3d^5 - 3d^4(3D)4p$	$b^3F - x^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1026.130	150		$3d^5 - 3d^4(a^3P)4p$	$a^2D - y^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1027.063	20		$3d^5 - 3d^4(a^2F)4p$	$a^2F - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1027.495	0		$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2I^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1027.791	20		$3d^5 - 3d^4(3D)4p$	$b^3F - x^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1028.367	0		$3d^5 - 3d^4(a^3H)4p$	$a^2I - z^2I^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	G3
Mn III	1028.754	650		$3d^5 - 3d^4(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	Y1
Mn III	1029.627	300		$3d^5 - 3d^4(a^3P)4p$	$a^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1029.843	0		$3d^5 - 3d^4(a^2G)4p$	$a^2D - x^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1030.973	30		$3d^5 - 3d^4(a^2G)4p$	$a^2D - x^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1031.404	700		$3d^5 - 3d^4(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1032.251	20		$3d^5 - 3d^4(a^1G)4p$	$a^2G - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1034.480	750		$3d^5 - 3d^4(a^3P)4p$	$a^2F - y^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1034.698	1		$3d^5 - 3d^4(a^2G)4p$	$a^2H - x^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1034.917	650		$3d^5 - 3d^4(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1035.392	0		$3d^5 - 3d^4(a^2G)4p$	$a^2H - x^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1035.895	700		$3d^5 - 3d^4(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1036.081	20		$3d^5 - 3d^4(1G)4p$	$a^2G - x^3H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1037.360	0		$3d^5 - 3d^4(a^3F)4p$	$a^4F - y^3G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1037.695	200		$3d^5 - 3d^4(a^3F)4p$	$a^4F - y^3G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1037.746	750		$3d^5 - 3d^4(a^3F)4p$	$a^2D - z^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1038.752	20		$3d^5 - 3d^4(a^2G)4p$	$a^4F - y^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1039.850	250		$3d^5 - 3d^4(a^3P)4p$	$a^2F - y^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	Y1

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Mn III	1040.323	80		3d ⁵ - 3d ⁴ (a ¹ G)4p	a ² G - x ² F ^o	½ - ½	Y1
Mn III	1041.191	180		3d ⁵ - 3d ⁴ (a ² F)4p	a ¹ D - z ² F ^o	½ - ½	Y1
Mn III	1044.610	50		3d ⁵ - 3d ⁴ (a ¹ G)4p	b ² F - w ² G ^o	½ - ½	Y1
Mn III	1044.790	700		3d ⁵ - 3d ⁴ (a ² F)4p	a ² D - z ² F ^o	½ - ½	Y1
Mn III	1045.240	0		3d ⁵ - 3d ⁴ (a ² P)4p	a ⁴ F - y ² D ^o	½ - ½	Y1
Mn III	1045.984	30		3d ⁵ - 3d ⁴ (a ² F)4p	a ⁴ F - y ² D ^o	½ - ½	Y1
Mn III	1046.167	700		3d ⁵ - 3d ⁴ (a ² P)4p	a ² F - y ² D ^o	½ - ½	Y1
Mn III	1046.473	80		3d ⁵ - 3d ⁴ (a ² F)4p	a ² D - x ⁴ D ^o	½ - ½	Y1
Mn III	1048.586	10		3d ⁵ - 3d ⁴ (a ² F)4p	a ² D - x ⁴ D ^o	½ - ½	Y1
Mn III	1049.105	0		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - z ² G ^o	½ - ½	Y1
Mn III	1049.816	650		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - x ² G ^o	½ - ½	Y1
Mn III	1050.122	80		3d ⁵ - 3d ⁴ (a ² F)4p	a ² D - x ⁴ D ^o	½ - ½	Y1
Mn III	1050.354	200		3d ⁵ - 3d ⁴ (a ¹ F)4p	b ² D - u ² F ^o	½ - ½	Y1
Mn III	1050.889	650		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - x ² G ^o	½ - ½	Y1
Mn III	1052.193	100		3d ⁵ - 3d ⁴ (a ¹ F)4p	b ² D - u ² F ^o	½ - ½	Y1
Mn III	1052.431	30		3d ⁵ - 3d ⁴ (a ¹ F)4p	b ² D - u ² F ^o	½ - ½	Y1
Mn III	1052.718	450		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² F ^o	½ - ½	Y1
Mn III	1055.289	80		3d ⁵ - 3d ⁴ (a ² G)4p	a ⁴ F - x ⁴ F ^o	½ - ½	Y1
Mn III	1055.523	350		3d ⁵ - 3d ⁴ (a ² G)4p	a ⁴ F - x ⁴ F ^o	½ - ½	Y1
Mn III	1055.839	G		3d ⁵ - 3d ⁴ (a ² G)4p	a ⁴ F - x ⁴ F ^o	½ - ½	Y1
Mn III	1056.271	30		3d ⁵ - 3d ⁴ (a ² G)4p	a ⁴ F - x ⁴ F ^o	½ - ½	Y1
Mn III	1058.270	120		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² F ^o	½ - ½	Y1
Mn III	1060.565	0		3d ⁵ - 3d ⁴ (a ² F)4p	a ² D - y ² F ^o	½ - ½	Y1
Mn III	1060.760	300		3d ⁵ - 3d ⁴ (a ² F)4p	a ² D - z ² D ^o	½ - ½	Y1
Mn III	1061.383	90		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - x ⁴ D ^o	½ - ½	Y1
Mn III	1061.825	150		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² F ^o	½ - ½	Y1
Mn III	1063.745	20		3d ⁵ - 3d ⁴ (a ² P)4p	a ² D - y ² F ^o	½ - ½	Y1
Mn III	1066.287	10		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - x ⁴ D ^o	½ - ½	Y1
Mn III	1067.049	150		3d ⁵ - 3d ⁴ (a ¹ G)4p	b ² F - x ² F ^o	½ - ½	Y1
Mn III	1067.343	0		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - x ⁴ D ^o	½ - ½	Y1
Mn III	1068.980	450		3d ⁵ - 3d ⁴ (a ² F)4p	a ² D - z ² D ^o	½ - ½	Y1
Mn III	1070.011	450		3d ⁵ - 3d ⁴ (a ² F)4p	a ² H - y ² G ^o	½ - ½	Y1
Mn III	1071.531	700		3d ⁵ - 3d ⁴ (a ² G)4p	a ² H - y ² H ^o	½ - ½	Y1
Mn III	1071.803	700		3d ⁵ - 3d ⁴ (a ² F)4p	a ² H - y ² G ^o	½ - ½	Y1
Mn III	1072.372	120		3d ⁵ - 3d ⁴ (a ² F)4p	a ⁴ F - x ⁴ D ^o	½ - ½	Y1
Mn III	1072.598	400		3d ⁵ - 3d ⁴ (a ² G)4p	a ² H - y ² H ^o	½ - ½	Y1
Mn III	1072.727	50		3d ⁵ - 3d ⁴ (a ² F)4p	a ⁴ F - x ⁴ D ^o	½ - ½	Y1
Mn III	1073.027	30		3d ⁵ - 3d ⁴ (a ² F)4p	a ⁴ F - x ⁴ D ^o	½ - ½	Y1
Mn III	1073.789	800		3d ⁵ - 3d ⁴ (a ² F)4p	a ² H - y ² G ^o	½ - ½	Y1
Mn III	1074.460	80		3d ⁵ - 3d ⁴ (a ¹ G)4p	b ² F - x ² F ^o	½ - ½	Y1
Mn III	1077.920	250		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - x ² G ^o	½ - ½	Y1
Mn III	1078.572	20		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - x ² G ^o	½ - ½	Y1
Mn III	1080.386	100		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - y ² F ^o	½ - ½	Y1
Mn III	1080.445	100		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - x ² G ^o	½ - ½	Y1
Mn III	1081.636	0		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - x ² G ^o	½ - ½	Y1
Mn III	1082.300	800		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - y ² F ^o	½ - ½	Y1
Mn III	1082.588	650		3d ⁵ - 3d ⁴ (a ² F)4p	a ⁴ F - y ² F ^o	½ - ½	Y1
Mn III	1083.276	1		3d ⁵ - 3d ⁴ (a ² D)4p	a ⁴ P - z ⁴ D ^o	½ - ½	G3
Mn III	1083.795	300		3d ⁵ - 3d ⁴ (a ² F)4p	a ⁴ F - y ² F ^o	½ - ½	Y1
Mn III	1084.485	450		3d ⁵ - 3d ⁴ (a ² H)4p	a ⁴ F - y ² G ^o	½ - ½	Y1
Mn III	1085.423	600		3d ⁵ - 3d ⁴ (a ² H)4p	a ⁴ F - y ² G ^o	½ - ½	Y1
Mn III	1085.772	850		3d ⁵ - 3d ⁴ (a ² D)4p	a ⁴ P - z ⁴ D ^o	½ - ½	Y1
Mn III	1086.533	90		3d ⁵ - 3d ⁴ (a ² H)4p	a ⁴ F - y ² G ^o	½ - ½	Y1
Mn III	1086.688	400		3d ⁵ - 3d ⁴ (a ² H)4p	a ⁴ F - y ² G ^o	½ - ½	Y1
Mn III	1086.751	400		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - y ² H ^o	½ - ½	Y1
Mn III	1087.368	50		3d ⁵ - 3d ⁴ (a ² F)4p	a ² G - y ² G ^o	½ - ½	Y1
Mn III	1087.699	40		3d ⁵ - 3d ⁴ (a ² G)4p	a ² H - y ² H ^o	½ - ½	Y1
Mn III	1087.862	0		3d ⁵ - 3d ⁴ (a ² D)4p	a ⁴ P - z ⁴ D ^o	½ - ½	Y1
Mn III	1088.185	650		3d ⁵ - 3d ⁴ (a ² G)4p	a ² G - y ² H ^o	½ - ½	Y1
Mn III	1088.724	350		3d ⁵ - 3d ⁴ (a ² D)4p	a ⁴ P - z ⁴ D ^o	½ - ½	Y1
Mn III	1088.724	550		3d ⁵ - 3d ⁴ (a ² D)4p	a ⁴ P - z ⁴ D ^o	½ - ½	Y1
Mn III	1089.313	250		3d ⁵ - 3d ⁴ (a ² F)4p	a ² G - y ² G ^o	½ - ½	Y1
Mn III	1089.715	50		3d ⁵ - 3d ⁴ (a ² D)4p	a ⁴ P - z ⁴ D ^o	½ - ½	Y1
Mn III	1090.126	250		3d ⁵ - 3d ⁴ (a ² D)4p	a ⁴ P - z ⁴ D ^o	½ - ½	Y1
Mn III	1091.233	40		3d ⁵ - 3d ⁴ (a ² F)4p	a ² G - y ² G ^o	½ - ½	Y1

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Mn III	1092.002	300		3d ⁵ - 3d ⁴ (a ² G)4p	a ² H - y ⁴ H°	½ - ½	Y1
Mn III	1093.844	70		3d ⁵ - 3d ⁴ (a ² G)4p	a ² H - y ⁴ H°	½ - ½	Y1
Mn III	1094.203	10		3d ⁵ - 3d ⁴ (a ² H)4p	a ² H - z ² H°	½ - ½	Y1
Mn III	1094.773	750		3d ⁵ - 3d ⁴ (a ² H)4p	a ² F - z ² G°	½ - ½	Y1
Mn III	1095.033	750		3d ⁵ - 3d ⁴ (a ² H)4p	a ² H - z ² H°	½ - ½	Y1
Mn III	1097.158	0		3d ⁵ - 3d ⁴ (a ² H)4p	r ² F - z ² G°	½ - ½	Y1
Mn III	1099.858	750		3d ⁵ - 3d ⁴ (a ² H)4p	a ² H - z ² H°	½ - ½	Y1
Mn III	1103.190	650		3d ⁵ - 3d ⁴ (a ² H)4p	a ² F - z ² G°	½ - ½	Y1
Mn III	1107.517	0		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² G°	½ - ½	Y1
Mn III	1107.814	350		3d ⁵ - 3d ⁴ (a ² L)4p	b ² D - w ² D°	½ - ½	Y1
Mn III	1108.164	20	2	3d ⁵ - 3d ⁴ (a ² D)4p	a ² G - z ² F°	½ - ½	G3
Mn III	1108.482	750		3d ⁵ - 3d ⁴ (a ² L)4p	a ² G - z ² F°	½ - ½	Y1
Mn III	1109.673	300		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² G°	½ - ½	Y1
Mn III	1110.508	150		3d ⁵ - 3d ⁴ (a ² L)4p	b ² D - w ² D°	½ - ½	Y1
Mn III	1111.105	10	2	3d ⁵ - 3d ⁴ (a ² L)4p	a ² G - z ² F°	½ - ½	G3
Mn III	1112.284	750		3d ⁵ - 3d ⁴ (a ² H)4p	a ² H - z ² I°	½ - ½	Y1
Mn III	1113.12	5	2	3d ⁵ - 3d ⁴ (a ² D)4p	a ² G - z ² F°	½ - ½	G3
Mn III	1113.193	900		3d ⁵ - 3d ⁴ (a ² H)4p	a ² H - z ² I°	½ - ½	Y1
Mn III	1113.677	20		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² G°	½ - ½	Y1
Mn III	1114.53	1h		3d ⁵ - 3d ⁴ (a ² D)4p	a ² G - z ² F°	½ - ½	G3
Mn III	1115.147	90		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² G°	½ - ½	Y1
Mn III	1116.151	350		3d ⁵ - 3d ⁴ (a ² F)4p	a ² G - z ² F°	½ - ½	Y1
Mn III	1118.068	0		3d ⁵ - 3d ⁴ (a ² F)4p	a ² G - z ² F°	½ - ½	Y1
Mn III	1118.674	80		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² G°	½ - ½	Y1
Mn III	1119.303	300		3d ⁵ - 3d ⁴ (a ² G)4p	b ² F - y ² F°	½ - ½	Y1
Mn III	1120.768	0		3d ⁵ - 3d ⁴ (a ² F)4p	a ² F - z ² G°	½ - ½	Y1
Mn III	1121.413	1		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1122.113	0		3d ⁵ - 3d ⁴ (a ² F)4p	b ² G - v ² G°	½ - ½	Y1
Mn III	1122.397	450		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	Y1
Mn III	1124.109	400		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	Y1
Mn III	1124.333	80		3d ⁵ - 3d ⁴ (a ² G)4p	b ² F - y ² F°	½ - ½	Y1
Mn III	1125.065	0		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1127.093	150		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	Y1
Mn III	1127.314	650		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	Y1
Mn III	1128.577	120		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	Y1
Mn III	1128.825	120		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	Y1
Mn III	1133.613	500		3d ⁵ - 3d ⁴ (a ² P)4p	b ² F - y ² D°	½ - ½	Y1
Mn III	1136.867	80		3d ⁵ - 3d ⁴ (a ² D)4p	b ² D - x ² D°	½ - ½	Y1
Mn III	1137.518	0		3d ⁵ - 3d ⁴ (a ² F)4p	b ² G - u ² F°	½ - ½	Y1
Mn III	1140.396	200		3d ⁵ - 3d ⁴ (a ² P)4p	b ² F - y ² D°	½ - ½	Y1
Mn III	1140.856	0		3d ⁵ - 3d ⁴ (a ² D)4p	b ² D - x ² D°	½ - ½	Y1
Mn III	1141.171	150		3d ⁵ - 3d ⁴ (a ² D)4p	b ² D - x ² D°	½ - ½	Y1
Mn III	1145.744	0		3d ⁵ - 3d ⁴ (a ² H)4p	a ² H - z ² G°	½ - ½	Y1
Mn III	1146.335	30		3d ⁵ - 3d ⁴ (a ² H)4p	a ² H - z ² G°	½ - ½	Y1
Mn III	1149.572	550		3d ⁵ - 3d ⁴ (a ² D)4p	b ² D - x ² F°	½ - ½	Y1
Mn III	1152.716	700		3d ⁵ - 3d ⁴ (a ² D)4p	b ² D - x ² F°	½ - ½	Y1
Mn III	1155.544	300		3d ⁵ - 3d ⁴ (a ² F)4p	b ² F - z ² F°	½ - ½	Y1
Mn III	1159.022	150		3d ⁵ - 3d ⁴ (a ² F)4p	b ² F - z ² F°	½ - ½	Y1
Mn III	1164.019	60		3d ⁵ - 3d ⁴ (a ² H)4p	a ² G - z ² G°	½ - ½	Y1
Mn III	1172.721	20		3d ⁵ - 3d ⁴ (a ² F)4p	a ² G - z ² G°	½ - ½	Y1
Mn III	1174.810	10		3d ⁵ - 3d ⁴ (a ² D)4p	a ² P - z ² D°	½ - ½	G3
Mn III	1177.484	6		3d ⁵ - 3d ⁴ (a ² D)4p	a ² P - z ² D°	½ - ½	G3
Mn III	1178.031	40		3d ⁵ - 3d ⁴ (a ² D)4p	a ² P - z ² D°	½ - ½	Y1
Mn III	1178.51	2		3d ⁵ - 3d ⁴ (a ² D)4p	a ² F - z ² D°	½ - ½	G3
Mn III	1179.467	4		3d ⁵ - 3d ⁴ (a ² D)4p	a ² P - z ² D°	½ - ½	G3
Mn III	1179.85	20	7	3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	G3
Mn III	1182.825	350		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	Y1
Mn III	1183.304	30	4	3d ⁵ - 3d ⁴ (a ² D)4p	a ² P - z ² P°	½ - ½	G3
Mn III	1183.860	25w	7	3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	G3
Mn III	1185.045	0		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	Y1
Mn III	1186.14	10w	7	3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	G3
Mn III	1187.735	250		3d ⁵ - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	Y1
Mn III	1191.730	15	4	3d ⁵ - 3d ⁴ (a ² D)4p	a ² P - z ² F°	½ - ½	G3
Mn III	1192.78	8	4	3d ⁵ - 3d ⁴ (a ² D)4p	a ² P - z ² P°	½ - ½	G3
Mn III	1198.493	30		3d ⁵ - 3d ⁴ (a ² D)4p	a ² P - z ² P°	½ - ½	G3

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zr Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	1198.994	400		$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$	Y1
Mn III	1202.807	0		$3d^5 - 3d^4(a^4G)4p$	$b^2D - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1206.425	20		$3d^4(a^3F)4p - 3d^4(a^5D)6s$	$z^2D^o - g^4D$	$\frac{3}{2} - \frac{7}{2}$	C4, G3
Mn III	1208.476	800		$3d^5 - 3d^4(a^3H)4p$	$b^2F - z^2G^o$	$\frac{3}{2} - \frac{7}{2}$	Y1
Mn III	1210.523	40		$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1211.582	150		$3d^5 - 3d^4(a^5D)4p$	$a^4P - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1211.725	40		$3d^5 - 3d^4(a^4G)4p$	$b^2D - x^2F^o$	$\frac{3}{2} - \frac{7}{2}$	Y1
Mn III	1216.639	20		$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2D^o$	$\frac{7}{2} - \frac{3}{2}$	Y1
Mn III	1219.801	30	6	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2D^o$	$\frac{7}{2} - \frac{3}{2}$	G3
Mn III	1220.940	750		$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1223.83	20w	6	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1225.133	350		$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2D^o$	$\frac{1}{2} - \frac{1}{2}$	Y1
Mn III	1228.972	100	5	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2P^o$	$\frac{7}{2} - \frac{3}{2}$	G3
Mn III	1230.12	20w	5	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1239.24	50w	5	$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1245.673	750		$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2P^o$	$\frac{1}{2} - \frac{1}{2}$	Y1
Mn III	1245.975	700		$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2P^o$	$\frac{3}{2} - \frac{1}{2}$	Y1
Mn III	1249.529	0		$3d^5 - 3d^4(a^5D)4p$	$a^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1252.289	30		$3d^5 - 3d^4(a^5D)4p$	$a^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1255.078	10		$3d^5 - 3d^4(a^5D)4p$	$b^2G - x^2F^o$	$\frac{7}{2} - \frac{3}{2}$	G3
Mn III	1255.21	20		$3d^5 - 3d^4(^1I)4p$	$b^2G - w^2H^o$	$\frac{7}{2} - \frac{3}{2}$	G3
Mn III	1257.885	0		$3d^5 - 3d^4(a^5D)4p$	$a^4D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1258.55	30		$3d^5 - 3d^4(^3D)4p$	$b^2G - x^2F^o$	$\frac{3}{2} - \frac{7}{2}$	G3
Mn III	1260.907	40		$3d^5 - 3d^4(^1I)4p$	$b^2G - w^2H^o$	$\frac{3}{2} - \frac{1}{2}$	G3
Mn III	1269.104	800		$3d^5 - 3d^4(a^2G)4p$	$b^2D - y^2F^o$	$\frac{3}{2} - \frac{7}{2}$	Y1
Mn III	1276.092	700		$3d^5 - 3d^4(a^2G)4p$	$b^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1276.467	50		$3d^5 - 3d^4(a^2G)4p$	$b^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1283.581	500	9	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$	G3
Mn III	1284.058	30	9	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1287.589	400	9	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{7}{2} - \frac{3}{2}$	G3
Mn III	1288.682	50	9	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1291.618	300	9	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1291.714	600	9	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1293.661	200	9	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$	G3
Mn III	1316.091	80		$3d^5 - 3d^4(^1G)4p$	$b^2G - x^2H^o$	$\frac{3}{2} - \frac{1}{2}$	Y1
Mn III	1322.186	40		$3d^5 - 3d^4(^1G)4p$	$b^2G - x^2H^o$	$\frac{7}{2} - \frac{3}{2}$	Y1
Mn III	1346.58	100		$3d^5 - 3d^4(a^2G)4p$	$b^2G - x^2G^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1346.854	50		$3d^5 - 3d^4(a^5D)4p$	$a^2F - z^2F^o$	$\frac{7}{2} - \frac{7}{2}$	Y1
Mn III	1347.087	0		$3d^4(a^5D)4s - 3d^4(^3D)4p$	$b^4D - x^4P^o$	$\frac{3}{2} - \frac{1}{2}$	Y1
Mn III	1347.62	80		$3d^5 - 3d^4(a^2G)4p$	$b^2G - x^2G^o$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1349.782	0		$3d^5 - 3d^4(a^5D)4p$	$a^2F - z^2F^o$	$\frac{7}{2} - \frac{3}{2}$	Y1
Mn III	1352.599	30		$3d^5 - 3d^4(a^3F)4p$	$b^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1353.027	30		$3d^5 - 3d^4(a^3F)4p$	$b^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1355.959	20		$3d^5 - 3d^4(a^5D)4p$	$a^2F - z^2F^o$	$\frac{3}{2} - \frac{7}{2}$	Y1
Mn III	1358.958	40		$3d^5 - 3d^4(a^5D)4p$	$a^2F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1360.718	1000	8	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1361.032	10		$3d^5 - 3d^4(a^5D)4p$	$a^2F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1361.26	1		$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{7}{2} - \frac{3}{2}$	G3
Mn III	1364.65	5	8	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{3}{2} - \frac{7}{2}$	G3
Mn III	1365.199	800	8	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1366.46	4		$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{3}{2} - \frac{7}{2}$	G3
Mn III	1368.20	20	8	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{7}{2} - \frac{3}{2}$	G3
Mn III	1369.430	400	8	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1369.535	700		$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1371.647	300	8	$3d^5 - 3d^4(a^5D)4p$	$a^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1386.833	0		$3d^5 - 3d^4(a^5D)4p$	$a^2D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1394.051	10		$3d^4(a^5D)4s - 3d^4(^3D)4p$	$b^4D - w^4D^o$	$\frac{1}{2} - \frac{1}{2}$	Y1
Mn III	1400.955	40		$3d^4(a^5D)4s - 3d^4(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1405.244	40		$3d^4(a^5D)4s - 3d^4(^3D)4p$	$b^4D - w^4D^o$	$\frac{7}{2} - \frac{7}{2}$	Y1
Mn III	1406.957	0		$3d^5 - 3d^4(a^3F)4p$	$b^2G - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	Y1
Mn III	1408.350	30		$3d^5 - 3d^4(a^2G)4p$	$b^2G - y^2H^o$	$\frac{3}{2} - \frac{1}{2}$	Y1
Mn III	1413.387	0		$3d^5 - 3d^4(a^3F)4p$	$b^2G - y^2G^o$	$\frac{7}{2} - \frac{7}{2}$	Y1
Mn III	1425.05	2h	22	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6S$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1427.238	6	22	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6S$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1430.784	20	22	$3d^4(a^5D)4p - 3d^4(a^5D)4d$	$z^6P^o - e^6S$	$\frac{7}{2} - \frac{3}{2}$	G3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	1446.467	5		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ P)4p	a ⁴ D - y ⁴ D°	3/2 - 1/2	G3
Mn III	1449.07	20		3d ⁵ - 3d ⁴ (a ³ H)4p	b ² G - z ² H°	3/2 - 1/2	G3
Mn III	1458.90	10		3d ⁵ - 3d ⁴ (a ³ H)4p	b ² G - z ² H°	3/2 - 1/2	G3
Mn III	1462.243	60		3d ⁵ - 3d ⁴ (a ³ F)4p	b ² G - z ² F°	3/2 - 1/2	Y1
Mn III	1486.494	300		3d ⁴ (a ³ H)4s - 3d ⁴ (a ¹ F)4p	b ² H - v ² G°	1/2 - 3/2	Y1
Mn III	1489.669	10		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ P)4p	b ⁴ D - y ⁴ D°	3/2 - 3/2	Y1
Mn III	1503.066	5		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ G)4p	b ⁴ D - x ⁴ F°	3/2 - 3/2	G3
Mn III	1512.177	5		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ G)4p	b ⁴ D - x ⁴ F°	3/2 - 3/2	G3
Mn III	1513.635	10		3d ⁴ (a ³ F)4s - 3d ⁴ (a ¹ F)4p	c ² F - v ² G°	3/2 - 1/2	Y1
Mn III	1513.67	1h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ F° - f ⁶ D	1/2 - 1/2	G3
Mn III	1515.34	1		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ F° - f ⁶ D	3/2 - 3/2	G3
Mn III	1516.76	5h	20	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ F° - f ⁶ D	3/2 - 3/2	G3
Mn III	1519.51	5h	20	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ F° - f ⁶ D	3/2 - 3/2	G3
Mn III	1522.577	8h	20	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ F° - f ⁶ D	3/2 - 3/2	G3
Mn III	1526.05	10h	20	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ F° - f ⁶ D	3/2 - 3/2	G3
Mn III	1528.64	2h		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ F)4p	b ⁴ D - z ² F°	3/2 - 3/2	G3
Mn III	1529.40	6h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁴ D	3/2 - 3/2	G3
Mn III	1530.364	30h	20	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ F° - f ⁶ D	1/2 - 3/2	G3
Mn III	1541.15	15h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ F° - f ⁶ D	3/2 - 3/2	G3
Mn III	1541.744	30		3d ⁴ (a ³ F)4s - 3d ⁴ (a ³ F)4p	c ² F - u ² F°	3/2 - 3/2	Y1
Mn III	1544.25	10h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ P° - f ⁶ D	3/2 - 3/2	G3
Mn III	1545.251	20		3d ⁴ (a ³ F)4s - 3d ⁴ (a ¹ F)4p	c ² F - u ² F°	3/2 - 3/2	Y1
Mn III	1546.197	0		3d ⁴ (a ³ F)4s - 3d ⁴ (a ¹ F)4p	c ² F - u ² F°	3/2 - 3/2	Y1
Mn III	1547.45	1h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁴ D	3/2 - 3/2	G3
Mn III	1547.68	1h		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ F)4p	b ⁴ D - x ⁴ D°	3/2 - 3/2	G3
Mn III	1548.371	1w		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ P° - f ⁶ D	3/2 - 3/2	G3
Mn III	1550.20	2h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ P° - f ⁶ D	3/2 - 3/2	G3
Mn III	1555.299	3h		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ F)4p	b ⁴ D - y ⁴ F°	3/2 - 3/2	G3
Mn III	1555.343	0		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ F)4p	b ⁴ D - y ⁴ F°	3/2 - 3/2	Y1
Mn III	1555.40	1		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - f ⁴ G	1/2 - 3/2	G3
Mn III	1556.121	8		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - f ⁴ G	3/2 - 1/2	G3
Mn III	1558.182	5	19	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ F	3/2 - 3/2	G3
Mn III	1558.602	10		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ F	3/2 - 3/2	G3
Mn III	1561.570	20		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ F	3/2 - 3/2	G3
Mn III	1561.681	40		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ I	1/2 - 1/2	Y1
Mn III	1562.033	20		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ I	1/2 - 1/2	Y1
Mn III	1562.212	2h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁴ D	3/2 - 3/2	G3
Mn III	1562.493	0		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ I	3/2 - 1/2	Y1
Mn III	1565.830	30h	19	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ F	3/2 - 3/2	G3
Mn III	1566.198	40		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ H	3/2 - 3/2	Y1
Mn III	1566.762	20		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ H	3/2 - 3/2	Y1
Mn III	1567.772	15h		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ H	1/2 - 1/2	G3
Mn III	1568.325	10	19	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ F	3/2 - 3/2	G3
Mn III	1569.304	0		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ I	1/2 - 1/2	Y1
Mn III	1569.516	0		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ I	3/2 - 3/2	Y1
Mn III	1570.169	0		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ F)4p	b ⁴ D - y ⁴ F°	3/2 - 3/2	Y1
Mn III	1571.06	2h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ D	3/2 - 3/2	G3
Mn III	1571.920	20h		3d ⁴ (a ³ H)4p - 3d ⁴ (a ³ H)4d	z ⁴ H° - e ⁴ H	1/2 - 1/2	G3
Mn III	1575.33	1		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁴ D	3/2 - 3/2	G3
Mn III	1576.924	10		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ P)4p	b ⁴ D - y ⁴ P°	3/2 - 3/2	Y1
Mn III	1577.939	100	19	3d ⁴ (a ³ H)4s - 3d ⁴ (a ³ D)4p	a ⁴ H - x ² F°	3/2 - 3/2	G3
Mn III	1578.467	20		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ D	3/2 - 3/2	G3
Mn III	1579.567	0		3d ⁴ (a ³ G)4s - 3d ⁴ (a ¹ F)4p	c ² G - v ² G°	3/2 - 3/2	Y1
Mn III	1585.714	150		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ P)4p	b ⁴ D - y ⁴ P°	3/2 - 3/2	Y1
Mn III	1591.942	5		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ F	3/2 - 3/2	G3
Mn III	1592.187	5		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ P)4p	b ⁴ D - y ⁴ P°	3/2 - 3/2	G3
Mn III	1593.97	3h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ D° - f ⁶ D	3/2 - 3/2	G3
Mn III	1594.312	5h		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ³ P)4p	b ⁴ D - y ⁴ P°	3/2 - 1/2	G3
Mn III	1595.081	100		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ F	3/2 - 3/2	G3
Mn III	1595.35	80		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁴ F	3/2 - 3/2	G3
Mn III	1596.211	80h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁴ F	3/2 - 3/2	G3
Mn III	1596.948	300		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁴ F	3/2 - 3/2	G3
Mn III	1598.651	50		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ F	3/2 - 3/2	G3
Mn III	1599.50	5		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ F	3/2 - 3/2	G3
Mn III	1600.770	10h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁴ F	3/2 - 3/2	G3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	1601.045	5h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁴ F° - f ⁴ D	½ - ½	G3
Mn III	1601.42	5h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ D° - f ⁶ D	½ - ½	G3
Mn III	1602.17	20	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1602.38	20		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ D	½ - ½	G3
Mn III	1603.203	30h	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G
Mn III	1603.598	2		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ D	½ - ½	G3
Mn III	1604.407	2h		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - f ⁴ G	½ - ½	G3
Mn III	1605.107	4h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁴ F° - f ⁴ D	½ - ½	G3
Mn III	1605.22	3h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ D° - f ⁶ D	½ - ½	G3
Mn III	1605.745	40h	18	3d ⁴ (a ⁵ D)4p - ?J ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	C4, G3
Mn III	1605.67	20	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1606.755	1		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁴ F° - f ⁴ D	½ - ½	G3
Mn III	1607.003	20h		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - f ⁴ G	½ - ½	G3
Mn III	1607.884	30h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ G	½ - ½	G3
Mn III	1608.18	3h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ D° - f ⁶ D	½ - ½	G3
Mn III	1609.62	20h	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1609.172	50h	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1610.05	3h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ D° - f ⁶ D	½ - ½	G3
Mn III	1610.228	20h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ D° - f ⁶ D	½ - ½	G3
Mn III	1612.78	2h		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)5s	z ⁶ D° - f ⁶ D	½ - ½	G3
Mn III	1613.656	20	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1614.144	800	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1617.163	5	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1617.760	200		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ K	½ - ½	G3
Mn III	1618.689	1		3d ⁴ (a ⁵ F)4s - 3d ⁴ (a ⁵ D)4p	b ⁴ F - x ² F°	½ - ½	G3
Mn III	1619.62	40h	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1620.602	1000	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1621.284	1h		3d ⁴ (a ⁵ F)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ G° - f ⁴ G	½ - ½	G3
Mn III	1623.122	10		3d ⁴ (a ⁵ H)4s - 3d ⁴ (a ⁵ G)4p	a ⁴ H - w ² G°	½ - ½	Y1
Mn III	1623.911	300		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ K	½ - ½	G3
Mn III	1626.885	0		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ H	½ - ½	Y1
Mn III	1626.99	6	18	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ F° - e ⁶ G	½ - ½	G3
Mn III	1627.200	3h		3d ⁴ (a ⁵ P)4s - 3d ⁴ (a ⁵ D)4p	b ⁴ P - x ⁴ P°	½ - ½	G3
Mn III	1627.743	20		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ I	½ - ½	Y1
Mn III	1629.117	400		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ K	½ - ½	G3
Mn III	1629.715	0		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ I	½ - ½	Y1
Mn III	1630.362	6		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ I	½ - ½	Y1
Mn III	1630.768	0		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ I	½ - ½	Y1
Mn III	1631.638	0		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ H	½ - ½	Y1
Mn III	1633.51	20h		3d ⁴ (a ⁵ P)4s - 3d ⁴ (a ⁵ D)4p	b ⁴ P - x ⁴ P°	½ - ½	G3
Mn III	1633.800	500		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ K	½ - ½	G3
Mn III	1636.559	3		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ H	½ - ½	G3
Mn III	1637.974	2h		3d ⁴ (a ⁵ H)4p - 3d ⁴ (a ⁵ H)4d	z ⁴ I° - e ⁴ K	½ - ½	G3
Mn III	1642.054	10		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ F	½ - ½	G3
Mn III	1642.78	30	21	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ P	½ - ½	G3
Mn III	1643.702	30h	21	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ P	½ - ½	G3
Mn III	1644.96	10h	21	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ P	½ - ½	G3
Mn III	1645.03	15h		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ⁵ P)4p	b ⁴ D - y ⁴ D°	½ - ½	G3
Mn III	1646.59	2h	21	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ P	½ - ½	G3
Mn III	1647.46	250	21	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ P	½ - ½	G3
Mn III	1647.827	30	21	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ P	½ - ½	G3
Mn III	1648.375	100h	25	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ F	½ - ½	G3
Mn III	1649.50	150w		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁴ F° - e ⁴ D	½ - ½	G3
Mn III	1651.35	80	21	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ P° - e ⁶ P	½ - ½	G3
Mn III	1653.57	400	25	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ F	½ - ½	G3
Mn III	1653.823	50		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ⁵ P)4p	b ⁴ D - y ⁴ D°	½ - ½	G3
Mn III	1656.510	3		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ F	½ - ½	G3
Mn III	1657.20	10		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ F	½ - ½	G3
Mn III	1658.68	6w	25	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ F	½ - ½	G3
Mn III	1659.602	100	24	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ D	½ - ½	G3
Mn III	1662.533	3		3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ F	½ - ½	G3
Mn III	1662.827	0		3d ⁴ (a ⁵ D)4s - 3d ⁴ (a ⁵ P)4p	b ⁴ D - y ⁴ D°	½ - ½	Y1
Mn III	1662.943	0		3d ⁴ (a ⁵ G)4s - 3d ⁴ (a ⁵ F)4p	d ² G - u ² F°	½ - ½	Y1
Mn III	1665.701	15	24	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁶ D	½ - ½	G3
Mn III	1666.255	10h		3d ⁴ (a ⁵ P)4s - 3d ⁴ (a ⁵ D)4p	b ⁴ P - x ⁴ P°	½ - ½	G3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	1667.698	20h	24	3d ⁴ (a ⁵ D)4p - 3d ⁴ (a ⁵ D)4d	z ⁶ D° - e ⁴ D	½ - ½	G3
Mn III	1668.047	1h		3d ⁴ (a ² H)4p - 3d ⁴ (a ² H)4d	y ⁴ G° - f ⁴ G	½ - ½	G3
Mn III	1668.799	0		3d ⁴ (a ² F)4s - 3d ⁴ (a ¹ D)4p	c ² F - w ² D°	½ - ½	Y1
Mn III	1669.032	200		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁴ F° - e ⁴ G	½ - ½	G3
Mn III	1669.404	200		3d ⁴ (a ² H)4p - 3d ⁴ (a ² H)4d	y ⁴ G° - f ⁴ G	½ - ½	G3
Mn III	1669.691	2		3d ⁴ (a ² D)4s - 3d ⁴ (a ² P)4p	b ⁴ D - y ⁴ D°	½ - ½	G3
Mn III	1670.315	3		3d ⁴ (a ² D)4s - 3d ⁴ (a ² P)4p	b ⁴ D - y ⁴ D°	½ - ½	G3
Mn III	1671.015	200		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁴ F° - e ⁴ G	½ - ½	G3
Mn III	1671.474	30		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁶ D° - e ⁴ D	½ - ½	G3
Mn III	1672.009	10		3d ⁴ (a ² H)4s - 3d ⁴ (¹ I)4p	a ⁴ H - z ² K°	½ - ½	G3
Mn III	1672.974	200		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁴ F° - e ⁴ G	½ - ½	G3
Mn III	1674.408	3h		3d ⁴ (a ² P)4s - 3d ⁴ (¹ S)4p	b ² P - x ² P°	½ - ½	G3
Mn III	1675.329	3		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁴ F° - e ⁴ G	½ - ½	G3
Mn III	1675.52	200		3d ⁴ (a ² H)4p - 3d ⁴ (a ² H)4d	y ⁴ G° - f ⁴ G	½ - ½	G3
Mn III	1676.147	3		3d ⁴ (a ² H)4s - 3d ⁴ (¹ I)4p	a ⁴ H - z ² K°	½ - ½	G3
Mn III	1676.95	30		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁴ F° - e ⁴ G	½ - ½	G3
Mn III	1678.08	1h		3d ⁴ (a ² P)4s - 3d ⁴ (² D)4p	b ⁴ P - x ⁴ P°	½ - ½	G3
Mn III	1705.497	3		3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ⁶ D - z ⁴ D°	½ - ½	G3
Mn III	1707.157	2		3d ⁴ (a ² P)4s - 3d ⁴ (¹ S)4p	b ² P - x ² P°	½ - ½	G3
Mn III	1707.995	2		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁶ D° - e ⁴ P	½ - ½	G3
Mn III	1708.804	0		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁶ D° - e ⁴ P	½ - ½	Y1
Mn III	1710.138	2		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁶ D° - e ⁴ P	½ - ½	G3
Mn III	1712.134	1		3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ⁶ D - z ⁴ D°	½ - ½	G3
Mn III	1716.569	5		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁶ D° - e ⁴ P	½ - ½	G3
Mn III	1717.053	3		3d ⁴ (a ² F)4s - 3d ⁴ (² D)4p	b ⁴ F - w ⁴ F°	½ - ½	G3
Mn III	1721.61	2		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - x ² G°	½ - ½	G3
Mn III	1735.073	30		3d ⁴ (a ² F)4s - 3d ⁴ (a ² D)4p	c ² F - x ² D°	½ - ½	Y1
Mn III	1742.15	50w		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁴ F° - e ⁴ D	½ - ½	G3
Mn III	1743.96	3h		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁴ F° - e ⁴ D	½ - ½	G3
Mn III	1744.35	2h		3d ⁴ (a ² F)4s - 3d ⁴ (² D)4p	c ² F - x ² D°	½ - ½	G3
Mn III	1745.625	5		3d ⁴ (a ² F)4s - 3d ⁴ (² D)4p	c ² F - x ² D°	½ - ½	G3
Mn III	1747.38	5		3d ⁴ (a ² F)4p - 3d ⁴ (a ² F)4d	z ⁴ F° - e ⁴ D	½ - ½	G3
Mn III	1748.888	10		3d ⁴ (a ² D)4p - 3d ⁴ (a ² D)4d	z ⁴ F° - e ⁴ D	½ - ½	G3
Mn III	1749.17	1h		3d ⁴ (a ² G)4p - 3d ⁴ (a ² H)4d	y ⁴ H° - f ⁴ G	½ - ½	G3
Mn III	1751.253	0		3d ⁴ (a ² D)4s - 3d ⁴ (a ¹ D)4p	c ⁴ D - w ² D°	½ - ½	Y1
Mn III	1764.841	3		3d ⁴ (a ² F)4s - 3d ⁴ (² D)4p	c ² F - x ² F°	½ - ½	G3
Mn III	1772.824	5		3d ⁴ (a ² F)4s - 3d ⁴ (² D)4p	c ² F - x ² F°	½ - ½	G3
Mn III	1784.394	20		3d ⁴ (a ² H)4s - 3d ⁴ (a ¹ G)4p	b ² H - w ² G°	½ - ½	Y1
Mn III	1792.38	5		3d ⁴ (a ² G)4s - 3d ⁴ (² D)4p	b ⁴ G - w ⁴ F°	½ - ½	G3
Mn III	1793.242	10		3d ⁴ (a ² G)4s - 3d ⁴ (² D)4p	b ⁴ G - w ⁴ F°	½ - ½	G3
Mn III	1793.560	10		3d ⁴ (a ² G)4s - 3d ⁴ (² D)4p	b ⁴ G - w ⁴ F°	½ - ½	G3
Mn III	1794.09	5		3d ⁴ (a ² G)4s - 3d ⁴ (² D)4p	b ⁴ G - w ⁴ F°	½ - ½	G3
Mn III	1796.864	100		3d ⁴ (a ² G)4s - 3d ⁴ (² D)4p	b ⁴ G - w ⁴ F°	½ - ½	G3
Mn III	1797.919	25		3d ⁴ (a ² G)4s - 3d ⁴ (² D)4p	b ⁴ G - w ⁴ F°	½ - ½	G3
Mn III	1798.130	80		3d ⁴ (a ² G)4s - 3d ⁴ (² D)4p	b ⁴ G - w ⁴ F°	½ - ½	G3
Mn III	1798.545	1		3d ⁴ (a ² D)4d - 3d ⁴ (a ² D)5f	e ⁴ G - w ⁶ F°	½ - ½	G3
Mn III	1799.346	2		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - x ⁴ G°	½ - ½	G3
Mn III	1799.56	2		3d ⁴ (a ² D)4d - 3d ⁴ (a ² D)5f	e ⁴ G - w ⁶ F°	½ - ½	G3
Mn III	1802.450	1		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - x ⁴ G°	½ - ½	G3
Mn III	1804.065	400		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - x ⁴ G°	½ - ½	G3
Mn III	1806.473	300		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - x ⁴ G°	½ - ½	G3
Mn III	1807.926	3		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - x ⁴ G°	½ - ½	G3
Mn III	1810.767	200		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - x ⁴ G°	½ - ½	G3
Mn III	1811.025	300		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - x ⁴ G°	½ - ½	G3
Mn III	1819.410	5		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ² F°	½ - ½	G3
Mn III	1823.477	40		3d ⁴ (a ² F)4s - 3d ⁴ (a ¹ G)4p	c ² F - w ² G°	½ - ½	Y1
Mn III	1828.647	40		3d ⁴ (a ² F)4s - 3d ⁴ (a ¹ G)4p	c ² F - w ² G°	½ - ½	Y1
Mn III	1833.019	20		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ² H°	½ - ½	G3
Mn III	1839.01	2		3d ⁴ (a ² H)4s - 3d ⁴ (² D)4p	b ² H - w ⁴ F°	½ - ½	G3
Mn III	1846.001	3		3d ⁴ (a ² G)4s - 3d ⁴ (² D)4p	c ² G - x ² F°	½ - ½	G3
Mn III	1846.278	3		3d ⁴ (a ² G)4s - 3d ⁴ (¹ I)4p	c ² G - w ² H°	½ - ½	G3
Mn III	1847.268	30		3d ⁴ (a ² H)4s - 3d ⁴ (¹ G)4p	b ² H - x ² H°	½ - ½	G3
Mn III	1849.049	15		3d ⁴ (a ² H)4s - 3d ⁴ (¹ G)4p	b ² H - x ² H°	½ - ½	G3
Mn III	1852.579	3		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ G°	½ - ½	G3
Mn III	1853.77	1		3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ⁶ D - z ⁴ F°	½ - ½	G3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	1856.316	3		3d ⁴ (a ² H)4s - 3d ⁴ (¹ I)4p	b ² H - y ² I°	½ - ½	G3
Mn III	1856.580	1		3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	G3
Mn III	1859.46	25		3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	G3
Mn III	1859.65	2		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ G°	½ - ½	G3
Mn III	1863.975	3		3d ⁴ (a ² G)4s - 3d ⁴ (a ² D)4p	c ² G - x ² F°	½ - ½	G3
Mn III	1866.828	5h		3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² F°	½ - ½	G3
Mn III	1869.164	6h		3d ⁴ (a ² G)4s - 3d ⁴ (¹ I)4p	c ² G - w ² H°	½ - ½	G3
Mn III	1877.616	400		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1878.018	2		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - y ⁴ H°	½ - ½	G3
Me III	1880.818	3		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1885.207	300		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1888.438	1		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1890.42	2		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1891.846	200		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1893.485	70		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	c ² F - z ² F°	½ - ½	Y1
Mn III	1896.295	3		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1897.28	1		3d ⁴ (a ² H)4s - 3d ⁴ (a ² H)4p	a ⁴ H - z ⁴ H°	½ - ½	G3
Mn III	1898.301	200		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1899.097	150		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	b ² H - x ² G°	½ - ½	G3
Mn III	1901.754	1		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	a ⁴ H - y ⁴ H°	½ - ½	G3
Mn III	1902.069	100		3d ⁴ (a ² F)4s - 3d ⁴ (¹ G)4p	c ² F - x ² H°	½ - ½	G3
Mn III	1907.83	200b		3d ⁴ (a ² H)4s - 3d ⁴ (a ² G)4p	b ² H - x ² G°	½ - ½	G3
Mn III	1908.670	0		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	c ² G - w ² G°	½ - ½	Y1
Mn III	1910.649	40		3d ⁴ (a ² D)4s - 3d ⁴ (a ² F)4p	c ² D - u ² F°	½ - ½	Y1
Mn III	1915.907	150		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	c ² G - w ² G°	½ - ½	Y1
Mn III	1916.385	20		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	c ² F - x ² F°	½ - ½	Y1
Mn III	1918.198	0		3d ⁴ (a ² G)4s - 3d ⁴ (¹ I)4p	d ² G - w ² H°	½ - ½	Y1
Mn III	1919.162	20		3d ⁴ (a ² D)4s - 3d ⁴ (a ² F)4p	c ² D - u ² F°	½ - ½	Y1
Mn III	1920.065	300		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	c ² G - w ² G°	½ - ½	Y1
Mn III	1920.390	70		3d ⁴ (a ² G)4s - 3d ⁴ (¹ I)4p	d ² G - w ² H°	½ - ½	Y1
Mn III	1924.422	20		3d ⁴ (a ² P)4s - 3d ⁴ (a ² P)4p	b ⁴ P - z ⁴ S°	½ - ½	G3
Mn III	1925.851	20		3d ⁴ (a ² G)4s - 3d ⁴ (¹ D)4p	d ² G - x ² F°	½ - ½	Y1
Mn III	1927.337	6		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	c ² G - w ² G°	½ - ½	Y1
Mn III	1927.889	80		3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	d ² D - w ² D°	½ - ½	Y1
Mn III	1928.479	1w		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ F°	½ - ½	G3
Mn III	1928.925	2		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ F°	½ - ½	G3
Mn III	1929.752	3		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ F°	½ - ½	G3
Mn III	1931.06	2		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ F°	½ - ½	G3
Mn III	1931.394	300		3d ⁴ (a ² G)4s - 3d ⁴ (¹ I)4p	d ² G - w ² H°	½ - ½	Y1
Mn III	1931.92	2		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ F°	½ - ½	G3
Mn III	1932.44	2		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ F°	½ - ½	G3
Mn III	1932.92	1w		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ F°	½ - ½	G3
Mn III	1933.483	100	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1935.770	2		3d ⁴ (a ² F)4s - 3d ⁴ (a ² G)4p	b ⁴ F - x ⁴ F°	½ - ½	G3
Mn III	1936.559	200	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1937.121	4		3d ⁴ (a ² P)4s - 3d ⁴ (a ² F)4p	b ⁴ P - x ⁴ D°	½ - ½	G3
Mn III	1940.056	100		3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	d ² D - w ² D°	½ - ½	Y1
Mn III	1940.224	6h	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1940.458	15	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1940.74	2	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	c ² D - z ² D°	½ - ½	G3
Mn III	1941.282	500	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1941.59	1h		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	b ⁴ G - x ⁴ G°	½ - ½	G3
Mn III	1942.886	250w		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	b ⁴ G - x ⁴ G°	½ - ½	G3
Mn III	1943.209	800	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1944.640	150	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1947.320	150		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	b ⁴ G - x ⁴ G°	½ - ½	G3
Mn III	1947.516	200	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1948.282	200		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	b ⁴ G - x ⁴ G°	½ - ½	G3
Mn III	1949.354	200	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1949.53	30		3d ⁴ (a ² D)4s - 3d ⁴ (² D)4p	c ⁴ D - x ⁴ P°	½ - ½	G3
Mn III	1949.744	150		3d ⁴ (¹ I)4s - 3d ⁴ (¹ I)4p	b ² I - w ² H°	½ - ½	G3
Mn III	1951.24	1		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	b ⁴ G - x ⁴ G°	½ - ½	G3
Mn III	1951.504	200		3d ⁴ (a ² G)4s - 3d ⁴ (a ² G)4p	b ⁴ G - x ⁴ G°	½ - ½	G3
Mn III	1952.361	500	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3
Mn III	1952.525	1000	13	3d ⁴ (a ² D)4s - 3d ⁴ (a ² D)4p	a ² D - z ² D°	½ - ½	G3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn III	1955.4	2		$3d^4(a^3F)4s - 3d^4(a^3G)4p$	$b^4F - y^4H^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	G3
Mn III	1956.614	300	12	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^4D - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1957.472	10		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^4P - z^4S^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1958.310	8		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - y^4F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1959.98	2		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - z^4F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1962.042	250		$3d^4(^1I)4s - 3d^4(^1I)4p$	$b^2I - w^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1962.878	100		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1963.27	1h		$3d^4(^1I)4s - 3d^4(^1I)4p$	$b^2I - w^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G3
Mn III	1963.514	100	12	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^4D - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1963.719	200	13	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	G3
Mn III	1967.080	10h		$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - x^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1968.776	4		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1969.576	50		$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - x^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1970.639	2		$3d^4(a^3P)4s - 3d^4(a^3F)4p$	$b^4P - x^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1971.28	10G		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1971.976	8b		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1972.218	5		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1972.471	3w		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - y^4H^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1972.861	100	12	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^4D - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1974.10	20b		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1975.439	100	12	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^4D - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1975.690	200		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1976.490	30		$3d^4(a^3G)4s - 3d^4(a^3G)4p$	$b^4G - y^4H^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1977.044	4		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1978.953	500		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1979.790	1	12	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^4D - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1982.212	20		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1982.76	400		$3d^4(a^3H)4s - 3d^4(a^3H)4p$	$a^4H - y^4G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1984.052	2		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1985.398	20		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1985.717	300		$3d^4(b^3F)4p - 3d^4(a^3D)5d$	$t^3F^{\circ} - g^6D$? $\frac{7}{2} - \frac{5}{2}$	C4, K8
Mn III	1985.797	750		$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$d^2G - w^2G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	Y1
Mn III	1986.839	100	12	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^4D - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1987.70	1h		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1989.038	8		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1989.587	400		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - w^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1990.219	3	12	$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1991.290	50		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1992.492	2	12	$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$e^4D - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1992.889	10		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^4P - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1993.222	80		$3d^4(a^3F)4s - 3d^4(a^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	G3
Mn III	1993.550	20		$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$d^2G - w^2G^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	Y1
Mn III	1995.02	3		$3d^4(a^3G)4s - 3d^4(a^1G)4p$	$c^2G - x^2H^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	G3
Mn III	1995.838	700		$3d^4(a^1G)4s - 3d^4(a^1G)4p$	$d^2G - w^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	Y1
Mn III	1996.905	15		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$a^4D - z^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1997.109	20		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^4P - y^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3
Mn III	1998.127	100		$3d^4(a^3D)4s - 3d^4(a^3D)4p$	$c^4D - w^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G3
Mn III	1998.883	20		$3d^4(a^3P)4s - 3d^4(a^3P)4p$	$b^4P - y^4P^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	G3

MANGANESE IV (Mn^{3+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)
 Ionization Potential [427 000] cm^{-1} , [53] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IV	522.780	120		$3d^4 - 3d^3(a^2F)4p$	$a^3H - w^3G^o$	6 - 5	Y2
Mn IV	523.036	80		$3d^4 - 3d^3(a^2F)4p$	$a^3H - w^3G^o$	5 - 4	Y2
Mn IV	523.234	70		$3d^4 - 3d^3(a^2F)4p$	$a^3H - w^3G^o$	4 - 3	Y2
Mn IV	526.293	20		$3d^4 - 3d^3(a^2F)4p$	$a^3F - w^3G^o$	4 - 5	Y2
Mn IV	526.358	0		$3d^4 - 3d^3(a^2F)4p$	$a^3F - w^3G^o$	3 - 4	Y2
Mn IV	527.402	0		$3d^4 - 3d^3(a^2F)4p$	$a^3F - w^3G^o$	2 - 3	Y2
Mn IV	534.396	0		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - y^3D^o$	3 - 4	Y2
Mn IV	534.504	90		$3d^4 - 3d^3(a^2F)4p$	$a^3G - w^3G^o$	5 - 5	Y2
Mn IV	534.780	60		$3d^4 - 3d^3(a^2F)4p$	$a^3G - w^3G^o$	4 - 4	Y2
Mn IV	534.876	40		$3d^4 - 3d^3(a^2F)4p$	$a^3G - w^3G^o$	3 - 3	Y2
Mn IV	535.352	150		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - y^3D^o$	4 - 4	Y2
Mn IV	535.562	20		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - y^3D^o$	2 - 3	Y2
Mn IV	536.324	70		$3d^4 - 3d^3(a^2F)4p$	$a^3F - w^3F^o$	3 - 3	Y2
Mn IV	540.103	50		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	2 - 3	Y2
Mn IV	540.882	300		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	3 - 3	Y2
Mn IV	541.117	100		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	1 - 2	Y2
Mn IV	541.667	350		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	2 - 2	Y2
Mn IV	541.814	100		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	0 - 1	Y2
Mn IV	541.858	400		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	4 - 3	Y2
Mn IV	542.101	300		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	1 - 1	Y2
Mn IV	542.454	400		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	3 - 2	Y2
Mn IV	542.653	300		$3d^4 - 3d^3(a^4P)4p$	$ga^3D - z^3P^o$	2 - 1	Y2
Mn IV	544.016	300		$3d^4 - 3d^3(a^2F)4p$	$a^3G - w^3F^o$	3 - 2	Y2
Mn IV	544.533	350		$3d^4 - 3d^3(a^2F)4p$	$a^3G - w^3F^o$	4 - 3	Y2
Mn IV	544.752	350		$3d^4 - 3d^3(a^2F)4p$	$a^3G - w^3F^o$	5 - 4	Y2
Mn IV	558.495	300		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^3G^o$	4 - 3	Y2
Mn IV	558.624	0		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^3G^o$	4 - 4	Y2
Mn IV	559.231	350		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^3G^o$	5 - 4	Y2
Mn IV	559.544	0		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^3G^o$	5 - 5	Y2
Mn IV	560.181	300		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^3G^o$	6 - 5	Y2
Mn IV	561.598	90		$3d^4 - 3d^3(a^2F)4p$	$a^3D - w^3F^o$	3 - 4	Y2
Mn IV	562.288	80		$3d^4 - 3d^3(a^2F)4p$	$a^3D - w^3F^o$	2 - 3	Y2
Mn IV	562.806	50		$3d^4 - 3d^3(a^2F)4p$	$a^3D - w^3F^o$	1 - 2	Y2
Mn IV	566.757	30		$3d^4 - 3d^3(a^2D)4p$	$a^3P - w^3D^o$	0 - 1	Y2
Mn IV	567.295	80		$3d^4 - 3d^3(a^2D)4p$	$a^3P - w^3D^o$	1 - 2	Y2
Mn IV	568.774	30		$3d^4 - 3d^3(a^2D)4p$	$a^3P - w^3D^o$	1 - 1	Y2
Mn IV	569.614	200		$3d^4 - 3d^3(a^2D)4p$	$a^3P - w^3D^o$	2 - 3	Y2
Mn IV	569.781	300		$3d^4 - 3d^3(a^2H)4p$	$a^3H - z^3I^o$	6 - 7	Y2
Mn IV	570.675	50		$3d^4 - 3d^3(a^2D)4p$	$a^3P - w^3D^o$	2 - 2	Y2
Mn IV	571.352	250		$3d^4 - 3d^3(a^2H)4p$	$a^3H - z^3I^o$	5 - 6	Y2
Mn IV	571.696	350		$3d^4 - 3d^3(a^2D)4p$	$a^3F - w^3D^o$	4 - 3	Y2
Mn IV	571.774	350		$3d^4 - 3d^3(a^2H)4p$	$a^3G - x^3G^o$	3 - 3	Y2
Mn IV	571.923	20		$3d^4 - 3d^3(a^2H)4p$	$a^3G - x^3G^o$	3 - 4	Y2
Mn IV	572.021	30		$3d^4 - 3d^3(a^2H)4p$	$a^3H - z^3I^o$	6 - 6	Y2
Mn IV	572.203	40		$3d^4 - 3d^3(a^2D)4p$	$a^3F - w^3D^o$	2 - 2	Y2
Mn IV	572.433	400		$3d^4 - 3d^3(a^2D)4p$	$a^3F - w^3D^o$	3 - 2	Y2
Mn IV	572.671	350		$3d^4 - 3d^3(a^2H)4p$	$a^3G - x^3G^o$	4 - 4	Y2
Mn IV	572.992	40		$3d^4 - 3d^3(a^2H)4p$	$a^3G - x^3G^o$	4 - 5	Y2
Mn IV	573.352	80		$3d^4 - 3d^3(a^2H)4p$	$a^3G - x^3G^o$	5 - 4	Y2
Mn IV	573.677	500		$3d^4 - 3d^3(a^2H)4p$	$a^3G - x^3G^o$	5 - 5	Y2
Mn IV	573.706	200		$3d^4 - 3d^3(a^2D)4p$	$a^3F - w^3D^o$	2 - 1	Y2
Mn IV	579.155	450		$3d^4 - 3d^3(a^2F)4p$	$ga^3D - z^3D^o$	2 - 3	Y2
Mn IV	579.787	600		$3d^4 - 3d^3(a^2H)4p$	$a^3H - y^3H^o$	6 - 5	Y2
Mn IV	580.026	500		$3d^4 - 3d^3(a^2H)4p$	$a^3H - y^3H^o$	5 - 5	Y2
Mn IV	580.298	30		$3d^4 - 3d^3(a^2P)4p$	$a^3P - y^3D^o$	0 - 1	Y2
Mn IV	580.383	350		$3d^4 - 3d^3(a^2F)4p$	$ga^3D - z^3D^o$	1 - 2	Y2
Mn IV	581.099	300		$3d^4 - 3d^3(a^2F)4p$	$ga^3D - z^3D^o$	0 - 1	B25, Y2
Mn IV	581.442	600		$3d^4 - 3d^3(a^2F)4p$	$ga^3D - z^3F^o$	4 - 5	Y2
Mn IV	581.650	600		$3d^4 - 3d^3(a^2F)4p$	$ga^3D - z^3F^o$	3 - 4	Y2
Mn IV	581.914	40		$3d^4 - 3d^3(a^2F)4p$	$ga^3D - z^3D^o$	3 - 2	Y2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IV	582.089	80		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	2 - 3	Y2
Mn IV	582.400	30		3d ⁴ - 3d ³ (a ³ P)4p	a ³ P - y ³ D ^o	1 - 1	Y2
Mn IV	582.785	450		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	4 - 4	Y2
Mn IV	582.993	500		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	3 - 3	Y2
Mn IV	583.390	450		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	2 - 2	Y2
Mn IV	583.480	350		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	0 - 1	Y2
Mn IV	583.618	40		3d ⁴ - 3d ³ (a ³ P)4p	a ³ F - y ³ D ^o	3 - 3	Y2
Mn IV	583.824	150		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	1 - 1	Y2
Mn IV	583.945	100		3d ⁴ - 3d ³ (a ³ P)4p	a ³ F - y ³ D ^o	4 - 3	Y2
Mn IV	584.063	150		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	3 - 4	Y2
Mn IV	584.124	100		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	4 - 3	B25, Y2
Mn IV	584.296	150		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	3 - 2	B25, Y2
Mn IV	584.443	550		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	2 - 1	B25, Y2
Mn IV	584.835	500		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	2 - 3	Y2
Mn IV	585.208	600		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ⁴ F ^o	4 - 4	Y2
Mn IV	585.586	500		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ³ D ^o	1 - 2	Y2
Mn IV	585.736	450		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ³ D ^o	3 - 3	Y2
Mn IV	586.245	350		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ³ D ^o	0 - 1	Y2
Mn IV	586.590	30		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ³ D ^o	1 - 1	Y2
Mn IV	586.873	450		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ³ D ^o	4 - 3	Y2
Mn IV	587.157	350		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ³ D ^o	3 - 2	Y2
Mn IV	587.232	350		3d ⁴ - 3d ³ (a ⁴ F)4p	g ^a D - z ³ D ^o	2 - 1	Y2
Mn IV	587.574	200		3d ⁴ - 3d ³ (a ³ P)4p	a ³ F - y ³ D ^o	2 - 1	Y2
Mn IV	591.707	150		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ F ^o	4 - 3	Y2
Mn IV	592.230	0		3d ⁴ - 3d ³ (a ² G)4p	a ³ P - y ³ F ^o	1 - 2	Y2
Mn IV	592.599	120		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ F ^o	4 - 4	Y2
Mn IV	593.279	100		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ F ^o	5 - 4	Y2
Mn IV	593.329	80		3d ⁴ - 3d ³ (a ³ P)4p	a ³ G - y ³ D ^o	4 - 3	Y2
Mn IV	594.106	120		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - y ³ H ^o	3 - 4	Y2
Mn IV	594.260	120		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - y ³ H ^o	5 - 6	Y2
Mn IV	594.503	350		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - y ³ H ^o	4 - 5	Y2
Mn IV	594.959	500		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ G ^o	5 - 5	Y2
Mn IV	595.223	60		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - y ³ H ^o	5 - 5	Y2
Mn IV	595.392	0		3d ⁴ - 3d ³ (a ² G)4p	a ³ P - y ³ F ^o	2 - 3	Y2
Mn IV	595.684	550		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ G ^o	6 - 5	Y2
Mn IV	596.174	450		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ G ^o	5 - 4	Y2
Mn IV	597.107	400		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ G ^o	4 - 3	Y2
Mn IV	597.298	450		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ F ^o	3 - 3	Y2
Mn IV	597.577	500		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ F ^o	2 - 2	Y2
Mn IV	597.644	450		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ F ^o	4 - 3	Y2
Mn IV	597.820	150		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ F ^o	3 - 2	Y2
Mn IV	598.526	500		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ F ^o	4 - 4	Y2
Mn IV	599.848	40		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - z ³ H ^o	5 - 6	Y2
Mn IV	600.257	350		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ G ^o	4 - 5	Y2
Mn IV	600.614	100		3d ⁴ - 3d ³ (a ² D)4p	a ³ D - w ³ D ^o	3 - 3	Y2
Mn IV	600.917	40		3d ⁴ - 3d ³ (a ² D)4p	a ³ D - w ³ D ^o	2 - 3	Y2
Mn IV	601.153	300		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ G ^o	3 - 4	Y2
Mn IV	601.499	70		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ G ^o	4 - 4	Y2
Mn IV	601.788	10		3d ⁴ - 3d ³ (a ² D)4p	a ³ D - w ³ D ^o	3 - 2	Y2
Mn IV	602.115	80		3d ⁴ - 3d ³ (a ² D)4p	a ³ D - w ³ D ^o	2 - 2	Y2
Mn IV	602.535	300		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ G ^o	2 - 3	Y2
Mn IV	602.798	40		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ G ^o	3 - 3	Y2
Mn IV	603.129	0		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - z ³ H ^o	5 - 5	Y2
Mn IV	603.788	10		3d ⁴ - 3d ³ (a ² D)4p	a ³ D - w ³ D ^o	2 - 1	Y2
Mn IV	603.863	100		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - z ³ H ^o	6 - 5	Y2
Mn IV	604.177	40		3d ⁴ - 3d ³ (a ² D)4p	a ³ D - w ³ D ^o	1 - 1	Y2
Mn IV	605.377	50		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - z ³ H ^o	5 - 4	Y2
Mn IV	606.648	80		3d ⁴ - 3d ³ (a ² G)4p	a ³ G - y ³ F ^o	3 - 3	Y2
Mn IV	607.478	200		3d ⁴ - 3d ³ (a ² G)4p	a ³ G - y ³ F ^o	4 - 3	Y2
Mn IV	608.577	50		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - z ³ H ^o	4 - 5	Y2
Mn IV	609.188	0		3d ⁴ - 3d ³ (a ² G)4p	a ³ G - y ³ F ^o	5 - 4	Y2
Mn IV	610.509	10		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - z ³ H ^o	3 - 4	Y2
Mn IV	610.967	450		3d ⁴ - 3d ³ (a ² G)4p	a ³ G - y ³ G ^o	5 - 5	Y2
Mn IV	611.461	450		3d ⁴ - 3d ³ (a ² G)4p	a ³ G - y ³ G ^o	4 - 4	Y2
Mn IV	612.292	500		3d ⁴ - 3d ³ (a ² G)4p	a ³ G - y ³ G ^o	3 - 3	Y2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IV	613.162	10		3d ⁴ - 3d ³ (a ³ G)4p	a ³ G - y ³ G°	4 - 3	B25, Y2
Mn IV	614.153	400		3d ⁴ - 3d ³ (a ³ P)4p	a ³ D - y ³ D°	3 - 3	Y2
Mn IV	615.947	40		3d ⁴ - 3d ³ (a ³ P)4p	a ³ D - y ³ D°	3 - 2	Y2
Mn IV	616.111	390		3d ⁴ - 3d ³ (a ³ G)4p	a ³ G - z ³ H°	5 - 6	Y2
Mn IV	616.277	300		3d ⁴ - 3d ³ (a ³ P)4p	a ³ D - y ³ D°	2 - 2	Y2
Mn IV	618.780	250		3d ⁴ - 3d ³ (a ³ G)4p	a ³ G - z ³ H°	4 - 5	Y2
Mn IV	619.173	10		3d ⁴ - 3d ³ (a ³ P)4p	a ³ D - y ³ D°	2 - 1	Y2
Mn IV	619.580	90		3d ⁴ - 3d ³ (a ³ P)4p	a ³ D - y ³ D°	1 - 1	Y2
Mn IV	620.275	200		3d ⁴ - 3d ³ (a ³ G)4p	a ³ G - z ³ H°	3 - 4	Y2
Mn IV	621.176	70		3d ⁴ - 3d ³ (a ³ G)4p	a ³ G - z ³ H°	4 - 4	Y2
Mn IV	621.964	80		3d ⁴ - 3d ³ (a ³ F)4p	b ³ F - v ³ D°	3 - 2	Y2
Mn IV	625.961	90		3d ⁴ - 3d ³ (a ³ F)4p	b ³ F - w ³ G°	4 - 5	Y2
Mn IV	627.432	50		3d ⁴ - 3d ³ (a ³ F)4p	b ³ F - w ³ G°	3 - 4	Y2
Mn IV	628.380	30		3d ⁴ - 3d ³ (a ³ F)4p	b ³ F - w ³ G°	2 - 3	Y2
Mn IV	629.341	0		3d ⁴ - 3d ³ (a ³ G)4p	a ³ D - y ³ F°	3 - 3	Y2
Mn IV	629.685	180		3d ⁴ - 3d ³ (a ³ G)4p	a ³ D - y ³ F°	2 - 3	Y2
Mn IV	630.329	150		3d ⁴ - 3d ³ (a ³ G)4p	a ³ D - y ³ F°	3 - 4	Y2
Mn IV	630.695	100		3d ⁴ - 3d ³ (a ³ G)4p	a ³ D - y ³ F°	1 - 2	Y2
Mn IV	633.607	10		3d ⁴ - 3d ³ (a ³ G)4p	a ³ D - y ³ G°	3 - 4	Y2
Mn IV	640.069	80		3d ⁴ - 3d ³ (a ³ F)4p	b ³ F - w ³ F°	4 - 4	Y2
Mn IV	640.909	30		3d ⁴ - 3d ³ (a ³ F)4p	b ³ F - w ³ F°	3 - 3	Y2
Mn IV	641.021	20		3d ⁴ - 3d ³ (a ³ F)4p	b ³ F - w ³ F°	2 - 2	Y2
Mn IV	641.132	100		3d ⁴ - 3d ³ (a ³ F)4p	b ³ F - w ³ F°	3 - 2	Y2
Mn IV	642.195	40		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ F°	3 - 4	Y2
Mn IV	642.588	300		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ F°	4 - 4	Y2
Mn IV	643.983	50		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ F°	2 - 3	Y2
Mn IV	644.273	300		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ F°	3 - 3	Y2
Mn IV	644.679	80		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ F°	4 - 3	Y2
Mn IV	645.832	250		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ F°	2 - 2	Y2
Mn IV	645.931	10		3d ⁴ - 3d ³ (a ³ F)4p	a ³ H - z ³ G°	5 - 5	Y2
Mn IV	646.133	80		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ F°	3 - 2	Y2
Mn IV	646.794	500		3d ⁴ - 3d ³ (a ³ F)4p	a ³ H - z ³ G°	6 - 5	Y2
Mn IV	647.102	40		3d ⁴ - 3d ³ (a ³ F)4p	a ³ H - z ³ G°	4 - 4	Y2
Mn IV	647.921	450		3d ⁴ - 3d ³ (a ³ F)4p	a ³ H - z ³ G°	5 - 4	Y2
Mn IV	648.692	450		3d ⁴ - 3d ³ (a ³ F)4p	a ³ H - z ³ G°	4 - 3	Y2
Mn IV	652.195	250		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ G°	4 - 5	Y2
Mn IV	653.018	0		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ F°	3 - 4	Y2
Mn IV	653.811	180		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ G°	3 - 4	Y2
Mn IV	653.988	150		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ F°	4 - 4	Y2
Mn IV	654.222	90		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ G°	4 - 4	Y2
Mn IV	654.870	400		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ F°	5 - 4	Y2
Mn IV	655.122	250		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ G°	2 - 3	Y2
Mn IV	655.156	200		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ F°	3 - 3	Y2
Mn IV	655.424	80		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ G°	3 - 3	Y2
Mn IV	656.148	400		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ F°	4 - 3	Y2
Mn IV	657.077	400		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ F°	3 - 2	Y2
Mn IV	660.344	80		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ D°	0 - 1	Y2
Mn IV	661.726	300		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ D°	1 - 2	Y2
Mn IV	662.234	0		3d ⁴ - 3d ³ (a ³ F)4p	a ³ H - z ³ F°	5 - 4	Y2
Mn IV	663.085	80		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ D°	1 - 1	Y2
Mn IV	663.429	10		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ F°	0 - 1	Y2
Mn IV	663.884	450		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ D°	2 - 3	Y2
Mn IV	664.838	400		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ G°	5 - 5	Y2
Mn IV	665.015	40		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ G°	3 - 4	Y2
Mn IV	666.035	350		3d ⁴ - 3d ³ (a ³ F)4p	a ³ G - z ³ G°	4 - 4	Y2
Mn IV	666.255	80		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ D°	3 - 3	Y2
Mn IV	666.332	100		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ D°	2 - 2	Y2
Mn IV	666.694	400		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ D°	4 - 3	Y2
Mn IV	667.004	120		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ D°	0 - 1	Y2
Mn IV	667.706	0		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ D°	2 - 1	Y2
Mn IV	668.433	80		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ D°	2 - 2	B25, Y2
Mn IV	668.498	120		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ D°	1 - 2	Y2
Mn IV	668.736	180		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ D°	3 - 2	Y2
Mn IV	669.486	60		3d ⁴ - 3d ³ (a ³ F)4p	a ³ P - z ³ F°	2 - 2	B25, Y2
Mn IV	669.792	150		3d ⁴ - 3d ³ (a ³ F)4p	a ³ F - z ³ D°	2 - 1	Y2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IV	670.607	10		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^4F^{\circ}$	4 - 3	B25, Y2
Mn IV	671.353	80		$3d^4 - 3d^3(a^4F)4p$	$z^3P - z^4D^{\circ}$	2 - 3	Y2
Mn IV	671.891	10		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^4F^{\circ}$	3 - 2	B25, Y2
Mn IV	673.208	40		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^4D^{\circ}$	2 - 2	Y2
Mn IV	673.449	0		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^4D^{\circ}$	2 - 3	B25, Y2
Mn IV	673.804	0		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^4D^{\circ}$	3 - 3	B25, Y2
Mn IV	674.236	60		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^4D^{\circ}$	4 - 3	Y2
Mn IV	675.654	80		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^4D^{\circ}$	3 - 2	Y2
Mn IV	676.647	80		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^4D^{\circ}$	2 - 1	Y2
Mn IV	679.374	150		$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^{\circ}$	3 - 4	Y2
Mn IV	679.939	200		$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^2G^{\circ}$	2 - 3	Y2
Mn IV	680.265	300		$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^2G^{\circ}$	3 - 4	Y2
Mn IV	680.362	350		$3d^4 - 3d^3(a^2H)4p$	$b^3F - x^2G^{\circ}$	4 - 5	Y2
Mn IV	682.120	80		$3d^4 - 3d^3(a^2F)4p$	$a^3D - z^3F^{\circ}$	2 - 3	Y2
Mn IV	684.183	50		$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^{\circ}$	2 - 2	Y2
Mn IV	684.707	50		$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3F^{\circ}$	1 - 2	Y2
Mn IV	691.252	50		$3d^4 - 3d^3(a^3D)4p$	$b^3F - w^3D^{\circ}$	4 - 3	Y2
Mn IV	693.163	40		$3d^4 - 3d^3(a^3D)4p$	$b^3F - w^3D^{\circ}$	3 - 2	Y2
Mn IV	695.248	20		$3d^4 - 3d^3(a^3D)4p$	$b^3F - w^3D^{\circ}$	2 - 1	Y2
Mn IV	706.383	60		$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3D^{\circ}$	3 - 3	Y2
Mn IV	709.244	90		$3d^4 - 3d^3(a^2P)4p$	$b^3F - y^3D^{\circ}$	4 - 3	Y2
Mn IV	709.586	10		$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^3D^{\circ}$	2 - 2	Y2
Mn IV	709.627	40		$3d^4 - 3d^3(a^2P)4p$	$b^3F - y^3D^{\circ}$	3 - 3	Y2
Mn IV	711.978	30		$3d^4 - 3d^3(a^2P)4p$	$b^3F - y^3D^{\circ}$	3 - 2	Y2
Mn IV	715.715	0		$3d^4 - 3d^3(a^2P)4p$	$b^3F - y^3D^{\circ}$	2 - 1	Y2
Mn IV	717.945	150		$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^4D^{\circ}$	1 - 2	Y2
Mn IV	718.893	0		$3d^4 - 3d^3(a^4F)4p$	$a^3D - z^4D^{\circ}$	2 - 1	Y2
Mn IV	730.873	0		$3d^4 - 3d^3(a^2G)4p$	$b^3F - y^3F^{\circ}$	4 - 4	Y2
Mn IV	797.657	40		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	4 - 4	Y2
Mn IV	798.121	40		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	3 - 4	Y2
Mn IV	801.194	0		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	2 - 3	Y2
Mn IV	801.355	30		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	3 - 3	Y2
Mn IV	804.052	10		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3F^{\circ}$	2 - 2	Y2
Mn IV	812.499	40		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3G^{\circ}$	4 - 5	Y2
Mn IV	818.468	0		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3G^{\circ}$	2 - 3	Y2
Mn IV	835.657	0		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3D^{\circ}$	3 - 3	Y2
Mn IV	839.514	0		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3D^{\circ}$	3 - 2	Y2
Mn IV	841.536	0		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3D^{\circ}$	2 - 1	Y2
Mn IV	864.850	100		$3d^4 - 3d^3(a^4F)4p$	$b^3F - z^3G^{\circ}$	4 - 4	Y2
Mn IV	1082.645	100		$3d^3(a^4F)4s - 3d^3(a^2F)4p$	$c^3F - w^3G^{\circ}$	4 - 5	Y2
Mn IV	1145.361	120		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$a^3F - x^2G^{\circ}$	5 - 5	Y2
Mn IV	1216.062	0		$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	1 - 2	Y2
Mn IV	1219.018	0		$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	2 - 2	Y2
Mn IV	1222.485	70		$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	4 - 3	Y2
Mn IV	1222.579	80		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3G^{\circ}$	4 - 5	Y2
Mn IV	1223.561	20		$3d^3(a^4F)4s - 3d^3(a^2P)4p$	$a^3F - y^3D^{\circ}$	3 - 2	Y2
Mn IV	1226.966	50		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3G^{\circ}$	5 - 5	Y2
Mn IV	1227.093	30		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3G^{\circ}$	4 - 4	Y2
Mn IV	1231.099	30		$3d^3(a^2G)4s - 3d^3(a^2F)4p$	$b^3G - w^3G^{\circ}$	4 - 3	Y2
Mn IV	1236.238	70		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^2G^{\circ}$	2 - 3	Y2
Mn IV	1242.246	900		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	2 - 3	Y2
Mn IV	1244.242	80		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^2G^{\circ}$	3 - 3	Y2
Mn IV	1244.327	P 900		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	3 - 4	Y2
Mn IV	1244.876	0		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^2G^{\circ}$	3 - 4	Y2
Mn IV	1247.726	850		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	4 - 5	Y2
Mn IV	1248.638	300		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	3 - 3	Y2
Mn IV	1251.933	950		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	5 - 6	Y2
Mn IV	1252.736	P 450		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	4 - 4	Y2
Mn IV	1256.457	40		$3d^3(a^4F)4s - 3d^3(a^2H)4p$	$c^3F - x^2G^{\circ}$	4 - 5	Y2
Mn IV	1257.277	950		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	6 - 7	Y2
Mn IV	1258.131	750		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	5 - 5	Y2
Mn IV	1264.412	900		$3d^3(a^4F)4p - 3d^3(a^4F)4d$	$z^3G^{\circ} - e^3H$	6 - 6	Y2
Mn IV	1277.628	100		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^3F - y^3F^{\circ}$	3 - 3	Y2
Mn IV	1281.727	30		$3d^3(a^4F)4s - 3d^3(a^2G)4p$	$a^3F - y^3F^{\circ}$	3 - 4	Y2
Mn IV	1293.930	150		$3d^3(a^4F)4s - 3d^3(a^2D)4p$	$c^3F - w^3D^{\circ}$	4 - 3	Y2

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IV	1297.947	0		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	a ⁴ F - y ³ G°	2-3	Y2
Mn IV	1321.588	20		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁴ F - y ³ D°	3-4	Y2
Mn IV	1328.564	0		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁴ F - y ³ D°	4-4	Y2
Mn IV	1332.660	20		3d ³ (a ² H)4s - 3d ³ (a ² F)4p	b ³ H - w ³ G°	5-5	Y2
Mn IV	1333.561	10		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁴ F - y ³ D°	3-3	Y2
Mn IV	1336.123	450		3d ³ (a ² H)4s - 3d ³ (a ² F)4p	b ³ H - w ³ G°	6-5	Y2
Mn IV	1336.918	400		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁴ F - y ³ D°	5-4	Y2
Mn IV	1338.061	350		3d ³ (a ² H)4s - 3d ³ (a ² F)4p	b ³ H - w ³ G°	5-4	Y2
Mn IV	1340.617	250		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁴ F - y ³ D°	4-3	Y2
Mn IV	1341.461	300		3d ³ (a ² H)4s - 3d ³ (a ² F)4p	b ³ H - w ³ G°	4-3	Y2
Mn IV	1346.014	0		3d ³ (a ⁴ F)4s - 3d ³ (a ² P)4p	c ³ F - y ³ D°	2-2	Y2
Mn IV	1346.865	0		3d ³ (a ⁴ F)4s - 3d ³ (a ² P)4p	c ³ F - y ³ D°	3-3	Y2
Mn IV	1355.441	250		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	a ⁴ F - z ³ H°	5-4	Y2
Mn IV	1356.436	0		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁴ F - z ³ F°	2-3	Y2
Mn IV	1358.594	450		3d ³ (a ⁴ F)4s - 3d ³ (a ² P)4p	c ³ F - y ³ D°	4-3	Y2
Mn IV	1359.890	350		3d ³ (a ⁴ F)4s - 3d ³ (z ² P)4p	c ³ F - y ³ D°	2-1	Y2
Mn IV	1361.996	0		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	a ⁴ F - z ³ P°	3-3	Y2
Mn IV	1414.596	10		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ F°	2-2	Y2
Mn IV	1422.038	10		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ F°	3-3	Y2
Mn IV	1440.324	70		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ F°	4-4	Y2
Mn IV	1442.807	80		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ G°	2-3	Y2
Mn IV	1444.078	100		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ G°	3-4	Y2
Mn IV	1446.740	60		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - x ³ G°	4-4	Y2
Mn IV	1448.789	120		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - x ³ G°	4-5	Y2
Mn IV	1450.315	120		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ G°	4-5	Y2
Mn IV	1452.893	200		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - x ³ G°	5-4	Y2
Mn IV	1453.626	20		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ G°	3-3	Y2
Mn IV	1454.961	60		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - x ³ G°	5-5	Y2
Mn IV	1457.560	80	P	3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ G°	4-4	Y2
Mn IV	1476.740	0		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	c ³ F - y ³ J	3-4	Y2
Mn IV	1491.579	0		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ P)4p	c ³ F - y ³ D°	3-3	Y2
Mn IV	1499.769	0		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - y ³ H°	4-5	Y2
Mn IV	1513.635	20		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ F°	3-3	Y2
Mn IV	1513.867	0		3d ³ (a ⁴ F)4s - 3d ³ (a ² G)4p	c ³ F - z ³ H°	4-4	Y2
Mn IV	1522.805	0		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ F°	4-3	Y2
Mn IV	1567.380	0		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ G°	3-4	Y2
Mn IV	1577.185	350		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ G°	4-4	Y2
Mn IV	1586.638	30		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ G°	4-3	Y2
Mn IV	1592.536	300		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - y ³ H°	3-4	Y2
Mn IV	1594.659	500		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - y ³ H°	4-5	Y2
Mn IV	1595.081	500		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - y ³ H°	5-6	Y2
Mn IV	1597.656	0		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - y ³ H°	4-4	Y2
Mn IV	1600.549	550		3d ³ (a ² H)4s - 3d ³ (a ² H)4p	b ³ H - x ³ G°	4-3	Y2
Mn IV	1601.550	80		3d ³ (a ² H)4s - 3d ³ (a ² H)4p	b ³ H - x ³ G°	4-4	Y2
Mn IV	1602.138	100		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - y ³ H°	5-5	Y2
Mn IV	1603.604	700		3d ³ (a ² H)4s - 3d ³ (a ² H)4p	b ³ H - x ³ G°	5-4	Y2
Mn IV	1604.038	0		3d ³ (a ² H)4s - 3d ³ (a ² H)4p	b ³ H - x ³ G°	4-5	Y2
Mn IV	1605.202	40		3d ³ (a ² G)4s - 3d ³ (a ² H)4p	b ³ G - y ³ H°	5-4	Y2
Mn IV	1606.108	150		3d ³ (a ² H)4s - 3d ³ (a ² H)4p	b ³ H - x ³ G°	5-5	Y2
Mn IV	1611.105	700		3d ³ (a ² H)4s - 3d ³ (a ² H)4p	b ³ H - x ³ G°	6-5	Y2
Mn IV	1642.249	40		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ D°	1-2	Y2
Mn IV	1647.773	300		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ D°	2-2	Y2
Mn IV	1650.573	300		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ D°	1-1	Y2
Mn IV	1651.685	350		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ D°	4-3	Y2
Mn IV	1653.833	750		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ F°	3-4	Y2
Mn IV	1656.046	450		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ D°	3-2	Y2
Mn IV	1656.166	550		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ D°	2-1	Y2
Mn IV	1656.388	700		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ F°	2-3	Y2
Mn IV	1659.249	700		3d ³ (a ² F)4s - 3d ³ (a ² F)4p	d ³ F - w ³ G°	4-5	Y2
Mn IV	1661.324	350		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ F°	1-2	Y2
Mn IV	1664.733	750		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ F°	4-4	Y2
Mn IV	1666.995	800w		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ F°	5-5	Y2
Mn IV	1667.651	100		3d ³ (a ² F)4s - 3d ³ (a ² F)4p	d ³ F - w ³ G°	4-4	Y2
Mn IV	1670.078	700		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁴ F - z ³ F°	1-1	Y2
Mn IV	1671.995	600		3d ³ (a ² F)4s - 3d ³ (a ² F)4p	d ³ F - w ³ G°	3-4	Y2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IV	1673.653	10		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5D^o$	3-4	Y2
Mn IV	1675.472	250		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	3-2	Y2
Mn IV	1675.776	300		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	2-1	Y2
Mn IV	1678.018	30		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5F^o$	5-4	Y2
Mn IV	1678.827	0		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5D^o$	2-3	Y2
Mn IV	1683.115	450		$3d^3(a^3F)4s - 3d^3(a^3F)4p$	$d^3F - w^3G^o$	2-3	Y2
Mn IV	1684.604	0		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5D^o$	1-2	Y2
Mn IV	1684.809	0		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5D^o$	4-4	Y2
Mn IV	1685.967	300		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3F^o$	3-3	Y2
Mn IV	1690.125	500		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3F^o$	3-2	Y2
Mn IV	1691.684	750		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3F^o$	4-3	Y2
Mn IV	1692.829	0		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5D^o$	1-1	Y2
Mn IV	1693.150	750		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - z^3I^o$	6-7	Y2
Mn IV	1698.298	800		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5D^o$	5-4	Y2
Mn IV	1698.695	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5D^o$	4-3	Y2
Mn IV	1698.911	400		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3F^o$	4-4	Y2
Mn IV	1699.062	700		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5D^o$	3-2	Y2
Mn IV?	1705.11	100					B25
Mn IV	1705.631	20		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^o$	2-3	Y2
Mn IV	1705.931	10		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^o$	3-4	Y2
Mn IV	1707.428	750		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - z^3I^o$	5-6	Y2
Mn IV	1712.776	200		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^o$	4-5	Y2
Mn IV	1717.043	100		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^o$	3-4	Y2
Mn IV?	1718.29	400b					B25
Mn IV	1718.669	650		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^o$	2-2	Y2
Mn IV	1720.521	750w		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - z^3I^o$	4-5	Y2
Mn IV	1720.739	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^o$	3-3	Y2
Mn IV	1721.406	750		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^o$	5-5	Y2
Mn IV	1722.944	650		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^o$	4-4	Y2
Mn IV	1724.827	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^o$	4-4	Y2
Mn IV	1730.553	600		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^o$	3-3	Y2
Mn IV	1731.684	200		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^o$	5-4	Y2
Mn IV	1734.041	100		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^o$	3-2	Y2
Mn IV	1736.516	300		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - y^3G^o$	4-3	Y2
Mn IV	1740.022	250		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3F^o$	4-3	Y2
Mn IV	1742.105	850w		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	5-6	Y2
Mn IV	1751.587	850		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	4-5	Y2
Mn IV	1759.815	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	3-4	Y2
Mn IV	1762.168	700		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^o$	4-4	Y2
Mn IV	1762.942	750		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - z^3H^o$	5-6	Y2
Mn IV	1766.273	850		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	5-5	Y2
Mn IV	1766.344	400		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^o$	4-3	Y2
Mn IV	1767.087	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	2-3	Y2
Mn IV	1771.244	450		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^o$	3-3	Y2
Mn IV	1772.112	650		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	4-4	Y2
Mn IV	1773.065	300		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^o$	3-2	Y2
Mn IV	1773.509	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	1-2	Y2
Mn IV	1776.593	600		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	3-3	Y2
Mn IV	1777.023	300		$3d^3(a^2F)4s - 3d^3(a^2F)4p$	$d^3F - w^3F^o$	2-2	Y2
Mn IV	1779.976	450		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	2-2	Y2
Mn IV	1782.212	750		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - z^3H^o$	4-5	Y2
Mn IV	1784.636	600		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^o$	6-6	Y2
Mn IV	1784.889	200		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^o$	4-5	Y2
Mn IV	1786.025	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3G^o$	2-3	Y2
Mn IV	1787.040	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	5-4	Y2
Mn IV	1787.375	750		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^o$	5-5	Y2
Mn IV	1788.641	750		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^o$	4-4	Y2
Mn IV	1789.226	300		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	4-3	Y2
Mn IV	1789.619	10		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^5F - z^5G^o$	3-2	Y2
Mn IV	1790.442	750		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3G^o$	3-4	Y2
Mn IV	1791.096	10		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^o$	5-4	Y2
Mn IV	1791.584	350		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - z^3H^o$	5-5	Y2
Mn IV	1793.537	80w		$3d^3(a^2H)4s - 3d^3(a^2H)4p$	$b^3H - y^3H^o$	6-5	Y2
Mn IV	1795.650	800		$3d^3(a^2G)4s - 3d^3(a^2G)4p$	$b^3G - z^3H^o$	3-4	Y2
Mn IV	1795.786	800		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$c^3F - z^3G^o$	4-5	Y2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IV	1802.090	150		$3d^2(a^2G)4s - 3d^2(a^2G)4p$	$b^2G - z^2H^{\circ}$	4 - 4	Y2
Mn IV	1802.632	10		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2G^{\circ}$	3 - 3	Y2
Mn IV	1811.284	0		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2G^{\circ}$	4 - 4	Y2
Mn IV	1811.613	0		$3d^2(a^2G)4s - 3d^2(a^2G)4p$	$b^2G - z^2H^{\circ}$	5 - 4	Y2
Mn IV	1887.151	350		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	3 - 3	Y2
Mn IV	1888.454	40		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	2 - 2	Y2
Mn IV	1899.483	350		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	2 - 1	Y2
Mn IV	1899.878	0		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2F^{\circ}$	2 - 3	Y2
Mn IV	1907.028	600		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	3 - 2	Y2
Mn IV	1910.251	750		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	4 - 3	Y2
Mn IV	1913.202	P 20		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2F^{\circ}$	4 - 5	Y2
Mn IV	1913.822	0		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2F^{\circ}$	2 - 2	Y2
Mn IV	1918.61	300		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2F^{\circ}$	3 - 3	B25, Y2
Mn IV	1925.406	40		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2F^{\circ}$	2 - 1	Y2
Mn IV	1927.776	20		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2F^{\circ}$	4 - 4	Y2
Mn IV?	1928.95	200					B25
Mn IV	1932.847	30		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2F^{\circ}$	3 - 2	Y2
Mn IV	1942.602	0		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2F^{\circ}$	4 - 3	Y2
Mn IV?	1944.23	200					B25
Mn IV	1948.75	200		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	3 - 3	B25, Y2
Mn IV	1954.580	P 50		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	4 - 4	Y2
Mn IV	1955.663	300		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	2 - 1	Y2
Mn IV	1964.451	P 250		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	3 - 2	Y2
Mn IV	1973.414	80		$3d^2(a^4F)4s - 3d^2(a^4F)4p$	$c^2F - z^2D^{\circ}$	4 - 3	Y2
Mn IV	1997.545	650		$3d^2(a^2H)4s - 3d^2(a^2G)4p$	$b^2H - z^2H^{\circ}$	6 - 6	Y2

MANGANESE V (Mn^{4+}), $Z = 25$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4F_{3/2}$ (21 electrons)Ionization Potential [589 000] cm^{-1} ; [73] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn V	382.061	100		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$7/2 - 7/2$	B24
Mn V	382.907	600		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$7/2 - 7/2$	B24
Mn V	382.980	100		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$7/2 - 7/2$	B24
Mn V	383.422	200		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$7/2 - 7/2$	B24
Mn V	383.681	400		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$7/2 - 7/2$	B24
Mn V	383.939	500		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$7/2 - 7/2$	B24
Mn V	393.3	300		$3d^3 - 3d^2(a^1G)4p$	$a^2C - z^2H^{\circ}$	$7/2 - 11/2$	B24
Mn V	394.322	100		$3d^3 - 3d^2(a^1G)4p$	$a^2G - z^2H^{\circ}$	$7/2 - 7/2$	B24
Mn V	393.604	200		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2G^{\circ}$	$7/2 - 7/2$	B24
Mn V	399.538	400		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2G^{\circ}$	$7/2 - 7/2$	B24
Mn V	401.787	300		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^{\circ}$	$7/2 - 7/2$	B24
Mn V	402.525	400		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^{\circ}$	$7/2 - 7/2$	B24
Mn V	402.754	300		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^{\circ}$	$7/2 - 7/2$	B24
Mn V	403.007	50		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^{\circ}$	$7/2 - 7/2$	B24
Mn V	403.281	50		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^{\circ}$	$7/2 - 7/2$	B24
Mn V	403.552	300		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^{\circ}$	$7/2 - 7/2$	B24
Mn V	403.680	100		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^{\circ}$	$7/2 - 7/2$	B24
Mn V	403.754	400		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^{\circ}$	$7/2 - 7/2$	B24
Mn V	404.358	800		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^{\circ}$	$11/2 - 11/2$	B24
Mn V	404.455	400		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^{\circ}$	$7/2 - 7/2$	B24
Mn V	405.094	500		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^{\circ}$	$7/2 - 7/2$	B24
Mn V	405.654	800		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^{\circ}$	$7/2 - 7/2$	B24
Mn V	406.037	700		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^{\circ}$	$7/2 - 7/2$	B24
Mn V	406.240	100		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^{\circ}$	$7/2 - 7/2$	B24
Mn V	406.417	700		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^{\circ}$	$7/2 - 7/2$	B24

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn V	406.845	600		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	407.301	200		$3d^3 - 3d^3(a^3P)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	408.322	600		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	408.390	100		$3d^3 - 3d^3(a^3P)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	408.733	400		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	409.217	100		$3d^3 - 3d^3(a^3P)4p$	$a^4P - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Mn V	409.335	200		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	409.546	300		$3d^3 - 3d^3(a^3P)4p$	$a^4G - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	409.795	400		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	410.311	800		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	410.459	500		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4G^o$	$\frac{3}{2} - \frac{1}{2}$	B24
Mn V	410.611	800		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	410.990	800		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	411.329	700		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	411.585	700		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	411.789	300		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	411.920	300		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	412.534	500		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	413.384	400		$3d^3 - 3d^3(a^3F)4p$	$g^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	414.933	300		$3d^3 - 3d^3(a^3P)4p$	$a^4P - z^4S^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Mn V	415.207	500		$3d^3 - 3d^3(a^3P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	415.336	50		$3d^3 - 3d^3(a^3G)4p$	$a^2H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	415.622	700		$3d^3 - 3d^3(a^3G)4p$	$a^2H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	415.980	800		$3d^3 - 3d^3(a^3P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	422.228	100		$3d^3 - 3d^3(a^3P)4p$	$a^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	428.600	500		$3d^3 - 3d^3(a^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	429.054	500		$3d^3 - 3d^3(a^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	429.984	100		$3d^3 - 3d^3(a^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	431.973	50b		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4L^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	433.558	700		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	434.210	300		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	434.403	50		$3d^3 - 3d^3(a^3F)4p$	$a^2G - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	434.575	200		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$	B24
Mn V	435.069	200		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	435.291	100		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Mn V	435.594	100		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	436.093	200		$3d^3 - 3d^3(a^3F)4p$	$a^2C - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	436.174	800		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	436.660	160		$3d^3 - 3d^3(a^3F)4p$	$a^2G - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	436.857	100		$3d^3 - 3d^3(a^3F)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	438.735	500		$3d^3 - 3d^3(a^3F)4p$	$a^2G - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	439.352	500		$3d^3 - 3d^3(a^3F)4p$	$a^2G - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	441.008	100		$3d^3 - 3d^3(a^3F)4p$	$a^2H - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	441.725	700		$3d^3 - 3d^3(a^3F)4p$	$a^2H - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Mn V	442.495	700		$3d^3 - 3d^3(a^3F)4p$	$a^2H - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	447.498	400		$3d^3 - 3d^3(a^3F)4p$	$a^2D - z^2L^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	448.262	300		$3d^3 - 3d^3(a^3F)4p$	$a^2D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	451.065	300		$3d^3 - 3d^3(a^3F)4p$	$a^2D - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	452.758	200		$3d^3 - 3d^3(a^3F)4p$	$a^2D - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	B24
Mn V	1431.98	12		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$	W4, B24
Mn V	1446.49	60		$3d^3(a^3F)4s - 3d^3(a^3F)4p$	$b^4F - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$	W4, B24
Mn V	1476.02	30		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^2F^o$	$\frac{3}{2} - \frac{7}{2}$	W4, B24
Mn V	1483.09	160		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2G^o$	$\frac{3}{2} - \frac{7}{2}$	W4, B24
Mn V	1486.74	30		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	W4, B24
Mn V	1490.68	160		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	W4, B24
Mn V	1491.30	30		$3d^3(a^3F)4s - 3d^3(a^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{7}{2}$	W4, B24
Mn V	1498.50	8	P	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	W4, B24
Mn V	1502.36	120		$3d^3(a^3F)4s - 3d^3(a^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	W4, B24
Mn V	1503.59	80		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{7}{2}$	W4, B24
Mn V	1504.38	200		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4G^o$	$\frac{3}{2} - \frac{1}{2}$	W4, B24
Mn V	1507.11	40		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	W4, B24
Mn V?	1509.02	4					W4
Mn V	1511.15	40		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	W4, B24
Mn V	1516.78	160		$3d^3(a^3F)4s - 3d^3(a^3F)4p$	$b^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	W4, B24
Mn V	1519.62	40		$3d^3(a^3F)4s - 3d^3(a^3F)4p$	$b^4F - z^4F^o$	$\frac{3}{2} - \frac{7}{2}$	W4, B24

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn V	1519.83	40		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4F^\circ$	$\frac{5}{2} - \frac{3}{2}$	W4, B24
Mn V	1528.13	120		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$	W4, B24
Mn V	1533.07	40		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$	W4, B24
Mn V	1539.40	80		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$	W4, B24
Mn V	1541.08	60		$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$	W4, B24
Mn V	1548.44	P	0	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^4F - z^4G^\circ$	$\frac{5}{2} - \frac{3}{2}$	W4, B24
Mn V	1614.61	P	120	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$	W4, B24
Mn V	1621.00	P	160	$3d^2(a^3F)4s - 3d^2(a^3F)4p$	$b^2F - z^2F^\circ$	$\frac{5}{2} - \frac{3}{2}$	W4, B24

MANGANESE VI (Mn^{3+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^3F_2$ (20 electrons)
 Ionization Potential [782 000] cm^{-1} ; [97] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn VI	307.109	100		$3d^2 - 3d4p$	$ga^3F - z^3F^\circ$	3 - 4	C1, M22
Mn VI	307.842	60		$3d^2 - 3d4p$	$ga^3F - z^3F^\circ$	2 - 3	C1, M22
Mn VI	307.999	400		$3d^2 - 3d4p$	$ga^3F - z^3F^\circ$	4 - 4	C1, M22
Mn VI	308.560	400		$3d^2 - 3d4p$	$ga^3F - z^3F^\circ$	3 - 3	C1, M22
Mn VI	308.853	300		$3d^2 - 3d4p$	$ga^3F - z^3F^\circ$	2 - 2	C1, M22
Mn VI	309.440	240		$3d^2 - 3d4p$	$ga^3F - z^3F^\circ$	4 - 3	C1, M22
Mn VI	309.579	200		$3d^2 - 3d4p$	$ga^3F - z^3F^\circ$	3 - 2	C1, M22
Mn VI	310.058	200		$3d^2 - 3d4p$	$ga^3F - z^3D^\circ$	3 - 3	C1, M22
Mn VI	310.182	180		$3d^2 - 3d4p$	$ga^3F - z^3D^\circ$	2 - 2	C1, M22
Mn VI	310.908	800b		$3d^2 - 3d4p$	$ga^3F - z^3D^\circ$	4 - 3	C1, M22
Mn VI	311.748	200		$3d^2 - 3d4p$	$a^1D - z^1P^\circ$	2 - 1	C1, M22
Mn VI	312.692	160		$3d^2 - 3d4p$	$ga^3F - z^1D^\circ$	2 - 2	C1, M22
Mn VI	314.979	120		$3d^2 - 3d4p$	$a^3P - z^1P^\circ$	2 - 1	C1, M22
Mn VI?	320.146	120					C1
Mn VI	320.598	180		$3d^2 - 3d4p$	$a^3P - z^3P^\circ$	1 - 2	C1, M22
Mn VI	320.681	180		$3d^2 - 3d4p$	$a^3P - z^3P^\circ$	0 - 1	C1, M22
Mn VI	320.874	180		$3d^2 - 3d4p$	$a^3P - z^3P^\circ$	1 - 0	C1, M22
Mn VI	320.979	180		$3d^2 - 3d4p$	$a^3P - z^3P^\circ$	1 - 1	C1, M22
Mn VI	321.176	220		$3d^2 - 3d4p$	$a^3P - z^3P^\circ$	2 - 2	C1, M22
Mn VI	321.541	180		$3d^2 - 3d4p$	$a^3P - z^3P^\circ$	2 - 1	C1, M22
Mn VI	325.146	400		$3d^2 - 3d4p$	$a^1G - z^1F^\circ$	4 - 3	C1, M22
Mn VI	326.571	40		$3d^2 - 3d4p$	$a^3P - z^3F^\circ$	2 - 3	C1, M22
Mn VI	327.131	20		$3d^2 - 3d4p$	$a^3P - z^3F^\circ$	1 - 2	C1, M22
Mn VI?	328.129	40					C1
Mn VI	328.232	200		$3d^2 - 3d4p$	$a^3P - z^3D^\circ$	2 - 3	C1, M22
Mn VI	328.431	400		$3d^2 - 3d4p$	$a^1D - z^1D^\circ$	2 - 2	C1, M22
Mn VI	328.558	180		$3d^2 - 3d4p$	$a^3P - z^3D^\circ$	1 - 2	C1, M22
Mn VI	329.043	100		$3d^2 - 3d4p$	$a^3P - z^3D^\circ$	0 - 1	C1, M22
Mn VI	329.177	40		$3d^2 - 3d4p$	$a^3P - z^3D^\circ$	2 - 2	C1, M22
Mn VI	329.320	100		$3d^2 - 3d4p$	$a^3P - z^3D^\circ$	1 - 1	C1, M22

MANGANESE VII (Mn^{6+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 D_{3/2}$ (19 electrons)
 Ionization Potential $962\,001\text{ cm}^{-1}$; 119.27 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn VII	111.889	20		3d - 9f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	112.060	10		3d - 9f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	114.216	10		3d - 8f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	114.393	20		3d - 8f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	117.808	30		3d - 7f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	117.992	50		3d - 7f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	123.799	100		3d - 6f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	124.005	150		3d - 6f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	133.43	100		$3p^6 3d - 3p^5 3d(^2D^\circ)4s$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	133.66	300		$3p^6 3d - 3p^5 3d(^2D^\circ)4s$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	133.68	400		$3p^6 3d - 3p^5 3d(^2D^\circ)4s$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	133.90	100		$3p^6 3d - 3p^5 3d(^2D^\circ)4s$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	134.21	250		$3p^6 3d - 3p^5 3d(^1F^\circ)4s$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	135.177	200		3d - 5f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	135.393	250		3d - 5f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	135.425	20		3d - 5f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	135.93	200		$3p^6 3d - 3p^5 3d(^2D^\circ)4s$	$g^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	136.21	250		$3p^6 3d - 3p^5 3d(^2D^\circ)4s$	$g^2D - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	138.49	150		$3p^6 3d - 3p^5 3d(^2F^\circ)4s$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	138.74	100		$3p^6 3d - 3p^5 3d(^2F^\circ)4s$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	139.65	500		$3p^6 3d - 3p^5 3d(^2F^\circ)4s$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	140.38	250		$3p^6 3d - 3p^5 3d(^2F^\circ)4s$	$g^2D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	141.17	50		$3p^6 3d - 3p^5 3d(^2F^\circ)4s$	$g^2D - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	141.81	200		$3p^6 3d - 3p^5 3d(^2P^\circ)4s$	$g^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	142.68	200		$3p^6 3d - 3p^5 3d(^2P^\circ)4s$	$g^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	143.87	20		$3p^6 3d - 3p^5 3d(^2P^\circ)4s$	$g^2D - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	F31,C16
Mn VII	162.349	800		3d - 4f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	162.667	600		3d - 4f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	162.707	300		3d - 4f	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	182.50	700		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	G1,F11
Mn VII	182.69	600		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	G1,F11
Mn VII	182.96	600		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	G1,F11
Mn VII	183.15	700		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	G1,F11
Mn VII	202.86	900b		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	G1,F11
Mn VII	204.13	900		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^\circ$	$\frac{3}{2} - \frac{3}{2}$	G1,F11
Mn VII	249.929	20		3d - 4p	$g^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	250.771	40		3d - 4p	$g^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	251.479	10		3d - 4p	$g^2D - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	K28
Mn VII	282.095	30		4p - 6s	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K28
Mn VII	284.059	100		4p - 6s	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K28
Mn VII	462.363	150		4p - 5s	$^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K28
Mn VII	467.662	300		4p - 5s	$^2P^\circ - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K28

MANGANESE VIII (Mn⁷⁺), Z = 25
Ground State 1s²2s²2p⁶3s²3p⁶ 1S₀ (18 electrons)
Ionization Potential [1 582 500] cm⁻¹; [196.2] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn VIII	96.33	60		3p ⁶ - 3p ⁵ (² P°)4d	g ¹ S - (½, ½) ^o	0 - 1	A1
Mn VIII	97.41	70		3p ⁶ - 3p ⁵ (² P°)4d	g ¹ S - (¾, ¾) ^o	0 - 1	A1
Mn VIII	122.168	150		3p ⁶ - 3p ⁵ (² P°)4s	g ¹ S - ½[½] ^o	0 - 1	K29
Mn VIII	124.055	100		3p ⁶ - 3p ⁵ (² P°)4s	g ¹ S - ¾[¾] ^o	0 - 1	K29
Mn VIII	134.69	20		3p ⁵ 3d - 3p ⁵ 4f	² P° - ² D	0 - 1	W1
Mn VIII	134.79	40		3p ⁵ 3d - 3p ⁵ 4f	² P° - ² D	1 - 2	W1
Mn VIII	135.06	30		3p ⁵ 3d - 3p ⁵ 4f	² P° - ² D	1 - 1	W1
Mn VIII	135.15			3p ⁵ 3d - 3p ⁵ 4f	² P° - ² D	2 - 3	W1
Mn VIII	135.48			3p ⁵ 3d - 3p ⁵ 4f	² P° - ² D	2 - 2	W1
Mn VIII	137.50	100		3p ⁵ 3d - 3p ⁵ 4f	² F° - ² G	4 - 5	W1
Mn VIII	137.82	70		3p ⁵ 3d - 3p ⁵ 4f	² F° - ² G	3 - 4	W1
Mn VIII	137.92	60		3p ⁵ 3d - 3p ⁵ 4f	² F° - ² G	2 - 3	W1
Mn VIII	139.93	50		3p ⁵ 3d - 3p ⁵ 4f	¹ D° - ¹ F	2 - 3	W1
Mn VIII	140.73	50		3p ⁵ 3d - 3p ⁵ 4f	¹ D° - ¹ F	2 - 3	W1
Mn VIII	141.29	70		3p ⁵ 3d - 3p ⁵ 4f	¹ F° - ¹ F	3 - 4	W1
Mn VIII	141.76	100		3p ⁵ 3d - 3p ⁵ 4f	² D° - ¹ G	2 - 4	W1
Mn VIII	185.46	900		3p ⁶ - 3p ⁵ (² P°)3d	g ¹ S - ¹ P°	0 - 1	G1, F11

MANGANESE IX (Mn⁶⁺), Z = 25
Ground State 1s²2s²2p⁶3s²3p⁵ ²P_{3/2}^o (17 electrons)
Ionization Potential [1 785 800] cm⁻¹; [221.4] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IX	73.8	P		3p ⁵ - 3p ⁴ (¹ D)5s	g ² P° - ² D	¾ - ½	F23
Mn IX	87.24	150		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² D	¾ - ¾	F23
Mn IX	87.52	200		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² D	¾ - ½	F23
Mn IX	87.79	100		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² P	¾ - ½	F23
Mn IX	87.94	300		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² P	¾ - ¾	F23
Mn IX	88.23	250		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² D	½ - ¾	F23
Mn IX	88.40	300		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² S	¾ - ½	F23
Mn IX	88.74	200		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² P	½ - ½	F23
Mn IX	88.89	200		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² P	½ - ¾	F23
Mn IX	89.39	P		3p ⁵ - 3p ⁴ (¹ D)4d	g ² P° - ² S	½ - ½	F23
Mn IX	89.77	200		3p ⁵ - 3p ⁴ (² P)4d	g ² P° - ² F	¾ - ¾	F23
Mn IX	89.89	200		3p ⁵ - 3p ⁴ (² P)4d	g ² P° - ⁴ F	¾ - ¾	F23
Mn IX	89.99	400		3p ⁵ - 3p ⁴ (² P)4d	g ² P° - ² D	¾ - ¾	F23
Mn IX	90.08	450		3p ⁵ - 3p ⁴ (² P)4d	g ² P° - ² D	¾ - ¾	F23
Mn IX	90.60			3p ⁵ - 3p ⁴ (² P)4d	g ² P° - ² P	½ - ¾	F10
Mn IX	91.02	400		3p ⁵ - 3p ⁴ (² P)4d	g ² P° - ² D	½ - ¾	F23
Mn IX	105.256	50		3p ⁵ - 3p ⁴ (¹ S)4s	g ² P° - ² S	¾ - ½	E20
Mn IX	109.782	500		3p ⁵ - 3p ⁴ (¹ D)4s	g ² P° - ² D	¾ - ¾	E20
Mn IX	111.262	400		3p ⁵ - 3p ⁴ (¹ D)4s	g ² P° - ² D	½ - ¾	E20
Mn IX	111.500	200		3p ⁵ - 3p ⁴ (² P)4s	g ² P° - ² P	¾ - ½	E20
Mn IX	112.415	500		3p ⁵ - 3p ⁴ (² P)4s	g ² P° - ² P	¾ - ¾	E20
Mn IX	113.080	200		3p ⁵ - 3p ⁴ (² P)4s	g ² P° - ² P	½ - ½	E20
Mn IX	113.627	300		3p ⁵ - 3p ⁴ (² P)4s	g ² P° - ⁴ P	¾ - ¾	E20
Mn IX	114.023	50		3p ⁵ - 3p ⁴ (² P)4s	g ² P° - ² P	½ - ¾	E20
Mn IX	114.472	50		3p ⁵ - 3p ⁴ (² P)4s	g ² P° - ⁴ P	¾ - ¾	E20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn IX	121.351			$3p^4(^3P)3d - 3p^4(^3P)4f$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$	F10
Mn IX	121.442			$3p^4(^1D)3d - 3p^4(^1D)4f$	$^2G - ^3H^o$	$\frac{3}{2} - \frac{1}{2}$	F10
Mn IX	121.633			$3p^4(^3P)3d - 3p^4(^3P)4f$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn IX	184.80			$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F13
Mn IX	188.48	900		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F13, F11
Mn IX	189.16	800		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F13, F11
Mn IX	189.98			$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F13
Mn IX	191.60	700		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F13, F11
Mn IX	194.61	600		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F13, F11
Mn IX	196.38	500		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F13, F11
Mn IX	199.32	600		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F13, F11
Mn IX	204.43	600		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F13, F11
Mn IX	376.86			$3s^3 3p^5 - 3s 3p^6$	$g^3P^o - ^3S$	$\frac{3}{2} - \frac{1}{2}$	F22
Mn IX	395.47			$3s^3 3p^5 - 3s 3p^6$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{1}{2}$	F22

MANGANESE X (Mn⁹⁺). Z = 25Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)Ionization Potential [2 004 300] cm⁻¹; [248.5] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn X	82.78	400		$3p^4 - 3p^3(^2D^o)4d$	$^1D - ^1F^o$	2 - 3	F23
Mn X	83.03	200		$3p^4 - 3p^3(^2D^o)4d$	$^1D - ^1D^o$	2 - 2	F23
Mn X	83.48	350		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3	F23
Mn X	84.2	P		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	0 - 1	F23
Mn X	84.28	200		$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2	F23
Mn X	100.173	100		$3p^4 - 3p^3(^3P^o)4s$	$^1D - ^1P^o$	2 - 1	E19
Mn X	100.585	200		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2 - 3	E19
Mn X	100.787	100		$3p^4 - 3p^3(^2D^o)4s$	$g^3P - ^3D^o$	2 - 2	E19
Mn X	101.808	50		$3p^4 - 3p^3(^2D^o)4s$	$g^3P - ^3D^o$	1 - 2	E19
Mn X	101.854	50		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	1 - 1	E19
Mn X	102.030	50		$3p^4 - 3p^3(^2D^o)4s$	$g^3P - ^3D^o$	0 - 1	E19
Mn X	103.269	300		$3p^4 - 3p^3(^2D^o)4s$	$^1D - ^1D^o$	2 - 2	E19
Mn X	103.521	200		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	2 - 1	E19
Mn X	104.313	50		$3p^4 - 3p^3(^2P^o)4s$	$^1S - ^1P^o$	0 - 1	E19
Mn X	104.608	100		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	1 - 1	E19
Mn X	104.806	50		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	0 - 1	E19
Mn X	107.34			$3p^3 3d - 3p^3 4f$	$^5D^o - ^5F$	2 - 3	F10
Mn X	107.36			$3p^3(^2D^o)3d - 3p^3(^2D^o)4f$	$^3F^o - ^3G$	4 - 5	F10
Mn X	107.39			$3p^3 3d - 3p^3 4f$	$^5D^o - ^5F$	3 - 4	F10
Mn X	107.472			$3p^3 3d - 3p^3 4f$	$^5D^o - ^5F$	4 - 5	F10
Mn X	108.93			$3p^3(^2D^o)3d - 3p^3(^2D^o)4f$	$^3F^o - ^3G$	4 - 5	F10
Mn X	108.97			$3p^3(^2D^o)3d - 3p^3(^2D^o)4f$	$^3F^o - ^3G$	3 - 4	F10
Mn X	192.99	600		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	2 - 2	F11, F2
Mn X	193.45	600		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^1F^o$	2 - 3	G1, F11
Mn X	194.30	600		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3D^o$	2 - 3	G1, F11
Mn X	194.37			$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	1 - 1	F2
Mn X	195.03	600		$3p^4 - 3p^3(^2P^o)3d$	$g^3P - ^3D^o$	0 - 1	G1, F11
Mn X	195.85	500		$3p^4 - 3p^3(^2P^o)3d$	$g^3P - ^3D^o$	1 - 2	G1, F11
Mn X	198.42			$3p^4 - 3p^3(^3D^o)3d$	$^1S - ^1P^o$	0 - 1	F7
Mn X	199.08	800		$3p^4 - 3p^3(^3P^o)3d$	$^1D - ^1D^o$	2 - 2	F13, F11
Mn X	202.86	900b		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	2 - 2	F13, F11
Mn X	207.06			$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$	1 - 1	F13
Mn X	207.98	400		$3p^4 - 3p^3(^2P^o)3d$	$^1D - ^3D^o$	2 - 3	F11, K8
Mn X	217.88			$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^3P^o$	2 - 2	F7
Mn X	218.11			$3p^4 - 3p^3(^2D^o)3d$	$^1D - ^3P^o$	2 - 1	F7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn X	333.73			$3s^2 3p^4 - 3s 3p^5$	$^1D - ^1P^o$	2 - 1	F7
Mn X	371.88			$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	2 - 1	F7
Mn X	383.00			$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	2 - 2	F7
Mn X	386.27			$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3F^o$	1 - 1	F7
Mn X	388.91			$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	0 - 1	F7
Mn X	398.28			$3s^2 3p^4 - 3s 3p^5$	$^3P - ^3P^o$	1 - 2	F7
Mn X	1574.9	f		$3p^4 - 3p^4$	4S	1 - 0	S28

MANGANESE XI (Mn^{10+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [2 283 000] cm^{-1} ; [283] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XI	75.059			$3p^3 - 3p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	75.227			$3p^3 - 3p^2(^3P)4d$	$g^4S^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	75.477			$3p^3 - 3p^2(^3P)4d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	75.819			$3p^3 - 3p^2(^1D)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	75.879			$3p^3 - 3p^2(^1D)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	76.380			$3p^3 - 3p^2(^3P)4d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	76.763			$3p^3 - 3p^2(^3P)4d$	$^2D^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	76.858			$3p^3 - 3p^2(^1D)4d$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F10
Mn XI	77.270			$3p^3 - 3p^2(^3P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	77.402			$3p^3 - 3p^2(^3P)4d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	77.556			$3p^3 - 3p^2(^1D)4d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	78.056			$3p^3 - 3p^2(^3P)4d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F10
Mn XI	91.646			$3p^3 - 3p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	92.240			$3p^3 - 3p^2(^3P)4s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	92.640			$3p^3 - 3p^2(^1D)4s$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	94.327			$3p^3 - 3p^2(^1P)4s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	95.299			$3p^3 - 3p^2(^1D)4s$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	95.390			$3p^3 - 3p^2(^1D)4s$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	98.023			$3p^2(^3P)3d - 3p^2(^3P)4f$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	98.064			$3p^2(^3P)3d - 3p^2(^3P)4f$	$^4F - ^4G^o$	$\frac{3}{2} - \frac{1}{2}$	F10
Mn XI	98.477			$3p^2(^3P)3d - 3p^2(^3P)4f$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	98.538			$3p^2(^3P)3d - 3p^2(^3P)4f$	$^4D - ^4F^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	99.02			$3p^2(^1D)3d - 3p^2(^3P)4f$	$^2F - ^2G^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Mn XI	99.356			$3p^2(^1D)3d - 3p^2(^1D)4f$	$^2G - ^2H^o$	$\frac{3}{2} - \frac{1}{2}$	F10
Mn XI	200.67	600		$3p^3 - 3p^2(^3P)3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F7, F11
Mn XI	202.38			$3p^3 - 3p^2(^3P)3d$	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F7
Mn XI	204.29			$3p^3 - 3p^2(^3P)3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	204.98			$3p^3 - 3p^2(^3P)3d$	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	207.02			$3p^3 - 3p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F7
Mn XI	208.02			$3p^3 - 3p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	209.57			$3p^3 - 3p^2(^3P)3d$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	210.16			$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	211.54			$3p^3 - 3p^2(^1D)3d$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	213.75			$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F7
Mn XI	215.86			$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	216.60			$3p^3 - 3p^2(^1D)3d$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F7
Mn XI	228.52			$3p^3 - 3p^2(^3P)3d$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F7
Mn XI	235.55			$3p^3 - 3p^2(^3P)3d$	$^2D^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	306.46			$3s^2 3p^3 - 3s 3p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F7
Mn XI	310.61			$3s^2 3p^3 - 3s 3p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XI	313.80			$3s^2 3p^3 - 3s 3p^4$	$^2D^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	363.46			$3s^2 3p^3 - 3s 3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	366.01			$3s^2 3p^3 - 3s 3p^4$	$^2D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	376.81			$3s^2 3p^3 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F7
Mn XI	382.07			$3s^2 3p^3 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	393.69			$3s^2 3p^3 - 3s 3p^4$	$g^4S^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F7
Mn XI	1359.5	f		$3p^2 - 3p^3$	$g^4S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{3}{2}$	S28
Mn XI	1450.5	f		$3p^2 - 3p^3$	$g^4S^\circ - ^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	S28

MANGANESE XII (Mn^{11+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [2 524 600] cm^{-1} ; [313] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XII	90.373			$3p 3d - 3p 4f$	$^2F^\circ - ^2G$	4 - 5	F10
Mn XII	90.701			$3p 3d - 3p 4f$	$^2F^\circ - ^2G$	3 - 4	F10
Mn XII	204.92			$3p^2 - 3p 3d$	$^1S - ^1P^\circ$	0 - 1	K8
Mn XII	210.34			$3p^2 - 3p 3d$	$^1D - ^1F^\circ$	2 - 3	F17
Mn XII	212.81			$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	0 - 1	F7
Mn XII	215.03			$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	1 - 2	F7
Mn XII	216.12			$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	1 - 1	F7
Mn XII	217.10			$3p^2 - 3p 3d$	$g^2P - ^2P^\circ$	0 - 1	F7
Mn XII	218.56			$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	2 - 3	F17
Mn XII	218.70			$3p^2 - 3p 3d$	$g^2P - ^2D^\circ$	2 - 2	F7
Mn XII	219.54			$3p^2 - 3p 3d$	$g^2P - ^1D^\circ$	1 - 2	F7
Mn XII	223.56			$3p^2 - 3p 3d$	$^1S - ^1P^\circ$	0 - 1	F7
Mn XII	224.62			$3p^2 - 3p 3d$	$g^2P - ^2P^\circ$	1 - 2	F7
Mn XII	228.61			$3p^2 - 3p 3d$	$g^2P - ^2P^\circ$	2 - 2	F7
Mn XII	237.78			$3p^2 - 3p 3d$	$^1D - ^1D^\circ$	2 - 2	F7
Mn XII	259.33			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2S^\circ$	0 - 1	F7
Mn XII	264.26			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2S^\circ$	1 - 1	F7
Mn XII	269.82			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2S^\circ$	2 - 1	F7
Mn XII	275.78			$3s^2 3p^2 - 3s 3p^3$	$^1D - ^1P^\circ$	2 - 1	F7
Mn XII	310.63			$3s^2 3p^2 - 3s 3p^3$	$^1S - ^1P^\circ$	0 - 1	K8
Mn XII	329.28			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2P^\circ$	0 - 1	F7
Mn XII	337.29			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2P^\circ$	1 - 1	F7
Mn XII	342.67			$3s^2 3p^2 - 3s 3p^3$	$^1D - ^1D^\circ$	2 - 2	F7
Mn XII	346.04			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^1P^\circ$	2 - 2	F7
Mn XII	386.27			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^\circ$	0 - 1	F7
Mn XII	388.91			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^\circ$	1 - 2	F7
Mn XII	397.46			$3s^2 3p^2 - 3s 3p^3$	$g^2P - ^2D^\circ$	2 - 3	F7
Mn XII	1322.8	f		$3p^2 - 3p^2$	$g^2P - ^1S$	1 - 0	S28

MANGANESE XIII (Mn^{12+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 P_{1/2}$ (13 electrons)
 Ionization Potential [2 758 500] cm^{-1} ; [342] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XIII	66.574	100		3p - 4d	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	E18
Mn XIII	67.215	200		3p - 4d	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	E18
Mn XIII	79.16			$3s 3p^2 - 3s 3p 4s$	$^4 P^o - ^4 P^o$	$\frac{3}{2} - \frac{5}{2}$	F10
Mn XIII	83.23			$3s 3p 3d - 3s 3p 4f$	$^4 F^o - ^4 G$	$\frac{3}{2} - \frac{5}{2}$	F10
Mn XIII	83.41			$3s 3p^2 - 3s 3p 4f$	$^4 F^o - ^4 G$	$\frac{3}{2} - \frac{5}{2}$	F10
Mn XIII	83.52			$3s 3p 3d - 3s 3p 4f$	$^4 F^o - ^4 G$	$\frac{3}{2} - \frac{5}{2}$	F10
Mn XIII	87.30			3d - 4f	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{5}{2}$	F10
Mn XIII	87.40			3d - 4f	$^2 D - ^2 F^o$	$\frac{3}{2} - \frac{5}{2}$	F10
Mn XIII	226.91			3p - 3d	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F17
Mn XIII	232.12			$3s 3p^2 - 3s 3p 3d$	$^4 P - ^4 D^o$	$\frac{3}{2} - \frac{5}{2}$	F7
Mn XIII	233.73			$3s 3p^2 - 3s 3p 3d$	$^4 P - ^4 D^o$	$\frac{3}{2} - \frac{5}{2}$	F7
Mn XIII	234.24			3p - 3d	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F17
Mn XIII	235.08			3p - 3d	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F7
Mn XIII	272.09			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	F7
Mn XIII	277.42			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	F7
Mn XIII	283.91			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{5}{2}$	F7
Mn XIII	289.74			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{5}{2}$	F7
Mn XIII	294.95			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{3}{2}$	F7
Mn XIII	308.75			$3s 3p^2 - 3p^2$	$^4 P - ^4 S^o$	$\frac{3}{2} - \frac{5}{2}$	F7
Mn XIII	308.92			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{5}{2}$	F7
Mn XIII	361.57			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F7
Mn XIII	380.42			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F7
Mn XIII	382.76			$3s^2 3p - 3s 3p^2$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F7

MANGANESE XIV (Mn^{13+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 ^1 S_0$ (12 electrons)
 Ionization Potential [3 259 000] cm^{-1} ; [404] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XIV	57.224	20		3s 3d - 3s 5f	$^2 D - ^2 F^o$	3 - 4	E18
Mn XIV	59.325	100		$3s^2 - 3s 4p$	$g^1 S - ^1 P^o$	0 - 1	E18
Mn XIV	62.526	50		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	0 - 1	E18
Mn XIV	62.694	100		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	1 - 2	E18
Mn XIV	62.713	20		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	1 - 1	E18
Mn XIV	63.109	200		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	2 - 3	E18
Mn XIV	63.146	20		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	2 - 2	E18
Mn XIV	67.02			$3s 3p - 3s 4d$	$^1 P^o - ^1 D$	1 - 2	F10
Mn XIV	74.063	20		$3s 3p - 3s 4s$	$^3 P^o - ^2 S$	0 - 1	E18
Mn XIV	74.327	50		$3s 3p - 3s 4s$	$^2 P^o - ^2 S$	1 - 1	E18
Mn XIV	74.961	100		$3s 3p - 3s 4s$	$^3 P^o - ^2 S$	2 - 1	E18
Mn XIV	78.35			3p 3d - 3p 4f	$^2 F^o - ^2 G$	4 - 5	F10
Mn XIV	78.42			3p 3d - 3p 4f	$^2 F^o - ^2 G$	2 - 3	F10
Mn XIV	78.54			3p 3d - 3p 4f	$^2 F^o - ^2 G$	3 - 4	F10
Mn XIV	79.10			3p 3d - 3p 4f	$^1 D^o - ^2 F$	2 - 3	F10
Mn XIV	79.720	100		$3s 3d - 3s 4f$	$^3 D - ^2 F^o$	1 - 2	E18
Mn XIV	79.761	200		$3s 3d - 3s 4f$	$^3 D - ^2 F^o$	2 - 3	E18
Mn XIV	79.826	300		$3s 3d - 3s 4f$	$^2 D - ^2 F^o$	3 - 4	E18
Mn XIV	80.06			3p 3d - 3p 4f	$^3 P^o - ^3 D$	0 - 1	F10
Mn XIV	80.38			3p 3d - 3p 4f	$^2 D^o - ^3 D$	2 - 2	F10

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XIV	80.46			3p3d - 3p4f	$^3D^{\circ} - ^3D$	3-3	F10
Mn XIV	81.05			3p3d - 3p4f	$^3D^{\circ} - ^3F$	3-4	F10
Mn XIV	83.78			3p3d - 3p4f	$^1P^{\circ} - ^1D$	1-2	F10
Mn XIV	84.09			3p3d - 3p4f	$^1F^{\circ} - ^1G$	3-4	F10
Mn XIV	241.07			3s3p - 3s3d	$^3P^{\circ} - ^3D$	0-1	F17
Mn XIV	243.45			3s3p - 3s3d	$^3P^{\circ} - ^3D$	1-2	F17
Mn XIV	243.88			3s3p - 3s3d	$^3P^{\circ} - ^3D$	1-1	F17
Mn XIV	249.64			3s3p - 3s3d	$^3P^{\circ} - ^3D$	2-3	F17
Mn XIV	260.41			3p ² - 3p3d	$^3P^{\circ} - ^3P^{\circ}$	2-2	F4
Mn XIV	304.85			3s ² - 3s3p	$g^1S - ^1P^{\circ}$	0-1	F7
Mn XIV	315.88			3s3p - 3p ²	$^3P^{\circ} - ^3P$	1-2	F7
Mn XIV	325.34			3s3p - 3p ²	$^3P^{\circ} - ^3P$	0-1	F7
Mn XIV	327.34			3s3p - 3p ²	$^3P^{\circ} - ^3P$	2-2	F7
Mn XIV	330.49			3s3p - 3p ²	$^3P^{\circ} - ^3P$	1-1	F7
Mn XIV	339.19			3s3p - 3p ²	$^3P^{\circ} - ^3P$	1-0	F7
Mn XIV	342.56			3s3d - 3p3d	$^3D - ^3D^{\circ}$	3-3	F4
Mn XIV	343.60			3s3p - 3p ²	$^3P^{\circ} - ^3P$	2-1	F7
Mn XIV	349.64			3s3p - 3p ²	$^1P^{\circ} - ^1S$	1-0	F4
Mn XIV	402.99			3s3d - 3p3d	$^3D - ^3F^{\circ}$	3-4	F4
Mn XIV	416.42			3s3d - 3p3d	$^3D - ^3F^{\circ}$	2-3	F4
Mn XIV	429.24			3s3d - 3p3d	$^3D - ^3F^{\circ}$	1-2	F4
Mn XIV	446.07	?		3s ² - 3s3p	$g^1S - ^3P^{\circ}$	0-1	K8
Mn XIV	518.16			3s3p - 3s3d	$^1P^{\circ} - ^1D$	1-2	F4

MANGANESE XV (Mn^{14+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)
 Ionization Potential $3\ 511\ 210\ cm^{-1}$; 435.3 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XV	19.155	P	-A	$2p^6 3s - 2p^5 3s^2$	$g^2S - ^2P^{\circ}$	$1/2 - 1/2$	F27
Mn XV	19.450	P	-A	$2p^6 3s - 2p^5 3s^2$	$g^2S - ^2P^{\circ}$	$1/2 - 3/2$	F27
Mn XV	45.137			3p - 5d	$^3P^{\circ} - ^3D$	$3/2 - 3/2$	E16
Mn XV	52.977			3d - 5f	$^3D - ^3F^{\circ}$	$3/2 - 3/2$	E16
Mn XV	53.032			3d - 5f	$^3D - ^3F^{\circ}$	$3/2 - 7/2$	E16
Mn XV	56.270			3s - 4p	$g^2S - ^2P^{\circ}$	$1/2 - 3/2$	E16
Mn XV	56.484			3s - 4p	$g^2S - ^2P^{\circ}$	$1/2 - 1/2$	E16
Mn XV	60.720			3p - 4d	$^2P^{\circ} - ^2D$	$1/2 - 3/2$	E16
Mn XV	61.319			3p - 4d	$^2P^{\circ} - ^2D$	$3/2 - 3/2$	E16
Mn XV	61.551			3p - 4d	$^2P^{\circ} - ^2D$	$3/2 - 3/2$	E16
Mn XV	71.038			3p - 4s	$^2P^{\circ} - ^2S$	$1/2 - 1/2$	E16
Mn XV	71.927			3p - 4s	$^2P^{\circ} - ^2S$	$3/2 - 1/2$	E16
Mn XV	75.182			3d - 4f	$^3D - ^3F^{\circ}$	$3/2 - 3/2$	E16
Mn XV	75.286			3d - 4f	$^3D - ^3F^{\circ}$	$3/2 - 7/2$	E16
Mn XV	87.47			3d - 4p	$^3D - ^3P^{\circ}$	$3/2 - 3/2$	F10
Mn XV	87.80			3d - 4p	$^3D - ^3P^{\circ}$	$3/2 - 1/2$	F10
Mn XV	269.11			3p - 3d	$^2P^{\circ} - ^2D$	$1/2 - 3/2$	F22
Mn XV	280.35			3p - 3d	$^2P^{\circ} - ^2D$	$3/2 - 3/2$	F22
Mn XV	282.18			3p - 3d	$^2P^{\circ} - ^2D$	$3/2 - 3/2$	F22
Mn XV	360.97			3s - 3p	$g^2S - ^2P^{\circ}$	$1/2 - 3/2$	F22
Mn XV	384.74			3s - 3p	$g^2S - ^2P^{\circ}$	$1/2 - 1/2$	F22

MANGANESE XVI (Mn¹⁵⁺), Z = 25
Ground State 1s²2s²2p⁶ 1S₀ (10 electrons)
Ionization Potential 9 164 300 cm⁻¹; 1136.2 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XVI	11.853	20		2p ⁶ - 2p ⁶ 6d	g ¹ S - ¹ P°	0 - 1	S31
Mn XVI	11.971	10		2p ⁶ - 2p ⁶ 6d	g ¹ S - ³ D°	0 - 1	S31
Mn XVI	12.373	20		2p ⁶ - 2p ⁶ 5d	g ¹ S - ¹ P°	0 - 1	S1
Mn XVI	12.510	50		2p ⁶ - 2p ⁶ 5d	g ¹ S - ³ D°	0 - 1	S31
Mn XVI	13.46	60		2p ⁶ - 2p ⁶ 4d	g ¹ S - ½[½]°	0 - 1	T14, S31, M22
Mn XVI	13.61	50		2p ⁶ - 2p ⁶ 4d	g ¹ S - ¾[¾]°	0 - 1	T14, S31, M22
Mn XVI	14.098	30		2p ⁶ - 2p ⁶ 4s	g ¹ S - ² P°	0 - 1	S31
Mn XVI	15.238	20		2s ² 2p ³ - 2s2p ⁴ 3p	g ¹ S - ¹ P°	0 - 1	T14, S31, M22
Mn XVI	15.312	20		2s ² 2p ³ - 2s2p ⁴ 3p	g ¹ S - ³ P°	0 - 1	T14, S31, M22
Mn XVI	16.616	100		2p ⁶ - 2p ⁶ 3d	g ¹ S - ½[½]°	0 - 1	T14, S31, M22
Mn XVI	16.882	80		2p ⁶ - 2p ⁶ 3d	g ¹ S - ¾[¾]°	0 - 1	T14, S31, M22
Mn XVI	17.095	40		2p ⁶ - 2p ⁶ 3d	g ¹ S - ½[½]°	0 - 1	T14, S31, M22
Mn XVI	18.654			2p ⁶ - 2p ⁶ 3s	g ¹ S - ½[½]°	0 - 1	T14, M22
Mn XVI	18.935			2p ⁶ - 2p ⁶ 3s	g ¹ S - ¾[¾]°	0 - 1	T14, M22

MANGANESE XVII (Mn¹⁶⁺), Z = 25
Ground State 1s²2s²2p⁵ ²P<sub>3/2}° (9 electrons)
Ionization Potential [9 840 300] cm⁻¹; [1220] eV</sub>

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XVII	12.181	20		2p ⁵ - 2p ⁴ (¹ S)4d	g ² P° - ² D		S31
Mn XVII	12.643	40		2p ⁵ - 2p ⁴ (³ P)4d	g ² P° - ² D		S31
Mn XVII	15.403	20		2p ⁵ - 2p ⁴ (¹ S)3d	g ² P° - ² D	½ - ½	S31
Mn XVII	15.584	80		2p ⁵ - 2p ⁴ (¹ S)3d	g ² P° - ² D	½ - ½	S31
Mn XVII	15.675	40		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² P	½ - ½	S31
Mn XVII	15.738	50		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² P	½ - ½	S31
Mn XVII	15.822	100		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² D	½ - ½	S31
Mn XVII	15.881	20		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² D	½ - ½	S31
Mn XVII	15.936	50		2p ⁵ - 2p ⁴ (¹ D)3d	g ² P° - ² P	½ - ½	S31, K8
Mn XVII	15.98	P		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² P	½ - ½	C10
Mn XVII	16.048	30		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² D	½ - ½	S31
Mn XVII	16.121	20		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ⁴ D	½ - ½	S31
Mn XVII	16.20	10		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² P	½ - ½	C10
Mn XVII	16.28	0		2p ⁵ - 2p ⁴ (³ P)3d	g ² P° - ² P	½ - ½	C10
Mn XVII	17.29	20		2p ⁵ - 2p ⁴ (¹ D)3s	g ² P° - ² D	½ - ½	C10
Mn XVII	17.50			2p ⁵ - 2p ⁴ (¹ D)3s	g ² P° - ² D	½ - ½	C10
Mn XVII	17.59			2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ² P	½ - ½	F17, C10
Mn XVII	17.72	30		2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ⁴ P	½ - ½	C10
Mn XVII	17.80			2p ⁵ - 2p ⁴ (³ P)3s	g ² P° - ⁴ P	½ - ½	C10
Mn XVII	17.90	?		2s2p ⁶ - 2s2p ⁵ 3s	² S - ² P°	½ - ½	K8
Mn XVII	100.09			2s ² 2p ⁵ - 2s2p ⁶	g ² P° - ² S	½ - ½	F5
Mn XVII	109.35			2s ² 2p ⁵ - 2s2p ⁶	g ² P° - ² S	½ - ½	F5

MANGANESE XVIII (Mn¹⁷⁺), Z = 25
 Ground State 1s²2s²2p⁴ ³P₂ (8 electrons)
 Ionization Potential [10 590 000] cm⁻¹; [1313] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XVIII	14.877	70		2p ⁴ - 2p ³ 3d	g ³ P - ³ P°	2 - 2	S31
Mn XVIII	16.53 ?			2p ⁴ - 2p ³ (⁴ S')3s	g ³ P - ³ S°	2 - 1	K8
Mn XVIII	16.73 ?			2p ⁴ - 2p ³ (⁴ S')3s	g ³ P - ³ S°	1 - 1	K8
Mn XVIII	96.22			2s ² 2p ⁴ - 2s2p ³	¹ D - ¹ P°	2 - 1	F5
Mn XVIII	108.70			2s ² 2p ⁴ - 2s2p ³	g ³ P - ³ P°	2 - 1	F5
Mn XVIII	111.93 ?			2s ² 2p ⁴ - 2s2p ³	¹ S - ¹ P°	0 - 1	K6
Mn XVIII	113.3			2s ² 2p ⁴ - 2s2p ³	g ³ P - ³ P°	1 - 0	F5
Mn XVIII	115.33			2s ² 2p ⁴ - 2s2p ³	g ³ P - ³ P°	2 - 2	F5
Mn XVIII	117.2			2s ² 2p ⁴ - 2s2p ³	g ³ P - ³ P°	0 - 1	F5
Mn XVIII	118.2			2s ² 2p ⁴ - 2s2p ³	g ³ P - ³ P°	1 - 1	F5
Mn XVIII	126.0			2s ² 2p ⁴ - 2s2p ³	g ³ P - ³ P°	1 - 2	F5

MANGANESE XIX (Mn¹⁸⁺), Z = 25
 Ground State 1s²2s²2p³ ⁴S_{3/2} (7 electrons)
 Ionization Potential [11 542 000] cm⁻¹; [1431] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XIX	14.205	20		2p ³ - 2p ² 3d	³ P° - ³ D	½ - ½	S31
Mn XIX	14.752	49		2p ³ - 2p ² 3d	³ P° - ³ D	¾ - ¾	S31
Mn XIX	89.3			2s ² 2p ³ - 2s2p ²	³ D° - ³ P	¾ - ½	F5
Mn XIX	99.1			2s ² 2p ³ - 2s2p ²	³ D° - ³ P	¾ - ¾	F5
Mn XIX	117.6			2s ² 2p ³ - 2s2p ²	³ D° - ³ D	¾ - ¾	F5
Mn XIX	118.41 ?			2s ² 2p ³ - 2s2p ²	³ P° - ³ S	¾ - ½	K8
Mn XIX	120.5			2s ² 2p ³ - 2s2p ²	³ D° - ³ D	¾ - ¾	F5
Mn XIX	144.86 ?			2s ² 2p ³ - 2s2p ²	g ⁴ S° - ⁴ P	¾ - ¾	K8

MANGANESE XX (Mn¹⁹⁺), Z = 25
 Ground State 1s²2s²2p² ³P₀ (6 electrons)
 Ionization Potential [12 389 000] cm⁻¹; [1536] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XX	13.55 ?			2p ² - 2p3d	¹ D - ¹ P°	2 - 1	K8
Mn XX	13.67 ?			2p ² - 2p3d	g ³ P - ³ P°	2 - 2	K8
Mn XX	13.68 ?			2p ² - 2p3d	g ³ P - ³ D°	2 - 3	K8
Mn XX	13.71 ?			2p ² - 2p3d	¹ S - ¹ P°	0 - 1	K8
Mn XX	13.86 ?			2p ² - 2p3d	¹ D - ¹ D°	2 - 2	K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XX	14.325	20		$2p^2 - 2p3s$	$g^3P - ^1P^o$	1 - 1	S31
Mn XX	14.47	?		$2p^2 - 2p3s$	$g^3P - ^3P^o$	2 - 2	K8
Mn XX	14.53	?		$2p^2 - 2p3s$	$^1D - ^1P^o$	2 - 1	K8
Mn XX	14.650	20		$2p^2 - 2p3s$	$^1D - ^3P^o$?	S31, K8
Mn XX	14.698	20		$2p^2 - 2p3s$	$^1S - ^1P^o$?	S31, K8
Mn XX	114.98	?		$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1P^o$	2 - 1	K8
Mn XX	123.48	?		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3S^o$	2 - 1	K8
Mn XX	129.42	?		$2s^2 2p^2 - 2s 2p^3$	$^1S - ^1P^o$	0 - 1	K8
Mn XX	130.06	?		$2s^2 2p^2 - 2s 2p^3$	$^1D - ^1D^o$	2 - 2	K8
Mn XX	151.74	?		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3F^o$	1 - 2	K8
Mn XX	162.16	?		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^o$	2 - 2	K8
Mn XX	165.22	?		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3P^o$	2 - 1	K8
Mn XX	197.82	?		$2s^2 2p^2 - 2s 2p^3$	$g^3P - ^3D^o$	2 - 3	K8

MANGANESE XXI (Mn^{20+}), $Z = 25$
 Ground State $1s^2 2s^2 2p^2 P_{1/2}^o$ (5 electrons)
 Ionization Potential [13 228 060] cm^{-1} ; [1640] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XXI	10.04	?		$2p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8
Mn XXI	13.01	?		$2p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K8
Mn XXI	13.73	?		$2p - 3s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8
Mn XXI	131.55	?		$2s^2 2p - 2s 2p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K8
Mn XXI	151.21	?		$2s^2 2p - 2s 2p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8

MANGANESE XXII (Mn^{21+}), $Z = 25$
 Ground State $1s^2 2s^2 ^1S_0$ (4 electrons)
 Ionization Potential [14 357 000] cm^{-1} ; [1780] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XXII	8.19	?		$2s^2 - 2s 5p$	$g^1S - ^3P^o$	0 - 1	K8
Mn XXII	9.13	?		$2s^2 - 2s 4p$	$g^1S - ^3P^o$	0 - 1	K8
Mn XXII	11.59	?		$2s^2 - 2p 3s$	$g^1S - ^1P^o$	0 - 1	K8
Mn XXII	155.46	?		$2s^2 - 2s 2p$	$g^1S - ^1P^o$	0 - 1	K8
Mn XXII	297.07	?		$2s^2 - 2s 2p$	$g^1S - ^3P^o$	0 - 1	K8

MANGANESE XXIII (Mn^{22+}), $Z = 25$
 Ground State $1s^2 2s^2 S_{1/2}$ (3 electrons)
 Ionization Potential [15 156 000] cm^{-1} ; [18791] eV

Ekmet	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XXIII	7.59	P		2p - 6d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
Mn XXIII	7.65	P		2p - 6d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
Mn XXIII	7.79	P		2s - 5p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G15
Mn XXIII	8.02	P		2p - 5d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
Mn XXIII	8.09	P		2p - 5d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
Mn XXIII	8.68	P		2s - 4p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G15
Mn XXIII	8.96	P		2p - 4d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
Mn XXIII	9.09	P		2p - 4d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
Mn XXIII	11.55	P		2s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	G15
Mn XXIII	13.60	P		2s - 3p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	G15
Mn XXIII	12.01	P		2p - 3d	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G15
Mn XXIII	12.158		20	2p - 3d	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	G15
Mn XXIII	12.222		20	2p - 3s	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	G15
Mn XXIII	12.385		200	2p - 3s	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	G15
Mn XXIII	199.93	P		2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	K8
Mn XXIII	258.02	P		2s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	K8

MANGANESE XXIV (Mn^{23+}), $Z = 25$
 Ground State $1s^2 ^1S_0$ (2 electrons)
 Ionization Potential [65 563 000] cm^{-1} ; [8141] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XXIV	1.72			$1s^2 - 1s3p$	$g^1S - ^2P^{\circ}$	0 - 1	C11
Mn XXIV	2.01	P		$1s^2 - 1s2p$	$g^1S - ^1P^{\circ}$	0 - 1	K8, C11
Mn XXIV	2.02			$1s^2 - 1s2p$	$g^1S - ^2P^{\circ}$	0 - 1	C11
Mn XXIV	2.05	?	f	$1s^2 - 1s2s$	$g^1S - ^2S$	0 - 1	K8

MANGANESE XXV (Mn^{24+}), $Z = 25$
 Ground State $1s^2 S_{1/2}$ (1 electron)
 Ionization Potential [69 135 600] cm^{-1} ; [8571.5] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Mn XXV	1.94	P		1s - 2p	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	K8

IRON, Z = 26

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe ?	9.25	9					C9
Fe	9.507	0					S31
Fe	9.990	10					S31
Fe	10.501	20					C8
Fe	10.530	10					C8
Fe ?	10.623						C8
Fe ?	10.741						C8
Fe	10.811	20					S31
Fe	10.873	10					S31
Fe ?	10.905						C8
Fe	10.926	10					S31
Fe	10.97	0					S31
Fe	11.074	0					S31
Fe	11.360						S31
Fe	11.480	10					S31
Fe	11.521	40					S31
Fe	11.628	10					C9
Fe	11.772	10					C9
Fe	11.994	10					C9
Fe	12.016	20					C9
Fe	12.076	10					C9
Fe	12.454	10					C9
Fe	12.780	20					S31
Fe	12.882	20					C9
Fe	12.915	10					C9
Fe	13.793	30					C9
Fe	14.609	20					C9
Fe	14.733	10					C9
Fe	14.750	20					C9
Fe	14.870	20					C9
Fe	14.908	20					C9
Fe	15.042	50					C9
Fe	15.558	10					C9
Fe	16.303	10					C9
Fe	16.336	20					C9
Fe	16.506	10					S31
Fe	16.892	20					C9
Fe	17.127	20					C9
Fe	17.162	10					C8
Fe	17.367	20					C9
Fe	17.402	20					C8
Fe	17.450	20					C9
Fe	17.469	20					C9
Fe	17.548	10					C9
Fe	17.597	10					C9
Fe	17.622	20					C9
Fe	155.78						H9
Fe	155.81						H9
Fe	163.52						H9
Fe	165.47	500					F11
Fe	166.35	600					F11
Fe	169.88	600					F11
Fe	176.32	400					F11
Fe	178.15	600					F11
Fe	179.00	500					F11
Fe	179.23	400					F11
Fe	186.86	500					F11
Fe	190.45						H9
Fe	194.31						H9
Fe	200.37						H9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe	204.77	400					F11
Fe	205.31						H ^o
Fe	208.44	200					F11
Fe	209.75	306					F11
Fe	210.40	300					F11

IRON I (Fe⁰⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p⁶3d⁶4s² ⁵D₄ (26 electrons)
Ionization Potential 63 480 cm⁻¹; 7.870 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe I	1737.63	0		3d ⁶ 4s ² -	ga ⁵ D - t ³ F ^o	? 4-4	J6, K8
Fe I	1749.77	1		3d ⁶ 4s ² -	ga ⁵ D - 24 ^o	? 3-3	J6, K8
Fe I	1761.08	0		3d ⁶ 4s ² - 3d ⁷ (a ² D)4p	ga ⁵ D - u ³ F ^o	? 4-3	J6, K8
Fe I	1839.65	0		3d ⁶ 4s ² -	ga ⁵ D - 23 ^o	? 4-3	J6, K8
Fe I	1839.80	3		3d ⁷ (a ⁴ F)4s -	a ⁵ F - 26 ^o	? 3-2	J6, K8
Fe I	1842.05	0		3d ⁶ 4s ² -	ga ⁵ D - 22 ^o	? 4-3	J6, K8
Fe I	1851.39	0		3d ⁶ 4s ² -	ga ⁵ D - 12 ^o	? 4-5	J6, K8
Fe I	1855.58	100	41	3d ⁶ 4s ² -	ga ⁵ D - 10 ^o	4-3	R27
Fe I	1856.23	0		3d ⁶ 4s ² -	ga ⁵ D - 22 ^o	? 3-3	J6, K8
Fe I	1859.26	40		3d ⁶ 4s ² -	ga ⁵ D - 20 ^o	4-3	K14
Fe I	1862.318	100	39	3d ⁶ 4s ² - 3d ⁶ 4s(b ⁴ D)4p	ga ⁵ D - t ⁵ P ^o	3-2	G22
Fe I	1863.54	10	40	3d ⁶ 4s ² -	ga ⁵ D - y ¹ F ^o	4-3	R27
Fe I	1865.30	300		3d ⁶ 4s ² -	ga ⁵ D - 17 ^o	4-4	K14
Fe I	1866.07	80	42	3d ⁶ 4s ² -	ga ⁵ D - 11 ^o	3-3	R27
Fe I	1866.815	40	39	3d ⁶ 4s ² - 3d ⁶ 4s(b ⁴ D)4p	ga ⁵ D - t ⁵ P ^o	2-1	G22
Fe I	1870.36	0		3d ⁶ 4s ² -	ga ⁵ D - 21 ^o	? 3-4	J6, K8
Fe I	1872.359	160	39	3d ⁶ 4s ² - 3d ⁶ 4s(b ⁴ D)4p	ga ⁵ D - t ⁵ P ^o	2-2	G??
Fe I	1873.052	160	39	3d ⁶ 4s ² - 3d ⁶ 4s(b ⁴ D)4p	ga ⁵ D - t ⁵ P ^o	4-3	G22
Fe I	1873.259	100	39	3d ⁶ 4s ² - 3d ⁶ 4s(b ⁴ D)4p	ga ⁵ D - t ⁵ P ^o	1-1	G22
Fe I	1874.58	3		3d ⁶ 4s ² -	ga ⁵ D - x ¹ F ^o	? 3-3	J6, K8
Fe I	1875.14	0		3d ⁶ 4s ² -	ga ⁵ D - 9 ^o	? 4-4	J6, K8
Fe I	1876.419	40	39	3d ⁶ 4s ² - 3d ⁶ 4s(b ⁴ D)4p	ga ⁵ D - t ⁵ P ^o	0-1	G22
Fe I	1878.06	1		3d ⁶ 4s ² -	ga ⁵ D - y ¹ F ^o	? 3-3	J6, K8
Fe I	1878.20	0		3d ⁷ (a ⁴ F)4s -	a ⁵ F - r ³ G ^o	? 5-4	J6, K8
Fe I	1878.849	20	39	3d ⁶ 4s ² - 3d ⁶ 4s(b ⁴ D)4p	ga ⁵ D - t ⁵ P ^o	1-2	G22
Fe I	1879.86	2		3d ⁶ 4s ² -	ga ⁵ D - 17 ^o	? 3-4	J6, K8
Fe I	1880.14	35	41	3d ⁶ 4s ² -	ga ⁵ D - 10 ^o	2-3	R27
Fe I	1883.06	0		3d ⁶ 4s ² - 3d ⁷ (a ² P)4p	ga ⁵ D - v ³ P ^o	? 2-1	J6, K8
Fe I	1883.91	40		3d ⁶ 4s ² -	ga ⁵ D - 20 ^o	2-3	K14
Fe I	1884.73	2		3d ⁶ 4s ² -	ga ⁵ D - x ¹ F ^o	? 2-3	J6, K8
Fe I	1887.761	300	39	3d ⁶ 4s ² - 3d ⁶ 4s(b ⁴ D)4p	ga ⁵ D - t ⁵ P ^o	3-3	G22
Fe I	1888.32	80	40	3d ⁶ 4s ² -	ga ⁵ D - y ¹ F ^o	2-3	R27
Fe I	1891.74	200		3d ⁶ 4s ² -	ga ⁵ D - 19 ^o	1-2	K14
Fe I	1899.21	20		3d ⁶ 4s ² -	ga ⁵ D - 16 ^o	2-3	K14
Fe I	1903.37	20b	38	3d ⁶ 4s ² -	ga ⁵ D - s ³ D ^o	3-3	R27
Fe I	1910.53	0		3d ⁶ 4s ² - 3d ⁷ (a ² P)4p	ga ⁵ D - z ¹ P ^o	? 1-1	J6, K8
Fe I	1934.528	500	37	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - u ⁵ P ^o	4-3	G22
Fe I	1937.274	500	35	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - u ⁵ F ^o	4-3	G22
Fe I	1940.649	500	37	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - u ⁵ P ^o	3-2	G22
Fe I	1945.070	200	35	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - u ⁵ F ^o	3-2	G22
Fe I	1945.294	400	37	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - u ⁵ P ^o	2-1	G22
Fe I	1946.219	40	35	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - u ⁵ F ^o	4-4	G22
Fe I	1946.983	600	36	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - t ⁵ D ^o	4-3	W9, G22
Fe I	1950.223	500	37	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - u ⁵ P ^o	3-3	G22
Fe I	1951.556	500	37	3d ⁶ 4s ² - 3d ⁶ 4s(a ⁶ D)5p	ga ⁵ D - u ⁵ P ^o	2-2	G22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe I	1552.262	500	37	$3d^6 4s^2 - 3d^6 4s(a^1) 5p$	$g^4 D - u^6 P^o$	1 - 1	G22
Fe I	1552.579	500	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	3 - 2	W9, G22
Fe I	1953.061	500	35	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 F^o$	3 - 3	W9, G22
Fe I	1955.690	400	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	2 - 1	G22
Fe I	1956.026	500	35	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 F^o$	2 - 2	G22
Fe I	1957.838	600	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	4 - 4	W9, G22
Fe I	1958.598	600	37	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 P^o$	1 - 2	G22
Fe I	1958.739	300	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	1 - 0	G22
Fe I	1958.84	0		$3d^6 4s^2 -$	$g^4 D - 7^o$?	J6, K8
Fe I	1960.130	600	35	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 F^o$	4 - 5	W9, G22
Fe I	1961.236	500		$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 P^o$	2 - 3	G22
Fe I	1962.031	500	35	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 F^o$	0 - 1	G22
Fe I	1962.107	600	35	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 F^o$	3 - 4	G22
Fe I	1962.746	10	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	1 - 1	G22
Fe I	1962.871	400	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	3 - 3	G22
Fe I	1963.110	500b	35	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 F^o$	1 - 2	G22
Fe I	1963.629	200	35	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	2 - 2	G22
Fe I	1964.043	400	35	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - u^6 F^o$	2 - 3	G22
Fe I	1970.771	10	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	1 - 2	G22
Fe I	1973.911	20	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	3 - 4	G22
Fe I	1974.059	20	36	$3d^6 4s^2 - 3d^6 4s(a^1 D) 5p$	$g^4 D - t^6 D^o$	2 - 3	G22

IRON II (Fe^{1+}), $Z = 26$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^1 6D_{9/2}$ (25 electrons)Ionization Potential $130\,524\text{ cm}^{-1}$; 16.18 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	896.504	20	31	$3d^6(a^5 D) 4s -$	$g^4 D - 29^o$	$7/2 - 5/2$	G22
Fe II	898.776	10	31	$3d^6(a^5 D) 4s -$	$g^4 D - 29^o$	$5/2 - 3/2$	G22
Fe II	900.360	100	31	$3d^6(a^5 D) 4s -$	$g^4 D - 29^o$	$3/2 - 1/2$	G22
Fe II	918.118	20		$3d^6(a^5 D) 4s -$	$g^4 D - 28^o$	$3/2 - 1/2$	G22
Fe II	919.095	10		$3d^6(a^5 D) 4s -$	$g^4 D - 28^o$	$1/2 - 3/2$	G22
Fe II	923.884	200	28	$3d^6(a^5 D) 4s -$	$g^4 D - 24^o$	$5/2 - 3/2$	G22
Fe II	924.970	100	30	$3d^6(a^5 D) 4s -$	$g^4 D - 27^o$	$3/2 - 1/2$	G22
Fe II	926.220	400	25	$3d^6(a^5 D) 4s -$	$g^4 D - 21^o$	$5/2 - 3/2$	G22
Fe II	926.618	60	30	$3d^6(a^5 D) 4s -$	$g^4 D - 27^o$	$3/2 - 1/2$	G22
Fe II	926.900	160	24	$3d^6(a^5 D) 4s -$	$g^4 D - 20^o$	$5/2 - 3/2$	G22
Fe II	927.176	40	28	$3d^6(a^5 D) 4s -$	$g^4 D - 24^o$	$7/2 - 5/2$	G22
Fe II	927.632	60	30	$3d^6(a^5 D) 4s -$	$g^4 D - 27^o$	$1/2 - 3/2$	G22
Fe II	928.107	200	26	$3d^6(a^5 D) 4s -$	$g^4 D - 22^o$	$7/2 - 5/2$	G22
Fe II	928.470	140b	29	$3d^6(a^5 D) 4s -$	$g^4 D - 25^o$	$3/2 - 1/2$	G22
Fe II	929.538	200	25	$3d^6(a^5 D) 4s -$	$g^4 D - 21^o$	$7/2 - 5/2$	G22
Fe II	929.612	200	28	$3d^6(a^5 D) 4s -$	$g^4 D - 24^o$	$5/2 - 3/2$	G22
Fe II	930.030	200	27	$3d^6(a^5 D) 4s -$	$g^4 D - 23^o$	$3/2 - 1/2$	G22
Fe II	930.165	200	29	$3d^6(a^5 D) 4s -$	$g^4 D - 25^o$	$5/2 - 3/2$	G22
Fe II	930.219	260	24	$3d^6(a^5 D) 4s -$	$g^4 D - 20^o$	$7/2 - 5/2$	G22
Fe II	930.558	200	26	$3d^6(a^5 D) 4s -$	$g^4 D - 22^o$	$3/2 - 1/2$	G22
Fe II	931.142	160	29	$3d^6(a^5 D) 4s -$	$g^4 D - 25^o$	$1/2 - 3/2$	G22
Fe II	931.709	60	27	$3d^6(a^5 D) 4s -$	$g^4 D - 23^o$	$3/2 - 1/2$	G22
Fe II	932.244	200	26	$3d^6(a^5 D) 4s -$	$g^4 D - 22^o$	$7/2 - 5/2$	G22
Fe II	932.687	200	27	$3d^6(a^5 D) 4s -$	$g^4 D - 23^o$	$1/2 - 3/2$	G22
Fe II	935.783	10	22	$3d^6(a^5 D) 4s -$	$g^4 D - 16^o$	$5/2 - 3/2$	G22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	936.484	60	23	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 17°	7/2 - 7/2	G22
Fe II	938.967	70	58	3d ⁷ -	a ⁴ F - 26°	7/2 - 7/2	G22
Fe II	939.159	140	22	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 16°	7/2 - 7/2	G22
Fe II	941.660	80	22	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 16°	7/2 - 7/2	G22
Fe II	942.589	40	56	3d ⁷ -	a ⁴ F - 21°	7/2 - 7/2	G22
Fe II	943.267	80	55	3d ⁷ -	a ⁴ F - 20°	7/2 - 7/2	G22
Fe II	943.910	100	58	3d ⁷ -	a ⁴ F - 27°	7/2 - 7/2	G22
Fe II	945.095	160	57	3d ⁷ -	a ⁴ F - 24°	7/2 - 7/2	G22
Fe II	946.051	10b		3d ⁷ -	a ⁴ F - 22°	7/2 - 7/2	G22
Fe II	947.564	20		3d ⁷ -	a ⁴ F - 25°	7/2 - 7/2	G22
Fe II	952.470	60	53	3d ⁷ -	a ⁴ F - 16°	7/2 - 7/2	G22
Fe II	954.496	20		3d ⁷ -	a ⁴ F - 18°	7/2 - 7/2	G22
Fe II	954.786	40		3d ⁷ -	a ⁴ F - 17°	7/2 - 7/2	G22
Fe II	995.829	60	77	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 26°	7/2 - 7/2	G22
Fe II	999.003	20		3d ⁶ (a ⁵ D)4s -	a ⁴ D - 27°	7/2 - 7/2	G22
Fe II	1000.183	40	77	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 26°	7/2 - 7/2	G22
Fe II	1000.665	20		3d ⁶ (a ⁵ D)4s -	a ⁴ D - 27°	7/2 - 7/2	G22
Fe II	1005.082	20		3d ⁶ (a ⁵ D)4s -	a ⁴ D - 20°	7/2 - 7/2	G22
Fe II	1007.657	140	76	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 18°	7/2 - 7/2	G22
Fe II	1007.975	160	75	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 17°	7/2 - 7/2	G22
Fe II	1011.037	160	74	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 16°	7/2 - 7/2	G22
Fe II	1012.088	140	76	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 18°	7/2 - 7/2	G22
Fe II	1012.417	160	75	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 17°	7/2 - 7/2	G22
Fe II	1015.083	60	76	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 18°	7/2 - 7/2	G22
Fe II	1015.520	140	74	3d ⁶ (a ⁵ D)4s -	a ⁴ D - 16°	7/2 - 7/2	G22
Fe II	1038.370	20		3d ⁷ -	a ⁴ P - 28°	7/2 - 7/2	G22
Fe II	1055.269	500	21	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 15°	7/2 - 7/2	G22
Fe II	1059.571	400	21	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 15°	7/2 - 7/2	G22
Fe II	1062.758	400	21	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 15°	7/2 - 7/2	G22
Fe II	1062.982	300	19	3d ⁶ (a ⁵ D)4s - 3d ⁵ 4s(a ⁵ G)4p	ga ⁶ D - w ⁴ G°	7/2 - 7/2	G22
Fe II	1068.356	600	19	3d ⁶ (a ⁵ D)4s - 3d ⁵ 4s(a ⁵ G)4p	ga ⁶ D - w ⁴ G°	7/2 - 7/2	G22
Fe II	1069.038	300	20	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 14°	7/2 - 7/2	G22
Fe II	1071.260	100	20	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 14°	7/2 - 7/2	G22
Fe II	1071.596	600	19	3d ⁶ (a ⁵ D)4s - 3d ⁵ 4s(a ⁵ G)4p	ga ⁶ D - w ⁴ G°	7/2 - 7/2	G22
Fe II	1076.556	40	52	3d ⁷ -	a ⁴ F - 15°	7/2 - 7/2	G22
Fe II	1096.616	400b	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1097.773	400	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1096.879	500	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1097.782	40	51	3d ⁷ -	a ⁴ F - 14°	7/2 - 7/2	G22
Fe II	1098.26	0		3d ⁷ - 3d ⁶ (b ³ F)4p	a ⁴ F - u ⁴ F°	7/2 - 7/2	J6,K8
Fe II	1099.117	500h	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1100.026	400	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1100.525	400	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1101.538	400	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1102.385	160	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1102.758	20	17	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 11°	7/2 - 7/2	G22
Fe II	1104.978	20	18	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - w ⁶ P°	7/2 - 7/2	G22
Fe II	1106.215	300	17	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 11°	7/2 - 7/2	G22
Fe II	1106.362	100	15	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 6°	7/2 - 7/2	G22
Fe II	1111.114	300	15	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 6°	7/2 - 7/2	G22
Fe II	1112.086	700	16	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 9°	7/2 - 7/2	M23
Fe II	1121.987	500	12	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 2°	7/2 - 7/2	G22
Fe II	1122.858	500	13	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 3°	7/2 - 7/2	G22
Fe II	1124.134	400	14	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 4°	7/2 - 7/2	G22
Fe II	1126.425	400	13	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 3°	7/2 - 7/2	G22
Fe II	1126.603	400	14	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 4°	7/2 - 7/2	G22
Fe II	1126.850	400	12	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 2°	7/2 - 7/2	G22
Fe II	1128.074	500	14	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 4°	7/2 - 7/2	G22
Fe II	1128.180	100	50	3d ⁷ -	a ⁴ F - 11°	7/2 - 7/2	G22
Fe II	1128.530	200h	194	3d ⁵ 4s ² -	a ⁶ S - 29°	7/2 - 7/2	G22
Fe II	1128.909	400	13	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 3°	7/2 - 7/2	G22
Fe II	1129.777	240	49	3d ⁷ -	a ⁴ F - 6°	7/2 - 7/2	G22
Fe II	1130.428	500w	12	3d ⁶ (a ⁵ D)4s -	ga ⁶ D - 2°	7/2 - 7/2	G22
Fe II	1130.874	40	48	3d ⁷ -	a ⁴ F - 5°	7/2 - 7/2	G22
Fe II	1133.413	500	50	3d ⁷ -	a ⁴ F - 11°	7/2 - 7/2	G22

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	1133.678	500	11	3d ⁶ (a ⁶ D)4s -	ga ⁶ D - 1°	½ - ½	G22
Fe II	1138.039	100	48	3d ⁷ -	a ⁴ F - 5°	½ - ½	G22
Fe II	1138.642	500	11	3d ⁶ (a ⁶ D)4s -	ga ⁶ D - 1°	½ - ½	G22
Fe II	1142.334	500	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1143.235	500	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1144.052	100	156	3d ⁶ (a ⁶ P)4s -	b ⁴ P - 24°	½ - ½	M23
Fe II	1144.946	700w	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1146.963	300	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1147.413	500	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1148.295	600	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G??
Fe II	1148.693	160	155	3d ⁶ (a ⁶ P)4s -	b ⁴ P - 20°	½ - ½	M23
Fe II	1150.292	400	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1150.689	400	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1151.163	500	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1152.440	300	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1152.882	400	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1153.281	400	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1153.955	300	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1154.401	400	10	3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ D)5p	ga ⁶ D - y ⁶ F°	½ - ½	G22
Fe II	1155.273	40	157	3d ⁶ (a ⁶ P)4s -	b ⁴ P - 25°	½ - ½	M23
Fe II	1156.575	40		3d ⁵ 4s ² -	a ⁶ S - 28°	½ - ½	G22
Fe II	1159.347	400	73	3d ⁶ (a ⁶ D)4s -	a ⁴ D - 14°	½ - ½	G22
Fe II	1162.351	40	153	3d ⁶ (a ⁶ P)4s -	b ⁴ P - 16°	½ - ½	G22, M23
Fe II	1164.48	1		3d ⁶ (a ⁶ D)4s - 3d ⁶ (b ⁶ P)4p	ga ⁶ D - v ⁴ D°	? ½ - ½	J6, K8
Fe II	1165.269	240	73	3d ⁶ (a ⁶ D)4s -	a ⁴ D - 14°	½ - ½	G22
Fe II	1169.19	0		3d ⁶ (a ⁶ D)4s - 3d ⁶ (b ⁶ F)4p	a ⁴ D - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1171.606	160	154	3d ⁶ (a ⁶ P)4s -	b ⁴ P - 17°	½ - ½	M23
Fe II	1175.699	20		3d ⁵ 4s ² -	a ⁶ S - 26°	½ - ½	G22
Fe II	1183.83	1		3d ⁶ (a ⁶ D)4s - 3d ⁶ (b ⁶ F)4p	a ⁴ D - u ² G°	? ½ - ½	J6, K8
Fe II	1187.41	0		3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ G)4p	a ⁴ D - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1192.02	2		3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ G)4p	a ⁴ D - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1195.46	1		3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ G)4p	a ⁴ D - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1197.43	0		3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ G)4p	a ⁴ D - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1199.24	1		3d ⁶ (a ⁶ D)4s - 3d ⁶ (a ⁶ F)4p	ga ⁶ D - v ² D°	? ½ - ½	J6, K8
Fe II	1213.149	400	71	3d ⁶ (a ⁶ P)4s -	a ⁴ D - 6°	½ - ½	G22
Fe II	1213.764	400	72	3d ⁶ (a ⁶ D)4s -	a ⁴ D - 11°	½ - ½	G22
Fe II	1214.409	200	70	3d ⁶ (a ⁶ D)4s -	a ⁴ D - 5°	½ - ½	G22
Fe II	1219.81	3		3d ⁶ (a ⁶ D)4s -	a ⁴ D - 8°	? ½ - ½	J6, K8
Fe II	1220.882	100	70	3d ⁶ (a ⁶ D)4s -	a ⁴ D - 5°	½ - ½	G22
Fe II	1230.93	2		3d ⁷ - 3d ⁶ (a ⁶ F)4p	a ⁴ F - v ² D°	? ½ - ½	J6, K8
Fe II	1233.660	160	275	3d ⁶ (a ⁶ F)4s -	a ² F - 26°	½ - ½	M23
Fe II	1236.34	0		3d ⁶ (a ⁶ G)4s -	a ⁴ G - 16°	? ½ - ½	J6, K8
Fe II	1237.93	0		3d ⁶ (a ⁶ D)4s -	a ⁴ D - 4°	? ½ - ½	J6, K8
Fe II	1235.41	0		3d ⁷ - 3d ⁶ (b ⁶ F)4p	a ⁴ P - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1257.18	0		3d ⁶ (a ⁶ F)4s -	a ² F - 17°	? ½ - ½	J6, K8
Fe II	1259.06	1		3d ⁷ - 3d ⁶ (b ⁶ F)4p	a ⁴ P - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1260.542	400	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	G22
Fe II	1266.24	2		3d ⁶ (a ⁶ D)4s - 3d ⁶ (b ⁶ P)4p	a ⁴ D - v ⁴ D°	? ½ - ½	J6, K8
Fe II	1266.694	400	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	G22
Fe II	1267.437	500	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	G22
Fe II	1269.96	0		3d ⁷ - 3d ⁶ (b ⁶ F)4p	a ⁴ P - u ² D°	? ½ - ½	J6, K8
Fe II	1271.235	20	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	G22
Fe II	1271.37	1		3d ⁷ - 3d ⁶ 4s(a ⁶ G)4p	a ⁴ P - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1272.001	500w	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	G22
Fe II	1272.638	300	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	G22
Fe II	1275.154	300	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	G22
Fe II	1275.801	400	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	G22
Fe II	1277.667	10	9	3d ⁶ (a ⁶ D)4s - 3d ⁶ 4s(a ⁶ S)4p	ga ⁶ D - x ⁶ P°	½ - ½	S1
Fe II	1289.09	1		3d ⁶ (a ⁶ G)4s -	b ² G - 21°	? ½ - ½	J6, K8
Fe II	1290.204	300	88	3d ⁷ -	a ⁴ P - 10°	½ - ½	G22
Fe II	1290.78	0		3d ⁶ (a ⁶ G)4s -	b ² G - 24°	? ½ - ½	J6, K8
Fe II	1291.594	300	87	3d ⁷ -	a ⁴ P - 9°	½ - ½	G22
Fe II	1293.543	10	88	3d ⁷ -	a ⁴ P - 10°	½ - ½	G22
Fe II	1294.914	240	87	3d ⁷ -	a ⁴ P - 9°	½ - ½	G22
Fe II	1296.088	400	86	3d ⁷ -	a ⁴ P - 8°	½ - ½	G22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	1298.815	40	87	3d ⁷ -	a ⁴ P - 9°	½ - ½	G22
Fe II	1299.984	10	86	3d ⁷ -	a ⁴ P - 8°	½ - ½	G22
Fe II	1303.04	0		3d ⁶ (a ² D)4s -	b ⁴ D - 22°	? ½ - ½	J6, K8
Fe II	1307.24	0		3d ⁶ (a ² D)4s -	b ⁴ D - 20°	? ½ - ½	J6, K8
Fe II	1316.49	1		3d ⁷ - 3d ⁵ 4s(a ⁵ G)4p	a ² G - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1324.25	0		3d ⁶ (a ² D)4s - 3d ⁶ (a ¹ F)4p	a ⁴ D - v ² D°	? ½ - ½	J6, K8
Fe II	1325.61	2		3d ⁷ - 3d ⁵ 4s(a ² G)4p	a ² H - v ² H°	? ½ - ½	J6, K8
Fe II	1327.10	0		3d ⁷ -	b ² F - 17°	? ½ - ½	J6, K8
Fe II	1330.05	1		3d ⁶ (a ² D)4s - 3d ⁶ (a ¹ F)4p	a ⁴ D - v ² D°	? ½ - ½	J6, K8
Fe II	1340.22	0		3d ⁷ -	a ² G - 10°	? ½ - ½	J6, K8
Fe II	1347.29	1		3d ⁶ (a ² D)4s - 3d ⁶ (a ² D)4p	ga ⁴ D - x ² D°	? ½ - ½	J6, K8
Fe II	1349.60	0		3d ⁷ - 3d ⁶ (a ² D)5p	a ⁴ P - y ⁴ F°	? ½ - ½	J6, K8
Fe II	1354.03	0		3d ⁷ - 3d ⁶ (b ² F)4p	a ² P - u ² D°	? ½ - ½	J6, K8
Fe II	1354.87	0		3d ⁷ - 3d ⁵ 4s(a ² G)4p	a ² H - w ⁴ G°	? ½ - ½	J6, K8
Fe II	1356.48	0		3d ⁶ (a ² F)4s - 3d ⁶ (b ² F)4p	b ⁴ F - t ² F°	? ½ - ½	J6, K8
Fe II	1360.17	0		3d ⁶ (a ² D)4s - 3d ⁶ (a ² D)4p	ga ⁴ D - x ² D°	? ½ - ½	J6, K8
Fe II	1360.870	100	111	3d ⁷ -	a ² P - w ⁶ P°	? ½ - ½	M23
Fe II	1361.372	85		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - v ⁴ D°	? ½ - ½	E6, M22
Fe II	1362.771	400	152	3d ⁶ (a ² P)4s -	b ⁴ P - 14°	? ½ - ½	M23
Fe II	1364.38	0		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - v ⁴ D°	? ½ - ½	J6, K8
Fe II	1364.575	240	103	3d ⁷ -	a ² G - 2°	? ½ - ½	E6, M22
Fe II	1366.720	85		3d ⁷ -	a ⁴ F - w ² F°	? ½ - ½	E6, M22
Fe II	1368.098	50		3d ⁷ - 3d ⁶ (b ² P)4p	a ² P - v ⁴ D°	? ½ - ½	E6, M22
Fe II	1368.57	1		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - v ⁴ D°	? ½ - ½	J6, K8
Fe II	1371.024	500		3d ⁵ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - w ⁴ G°	? ½ - ½	E6, M22
Fe II	1372.29	1		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - v ⁴ D°	? ½ - ½	J6, K8
Fe II	1373.717	120		3d ⁷ -	a ⁴ F - w ² F°	? ½ - ½	E6, M22
Fe II	1374.41	P	103	3d ⁷ -	a ² G - 2°	? ½ - ½	M22
Fe II	1375.172	200		3d ⁵ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - w ⁴ G°	? ½ - ½	E6, M22
Fe II	1376.672	10		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - v ⁴ D°	? ½ - ½	E6, M22
Fe II	1377.99	2		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - w ⁴ G°	? ½ - ½	J6, K8
Fe II	1379.466	40		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - w ⁴ G°	? ½ - ½	E6, S1, M22
Fe II	1379.61	0		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - v ⁴ D°	? ½ - ½	J6, K8
Fe II	1381.250	200h	152	3d ⁶ (a ² P)4s -	b ⁴ P - 14°	? ½ - ½	M23
Fe II	1382.71	0		3d ⁶ (a ² D)4s - 3d ⁶ (a ² D)4p	ga ⁴ D - y ² P°	? ½ - ½	J6, K8
Fe II	1383.578	20		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - w ⁴ G°	? ½ - ½	E6, S1, M22
Fe II	1386.47	0		3d ⁶ (a ² F)4s -	b ⁴ F - 15°	? ½ - ½	J6, K8
Fe II	1387.22	4		3d ⁷ - 3d ⁶ (b ² F)4p	a ² H - u ² G°	? ½ - ½	J6, K8
Fe II	1387.87	0		3d ⁶ (a ² H)4s - 3d ⁶ (b ² F)4p	a ² H - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1392.14	3		3d ⁷ - 3d ⁵ 4s(a ⁵ G)4p	a ² H - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1392.82	4		3d ⁷ - 3d ⁶ (b ² F)4p	a ² H - u ² G°	? ½ - ½	J6, K8
Fe II	1393.49	1		3d ⁷ - 3d ⁵ 4s(a ⁵ G)4p	a ² D - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1397.572	10	350	3d ⁶ (a ¹ S)4s -	a ² S - 27°	? ½ - ½	E6, S1, M22
Fe II	1398.38	1		3d ⁶ (a ² F)4s - 3d ⁵ 4s(a ⁵ G)4p	b ⁴ F - w ⁴ G°	? ½ - ½	J6, K8
Fe II	1401.772	4		3d ⁶ (a ² F)4s - 3d ⁵ 4s(a ⁵ G)4p	b ⁴ F - w ⁴ G°	? ½ - ½	E6, S1, M22
Fe II	1403.246	1		3d ⁶ (a ² F)4s - 3d ⁵ 4s(a ⁵ G)4p	b ⁴ F - w ⁴ G°	? ½ - ½	S1
Fe II	1405.604	2		3d ⁷ - 3d ⁶ (a ² D)4p	a ⁴ F - x ² F°	? ½ - ½	E6, M22
Fe II	1405.797	1		3d ⁶ (a ² F)4s - 3d ⁵ 4s(a ⁵ G)4p	b ⁴ F - w ⁴ G°	? ½ - ½	E6, S1, M22
Fe II	1407.46	0		3d ⁶ (a ² F)4s - 3d ⁵ 4s(a ⁵ G)4p	b ⁴ F - w ⁴ G°	? ½ - ½	J6, K8
Fe II	1408.478	80		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - x ⁴ H°	? ½ - ½	E6, S1, M22
Fe II	1409.277	1		3d ⁶ (a ² F)4s - 3d ⁵ 4s(a ⁵ G)4p	b ⁴ F - w ⁴ G°	? ½ - ½	S1
Fe II	1411.47	1		3d ⁶ (a ² F)4s - 3d ⁶ (b ² F)4p	b ⁴ F - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1412.834	70	47	3d ⁷ - 3d ⁶ (a ² D)4p	a ⁴ F - w ⁴ D°	? ½ - ½	M23
Fe II	1413.699	70		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - x ⁴ H°	? ½ - ½	E6, S1, M22
Fe II	1414.89	1		3d ⁶ (a ² F)4s - 3d ⁶ (b ² F)4p	b ⁴ F - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1415.75	1		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² G - v ² H°	? ½ - ½	J6, K8
Fe II	1416.62	0		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1416.73	0		3d ⁶ (a ² F)4s - 3d ⁶ (b ² F)4p	b ⁴ F - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1417.727	30		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - x ⁴ H°	? ½ - ½	E6, S1, M22
Fe II	1417.744	400	143	3d ⁷ -	a ² D - w ⁶ P°	? ½ - ½	M23
Fe II	1418.855	10		3d ⁷ - 3d ⁶ (a ² D)4p	a ⁴ F - w ⁴ F°	? ½ - ½	E6, M22
Fe II	1419.31	0		3d ⁶ (a ² F)4s - 3d ⁶ (b ² F)4p	b ⁴ F - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1420.911	30		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ⁵ G)4p	a ² H - x ⁴ H°	? ½ - ½	E6, S1, M22
Fe II	1422.53	0		3d ⁶ (a ² F)4s - 3d ⁶ (b ² F)4p	b ⁴ F - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1424.657	50		3d ⁷ - 3d ⁶ (a ² D)4p	a ⁴ F - w ⁴ D°	? ½ - ½	M23

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	1424.31	0		3d ⁶ (a ¹ D)4s -	c ² D - 26°	? ½ - ½	J6, K8
Fe II	1424.716	70	47	3d ⁷ - 3d ⁶ (a ³ D)4p	a ⁴ F - w ⁴ D°	? ½ - ½	E6, M22
Fe II	1428.69	0		3d ⁶ (a ³ D)4s - 3d ⁶ (a ¹ D)4p	a ⁴ D - w ³ P°	? ½ - ½	J6, K8
Fe II	1430.12	0		3d ⁷ - 3d ⁶ (a ³ D)4p	a ⁴ F - w ⁴ F°	? ½ - ½	J6, K8
Fe II	1430.780	200		3d ⁶ (a ³ H)4s - 3d ⁵ 4s(a ² G)4p	b ² H - v ³ H°	? ½ - ½	E6, M22
Fe II	1430.895	120		3d ⁶ (a ³ H)4s - 3d ⁵ 4s(a ² G)4p	b ² H - v ³ H°	? ½ - ½	E6, M22
Fe II	1432.87	2		3d ⁶ (a ³ F)4s - 3d ⁵ (b ² F)4p	b ⁴ F - u ² G°	? ½ - ½	J6, K8
Fe II	1434.994	40		3d ⁷ - 3d ⁶ (a ³ D)4p	a ⁴ F - w ⁴ D°	? ½ - ½	E6, M22
Fe II	1435.85	0		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1438.13	1		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1438.44	1		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1439.42	2		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1440.52	0		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1441.11	2		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1442.10	1		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1442.42	2		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1442.746	20		3d ⁷ - 3d ⁶ (a ³ D)4p	a ⁴ F - w ⁴ D°	? ½ - ½	E6, M22
Fe II	1443.01	1		3d ⁶ (a ³ F)4s - 3d ⁵ 4s(a ² G)4p	b ⁴ F - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1443.73	1		3d ⁶ (a ³ D)4s - 3d ⁶ (a ² G)4p	g ^a 4D - y ² F°	? ½ - ½	J6, K8
Fe II	1445.39	0		3d ⁶ (a ³ F)4s - 3d ⁵ (b ² F)4p	b ⁴ F - u ² G°	? ½ - ½	J6, K8
Fe II	1448.393	70		3d ⁶ (a ³ F)4s - 3d ⁵ (b ² F)4p	a ² F - t ³ F°	? ½ - ½	E6, M22
Fe II	1454.308	20		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - w ⁴ G°	? ½ - ½	E6, S1, M22
Fe II	1456.47	1		3d ⁶ (a ³ F)4s - 3d ⁵ (b ² F)4p	a ² F - t ³ F°	? ½ - ½	J6, K8
Fe II	1459.311	300	193	3d ⁵ 4s ² -	a ⁴ S - w ⁴ P°	? ½ - ½	G22
Fe II	1463.198	6		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - w ⁴ G°	? ½ - ½	E6, S1, M22
Fe II	1465.043	400	193	3d ⁵ 4s ² -	a ⁴ S - w ⁴ P°	? ½ - ½	G22
Fe II	1468.605	4d		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - w ⁴ G°	? ½ - ½	S1
Fe II	1469.38	0		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	a ⁴ G - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1469.68	0		3d ⁶ (a ³ F)4s -	b ⁴ F - 10°	? ½ - ½	J6, K8
Fe II	1472.023	4		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - w ⁴ G°	? ½ - ½	S1
Fe II	1473.834	400	193	3d ⁵ 4s ² -	a ⁴ S - w ⁴ P°	? ½ - ½	G22
Fe II	1475.686	0		3d ⁷ - 3d ⁶ (a ¹ D)4p	a ⁴ P - 2P°	? ½ - ½	S1, K8
Fe II	1476.054	200	192	3d ⁶ (a ² F)4s -	b ⁴ F - 6°	? ½ - ½	G22, M22
Fe II	1477.50	0		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	a ⁴ G - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1477.55	0		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	a ⁴ G - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1480.437	0		3d ⁷ - 3d ⁶ (a ¹ D)4p	a ⁴ P - 2P°	? ½ - ½	S1, K8
Fe II	1483.38	0		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	a ⁴ G - u ⁴ F°	? ½ - ½	J6, K8
Fe II	1491.37	1		3d ⁷ - 3d ⁶ (a ³ D)5p	a ² D - y ² F°	? ½ - ½	J6, K8
Fe II	1492.04	0		3d ⁷ - 3d ⁶ (a ³ D)5p	a ² D - y ² F°	? ½ - ½	J6, K8
Fe II	1492.56	2		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	a ⁴ G - u ² G°	? ½ - ½	J6, K8
Fe II	1494.59	4		3d ⁶ (a ² P)4s - 3d ⁵ (b ² F)4p	b ² P - u ² D°	? ½ - ½	J6, K8
Fe II	1496.523	40		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - x ⁴ H°	? ½ - ½	E6, S1, M22
Fe II	1498.28	1		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1501.01	0		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	a ⁴ G - u ² G°	? ½ - ½	J6, K8
Fe II	1504.27	3		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1505.43	0		3d ⁶ (a ² P)4s - 3d ⁵ (b ² F)4p	b ² P - u ² D°	? ½ - ½	J6, K8
Fe II	1506.53	1		3d ⁶ (a ³ D)4s - 3d ⁵ (a ² G)4p	g ^a 4D - x ⁴ F°	? ½ - ½	J6, K8
Fe II	1506.898	6		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - x ⁴ H°	? ½ - ½	E6, S1, M22
Fe II	1507.19	2		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1508.22	0		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1508.27	2		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1508.87	1		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - v ⁴ F°	? ½ - ½	J6, K8
Fe II	1509.27	0		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	b ² H - u ² G°	? ½ - ½	J6, K8
Fe II	1512.053	4		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - x ⁴ H°	? ½ - ½	E6, S1, M22
Fe II	1512.24	1		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ S - 3°	? ½ - ½	J6, K8
Fe II	1513.31	1		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ² G)4p	b ² H - x ⁴ H°	? ½ - ½	J6, K8
Fe II	1514.339	1		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	a ⁴ G - x ⁴ H°	? ½ - ½	S1
Fe II	1515.89	1		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	b ² G - t ² F°	? ½ - ½	J6, K8
Fe II	1515.93	1		3d ⁷ - 3d ⁶ (a ¹ F)4p	a ² D - u ² F°	? ½ - ½	J6, K8
Fe II	1519.43	0		3d ⁶ (a ² H)4s - 3d ⁵ 4s(a ² G)4p	b ² H - x ⁴ H°	? ½ - ½	J6, K8
Fe II	1519.50	2		3d ⁷ - 3d ⁶ 4s(a ² S)4p	a ⁴ P - x ⁴ P°	? ½ - ½	J6, K8
Fe II	1520.87	2		3d ⁶ (a ³ D)4s - 3d ⁵ (a ² G)4p	g ^a 4D - x ⁴ F°	? ½ - ½	J6, K8
Fe II	1522.69	2		3d ⁶ (a ² G)4s - 3d ⁵ 4s(a ² G)4p	b ² G - v ² H°	? ½ - ½	J6, K8
Fe II	1526.37	1		3d ⁶ (a ² G)4s - 3d ⁵ (b ² F)4p	b ² G - t ² F°	? ½ - ½	J6, K8
Fe II	1526.517	20		3d ⁷ - 3d ⁶ (a ¹ F)4p	a ² P - v ² D°	? ½ - ½	S1

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	1527.296	20		$3d^6 a^2G)4s - 3d^6 4s(a^2G)4p$	$b^2G - v^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S1
Fe II	1531.62	1		$3d^6(a^2F)4s - 3d^6(b^2F)4p$	$a^2F - u^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1532.82	0		$3d^7 - 3d^6(a^1F)4p$	$a^2D - u^2F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	J6, K8
Fe II	1541.011	10		$3d^6 4s^2$	$a^5S - 1^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G22
Fe II	1544.78	1		$3d^6(a^2P)4s - 3d^6(b^2P)4p$	$b^4P - v^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1548.42	1		$3d^7 - 3d^6(a^1D)4p$	$a^4P - w^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1548.692	1d	46	$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	F6, S1, M22
Fe II	1550.260	20	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G22
Fe II	1550.52	1		$3d^6(a^2G)4s$	$a^4G - 5^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	J6, K8
Fe II	1551.17	0		$3d^7 - 3d^6(b^2F)4p$	$b^2F - t^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1551.933	20		$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, M22
Fe II	1553.82	0		$3d^7 - 3d^6(b^2F)4p$	$b^2F - t^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1554.13	1		$3d^6(a^2D)4s - 3d^6(a^2D)4p$	$a^4D - y^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1558.542	200	46	$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1558.690	200	46	$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1559.084	400	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1560.260	40	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1563.788	500	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1565.374	4	46	$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1566.819	400	44	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1568.016	160	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1569.674	240	44	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1570.242	400	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1570.50	0		$3d^6(a^2F)4s - 3d^6(a^1F)4p$	$b^4F - u^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1571.01	0		$3d^6(a^2D)4s - 3d^6(a^2D)4p$	$a^4D - w^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1572.26	1		$3d^6(a^2F)4s - 3d^6(b^2P)4p$	$b^4F - v^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1572.750	20	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1573.825	100	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1574.12	0		$3d^6(a^2P)4s - 3d^6(a^1F)4p$	$b^4P - v^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1574.39	1		$3d^6(a^2F)4s - 3d^6(a^1F)4p$	$b^4F - u^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1574.768	10	44	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1574.923	400	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1575.80	1		$3d^6(a^1F)4s$	$c^2F - 26^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1577.166	20	45	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1578.497	30		$3d^7 - 3d^6(a^1F)4p$	$a^2D - v^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1579.25	1		$3d^6(a^2D)4s - 3d^6(a^2D)4p$	$a^4D - w^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1580.625	500	44	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1581.274	160	44	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1584.949	300	44	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1585.985	30		$3d^7 - 3d^6(a^1F)4p$	$a^2D - v^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1588.286	200	44	$3d^7 - 3d^6(a^2G)4p$	$a^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1596.64	2		$3d^6(a^2G)4s - 3d^6(b^2F)4p$	$b^2G - u^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1596.82	1		$3d^6(a^2D)4s - 3d^6 4s(a^2G)4p$	$b^4D - w^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1600.02	2		$3d^7 - 3d^6(a^1F)4p$	$a^2H - v^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	J6, K8
Fe II	1602.228	1d		$3d^7 - 3d^6(a^2F)4p$	$a^4F - z^2F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S1
Fe II	1602.588	240	316	$3d^7$	$b^2F - 14^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	M23
Fe II	1605.318	20		$3d^7 - 3d^6(a^1D)4p$	$a^2G - v^2F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S1
Fe II	1605.44	1		$3d^6(a^2H)4s - 3d^6(a^1F)4p$	$a^4H - v^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	J6, K8
Fe II	1608.456	700	8	$3d^6(a^2D)4s - 3d^6(a^2S)4p$	$g^2D - y^6P^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	E6, G22
Fe II	1610.921	300h	43	$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	E6, G22
Fe II	1611.21	1		$3d^6(a^2D)4s - 3d^6(a^2F)4p$	$g^2D - y^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	J6, K8
Fe II	1612.802	400	43	$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	E6, G22
Fe II	1613.183	2		$3d^7 - 3d^6 4s(a^2G)4p$	$b^2F - w^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1613.25	1		$3d^6(a^2D)4s - 3d^6(a^2P)4p$	$g^2D - y^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	J6, K8
Fe II	1616.65	0		$3d^7 - 3d^6(a^2F)4p$	$a^4F - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1618.470	500	8	$3d^6(a^2D)4s - 3d^6(a^2S)4p$	$g^2D - y^6P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1619.52	1		$3d^6(a^2D)4p - 3d^6(a^2G)5s$	$z^6F^{\circ} - e^2G$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1620.15	0		$3d^6(a^2H)4s - 3d^6(a^1F)4p$	$a^4H - v^2G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	J6, K8
Fe II	1621.685	600	8	$3d^6(a^2D)4s - 3d^6(a^2S)4p$	$g^2D - y^6P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1623.091	160	43	$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1623.715	1d		$3d^7 - 3d^6(a^2F)4p$	$a^4F - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1625.520	400	43	$3d^7 - 3d^6(a^2F)4p$	$a^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1625.909	300	8	$3d^6(a^2D)4s - 3d^6(a^2S)4p$	$g^2D - y^6P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1627.401	4		$3d^7 - 3d^6(a^2F)4p$	$a^4F - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1629.154	600	8	$3d^6(a^2D)4s - 3d^6(a^2S)4p$	$g^2D - y^6P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	1629.376	40		$3d^7 - 3d^6(a^1D)4p$	$a^2G - v^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S1
Fe II	1630.19	1		$3d^6(a^3D)4s - 3d^6(a^3P)4p$	$ga^4D - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1631.120	600	8	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$ga^4D - y^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1632.668	20	43	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1633.908	300	43	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1634.345	400	8	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$ga^4D - y^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1635.398	700	68	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$ga^4D - y^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1636.321	600	8	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$ga^4D - y^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1637.397	300	42	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1639.403	600	8	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$ga^4D - y^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G22
Fe II	1639.62	2		$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$b^4D - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1640.150	240	43	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1641.759	500	68	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1642.187	100	274	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$b^4D - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	M23
Fe II	1642.483	2		$3d^7 - 3d^6(a^3S)4p$	$a^2P - x^6P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1642.50	2		$3d^7 - 3d^6(a^1D)4p$	$a^2P - w^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1643.576	300	42	$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1644.76	1		$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$b^4D - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1646.182	400	68	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$b^4D - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1647.159	500	68	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1647.55	2		$3d^7 - 3d^6(b^3F)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1647.76	2		$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$b^2F - u^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1649.423	300	42	$3d^7 - 3d^6(a^3F)4p$	$b^4D - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1649.572	400	68	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$a^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1650.704	400	68	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1651.61	4		$3d^7 - 3d^6(a^3S)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1652.44	0		$3d^7 - 3d^6(a^3S)4p$	$b^2F - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1652.489	10	42	$3d^7 - 3d^6(a^3F)4p$	$d^2D - 23^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1653.40	0		$3d^7 - 3d^6(a^1D)4p$	$a^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G22
Fe II	1654.06	1		$3d^7 - 3d^6(a^3F)4p$	$a^2P - w^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1654.111	100	68	$3d^7 - 3d^6(a^3F)4p$	$d^2D - 22^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1654.476	100	42	$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1654.91	0		$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1655.042	20	68	$3d^6(a^3D)4s - 3d^6(a^3P)4p$	$ga^6D - z^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1655.50	3		$3d^6(a^3D)4s - 3d^6(a^3S)4p$	$a^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G22
Fe II	1656.73	4		$3d^7 - 3d^6(b^3F)4p$	$b^2F - u^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1657.049	4	42	$3d^7 - 3d^6(a^3S)4p$	$a^2P - x^6P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1657.531	30		$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1658.771	300	41	$3d^7 - 3d^6(a^1D)4p$	$a^3P - w^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1659.483	400	40	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1660.88	1		$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1661.347	1	41	$3d^6(a^3D)4s - 3d^6(a^3F)4p$	$b^4D - w^6P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1662.369	10	42	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1662.43	1		$3d^7 - 3d^6(a^3F)4p$	$a^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G22
Fe II	1663.221	300	40	$3d^6(a^3D)4s - 3d^6(b^3F)4p$	$b^2D - t^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1663.79	2		$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1666.06	0		$3d^6(a^3D)4s - 3d^6(b^3F)4p$	$b^2D - t^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1667.91	1		$3d^6(a^3G)4s - 3d^6(b^3F)4p$	$c^2G - u^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1668.99	2		$3d^7 - 3d^6(a^1D)4p$	$a^2P - w^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1670.742	500	46	$3d^6(a^3F)4s - 3d^6(a^3D)5p$	$a^2F - y^6F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1671.010	20	40	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1673.462	300	102	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G22
Fe II	1674.254	40	41	$3d^7 - 3d^6(a^3F)4p$	$a^2G - w^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1674.716	80	40	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1676.853	20	41	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, S1, M22
Fe II	1677.847	10		$3d^7 - 3d^6(a^1D)4p$	$a^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1679.381	300	102	$3d^7 - 3d^6(a^1D)4p$	$a^2P - w^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1680.41	1		$3d^7 - 3d^6(a^3F)4p$	$a^2G - w^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1681.12	1		$3d^6(a^3D)4s - 3d^6(a^3H)4p$	$b^4D - 9^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1684.005	2		$3d^7 - 3d^6(a^1D)4p$	$a^4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1685.954	100	41	$3d^7 - 3d^6(a^3F)4p$	$a^2P - v^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1686.455	160	40	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1686.692	40	39	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1688.280	2	102	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1688.401	8	41	$3d^7 - 3d^6(a^3F)4p$	$a^2G - w^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
				$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1

Element	Wavelength	Intensity	Multiple:	Configuration	Term	J - J	References
Fe II	1689.828	200w	85	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1690.45	0		$3d^7$	$d^2D - 18^{\circ}$?	J6, K8
Fe II	1690.759	160	85	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1691.271	160	41	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1692.516	1	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1693.477	10	85	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1693.61	0		$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^2D^{\circ}$?	J6, K8
Fe II	1693.936	10	41	$3d^7 - 3d^6(a^3F)4p$	$a^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1696.463	10	84	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1696.794	160	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1697.13	0		$3d^6(a^3F)4p - 3d^6(a^1F)5s$	$y^4F^{\circ} - f^2F$?	J6, K8
Fe II	1697.43	1		$3d^6(a^3D)4s$	$b^4D - 5^{\circ}$?	J6, K8
Fe II	1698.190	10	40	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1698.43	0		$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4F^{\circ}$?	J6, K8
Fe II	1699.193	40	85	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1701.952	40	85	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1702.043	500	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1702.74	3		$3d^7 - 3d^6 4s(a^5S)4p$	$a^2D - x^6P^{\circ}$?	J6, K8
Fe II	1702.81	3		$3d^7 - 3d^6(a^1D)4p$	$a^2D - w^2P^{\circ}$?	J6, K8
Fe II	1704.652	10	39	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1706.142	20	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1707.399	40	84	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1708.250	20	84	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1708.621	160	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1709.560	10	37	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1709.670	300	84	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1711.658	1		$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1712.997	400	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1713.20	1		$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^{\circ}$?	J6, K8
Fe II	1715.032	10	84	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S1
Fe II	1715.503	240	84	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1716.577	40	39	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1718.123	40	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1718.986	20		$3d^7 - 3d^6(a^1D)4p$	$a^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1720.042	200	84	$3d^7 - 3d^6(a^3D)4p$	$a^4P - w^4P^{\circ}$	$\frac{1}{2} - \frac{7}{2}$	M23, S1
Fe II	1720.616	400	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1722.425	10		$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1722.70	1		$3d^6(b^3F)4s$	$c^4F - 23^{\circ}$?	J6, K8
Fe II	1724.572	20		$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1724.854	160	39	$3d^7 - 3d^6(a^3P)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1724.966	160	37	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1725.402	100	346	$3d^6(a^3D)4s$	$b^2D - 14^{\circ}$		M23
Fe II	1726.391	240	38	$3d^7 - 3d^6(a^3H)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1726.900	1		$3d^7$	$a^2G - v^2H^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1728.275	1		$3d^6(a^3P)4s - 3d^6(a^1D)4p$	$b^4P - w^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1728.845	4		$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1731.038	200	110	$3d^7 - 3d^6(a^1S)4p$	$a^2P - x^2P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M23, S1
Fe II	1731.18	1		$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4F^{\circ}$?	J6, K8
Fe II	1731.373	20		$3d^7$	$a^2G - w^2H^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1731.891	10		$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1732.253	300	420	$3d^6(b^3F)4s$	$c^4F - 20^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M23
Fe II	1733.375	4	110	$3d^7 - 3d^6(a^1S)4p$	$a^2P - x^2P^{\circ}$	$\frac{1}{2} - \frac{7}{2}$	S1
Fe II	1733.87	4		$3d^6(b^3P)4s$	$c^4P - 20^{\circ}$?	J6, K8
Fe II	1735.503	10		$3d^7 - 3d^6(a^1D)4p$	$a^2D - v^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1736.60	2		$3d^6(a^5D)4p - 3d^6(a^3F)5s$	$z^6F^{\circ} - f^4F$?	J6, K8
Fe II	1737.192	6	37	$3d^7 - 3d^6(a^3P)4p$	$a^4F - y^4P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1737.943	1d		$3d^6(a^5D)4s - 3d^6(a^3G)4p$	$a^4D - x^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1744.52	3		$3d^6(a^3G)4s - 3d^6(a^1F)4p$	$a^4G - v^2G^{\circ}$?	J6, K8
Fe II	1744.99	0		$3d^6(a^3P)4s - 3d^6(a^1D)4p$	$b^4P - v^2F^{\circ}$?	J6, K8
Fe II	1746.818	300	101	$3d^7 - 3d^6(a^1G)4p$	$a^3G - w^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1748.910	6		$3d^7 - 3d^6(a^1D)4p$	$a^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1749.136	20		$3d^7 - 3d^6(a^3D)4p$	$a^2G - x^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1749.60	2		$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^2G^{\circ}$?	J6, K8
Fe II	1760.350	1d		$3d^7 - 3d^6(a^3D)4p$	$a^2G - w^4D^{\circ}$?	S1
Fe II	1760.415	400	100	$3d^7 - 3d^6(a^3D)4p$	$a^2G - w^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M23

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - j	References
Fe II	1761.379	500	101	3d ⁷ - 3d ⁶ (a ¹ G)4p	a ² G - w ² G°	7/2 - 7/2	M23, S1
Fe II	1764.117	20		3d ⁷ - 3d ⁶ (a ³ D)4p	a ² G - x ² F°	7/2 - 7/2	E6, G22
Fe II	1765.325	10		3d ⁷ - 3d ⁶ (a ³ D)4p	a ² G - x ² F°	7/2 - 7/2	G22
Fe II	1767.71	1		3d ⁶ (a ³ D)4s - 3d ⁶ (b ² F)4p	b ² D - u ² D°	? 7/2 - 7/2	J6, K8
Fe II	1769.667	20	100	3d ⁷ - 3d ⁶ (a ³ D)4p	a ² G - w ² F°	7/2 - 7/2	M23
Fe II	1771.93	0		3d ⁷ - 3d ⁶ (a ¹ D)4p	a ² D - v ² F°	? 7/2 - 7/2	J6, K8
Fe II	1772.509	300	99	3d ⁷ -	a ² G - x ² H°	7/2 - 7/2	E6, G22
Fe II	1773.17	2		3d ⁷ -	b ² F - l°	? 7/2 - 7/2	J6, K8
Fe II	1776.661	20	99	3d ⁷ -	a ² G - x ² H°	7/2 - 7/2	G22
Fe II	1777.45	0		3d ⁶ (a ³ D)4p - 3d ⁶ (a ² F)5s	z ⁴ F° - e ² F	? 7/2 - 7/2	J6, K8
Fe II	1777.900	4		3d ⁷ - 3d ⁶ (a ³ D)4p	a ² P - x ² D°	7/2 - 7/2	S1
Fe II	1780.99	2		3d ⁶ (a ³ D)4s - 3d ⁶ (a ⁵ D)5p	b ⁴ D - y ⁶ F°	? 7/2 - 7/2	J6, K8
Fe II	1781.336	4		3d ⁷ - 3d ⁶ (a ³ D)4p	a ² P - x ² D°	7/2 - 7/2	S1
Fe II	1781.529	20		3d ⁷ - 3d ⁶ (a ² G)4p	a ⁴ P - y ³ F°	? 7/2 - 7/2	G22
Fe II	1781.702	40	67	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ P)4p	a ⁴ D - z ² P°	7/2 - 1/2	M23
Fe II	1785.262	800	191	3d ⁵ 4s ² - 3d ⁵ 4s(a ² S)4p	a ⁶ S - x ⁶ P°	7/2 - 7/2	G22
Fe II	1786.448	20		3d ⁷ - 3d ⁶ (a ² G)4p	a ⁴ P - y ³ F°	7/2 - 1/2	G22
Fe II	1786.738	800	191	3d ⁵ 4s ² - 3d ⁵ 4s(a ² S)4p	a ⁶ S - x ⁶ P°	7/2 - 7/2	G22
Fe II	1788.072	700	191	3d ⁵ 4s ² - 3d ⁵ 4s(a ² S)4p	a ⁶ S - x ⁶ P°	7/2 - 7/2	E6, G22
Fe II	1789.83	2		3d ⁷ - 3d ⁶ (a ³ D)4p	a ² G - w ² F°	? 7/2 - 7/2	J6, K8
Fe II	1793.367	200	99	3d ⁷ -	a ² G - x ² H°	7/2 - 7/2	E6, G22
Fe II	1794.77	1		3d ⁶ (a ³ G)4s - 3d ⁶ (a ¹ F)4p	b ² G - u ² F°	? 7/2 - 7/2	J6, K8
Fe II	1795.11	2		3d ⁶ (a ⁵ D)4p - 3d ⁶ (a ³ F)5s	z ⁴ D° - e ² F	? 7/2 - 7/2	J6, K8
Fe II	1796.931	40		3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ F)4p	a ⁴ D - y ⁴ G°	? 7/2 - 7/2	S1, M22
Fe II	1798.156	200	142	3d ⁷ - 3d ⁶ (a ¹ S)4p	a ² D - x ² P°	7/2 - 7/2	S1
Fe II	1800.45	0		3d ⁶ (a ³ D)4s - 3d ⁶ (b ² P)4p	b ⁴ D - v ⁴ D°	? 7/2 - 7/2	J6, K8
Fe II	1801.13	1		3d ⁷ - 3d ⁵ 4s(a ² S)4p	a ⁴ P - x ⁴ P°	? 1/2 - 1/2	J6, K8
Fe II	1804.17	2		3d ⁷ - 3d ⁵ 4s(a ² S)4p	a ⁴ P - x ⁴ P°	? 7/2 - 7/2	J6, K8
Fe II	1804.65	1		3d ⁶ (a ⁵ D)4p - 3d ⁶ (a ³ F)5s	z ⁴ F° - e ² F	? 7/2 - 7/2	J6, K8
Fe II	1804.98	1		3d ⁶ (a ³ D)4s - 3d ⁶ (b ² P)4p	b ⁴ D - v ⁴ D°	? 7/2 - 7/2	J6, K8
Fe II	1807.746	10	66	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ F)4p	a ⁴ D - x ⁴ D°	7/2 - 7/2	S1
Fe II	1809.316	200	142	3d ⁷ - 3d ⁶ (a ¹ S)4p	a ² D - x ² P°	7/2 - 1/2	M23, S1
Fe II	1810.53	3		3d ⁶ (a ¹ D)4s - 3d ⁶ (b ² F)4p	e ² D - u ⁴ F°	? 7/2 - 7/2	J6, K8
Fe II	1813.99	1		3d ⁶ (a ⁵ D)4p - 3d ⁶ (a ³ F)5s	z ⁴ D° - f ⁴ F	? 7/2 - 7/2	J6, K8
Fe II	1815.406	10		3d ⁷ -	a ² D - w ² F°	7/2 - 7/2	G22
Fe II	1815.761	4	66	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ F)4p	a ⁴ D - x ⁴ D°	7/2 - 7/2	S1
Fe II	1815.87	0		3d ⁶ (a ⁵ D)4p - 3d ⁶ (a ³ F)5s	z ⁴ F° - f ⁴ F	? 7/2 - 7/2	J6, K8
Fe II	1818.509	40	66	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ F)4p	z ⁴ D - x ⁴ D°	7/2 - 7/2	G22
Fe II	1819.65	0		3d ⁷ - 3d ⁶ (b ² P)4p	b ² F - v ⁴ D°	? 7/2 - 7/2	J6, K8
Fe II	1822.150	20	66	3d ⁶ (a ² D)4s - 3d ⁶ (a ³ F)4p	a ⁴ D - x ⁴ D°	7/2 - 7/2	G22
Fe II	1823.888	20		3d ⁷ - 3d ⁶ (a ³ D)4p	a ² P - y ² P°	7/2 - 7/2	G22
Fe II	1824.98	0		3d ⁷ -	a ² H - w ² F°	? 7/2 - 7/2	J6, K8
Fe II	1825.316	8	66	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ² F)4p	a ⁴ D - x ⁴ D°	7/2 - 7/2	S1
Fe II	1826.991	20	65	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ P)4p	a ⁴ D - y ⁴ D°	7/2 - 7/2	G22
Fe II	1827.736	4	66	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ F)4p	a ⁴ D - x ⁴ D°	1/2 - 1/2	S1
Fe II	1830.47	3		3d ⁶ (a ⁵ D)4p - 3d ⁶ (a ³ F)5s	z ⁴ F° - f ⁴ F	? 7/2 - 7/2	J6, K8
Fe II	1830.861	4	66	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ F)4p	a ⁴ D - x ⁴ D°	1/2 - 7/2	S1
Fe II	1831.261	20		3d ⁷ -	a ² D - w ² F°	7/2 - 7/2	G22
Fe II	1831.724	20	66	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ F)4p	a ⁴ D - x ⁴ D°	7/2 - 7/2	G22
Fe II	1832.494	6	65	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ P)4p	a ⁴ D - y ⁴ D°	7/2 - 7/2	S1
Fe II	1833.071	10	66	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ² F)4p	a ⁴ D - x ⁴ D°	7/2 - 7/2	G22
Fe II	1833.27	1		3d ⁷ - 3d ⁶ (a ¹ F)4p	b ² F - u ² F°	? 7/2 - 7/2	J6, K8
Fe II	1833.64	6		3d ⁶ (a ⁵ D)4p - 3d ⁶ (a ³ F)5s	z ⁴ F° - f ⁴ F	? 7/2 - 7/2	J6, K8
Fe II	1835.42	2		3d ⁷ - 3d ⁶ (a ¹ F)4p	b ² F - u ² F°	? 7/2 - 7/2	J6, K8
Fe II	1835.874	300	98	3d ⁷ - 3d ⁶ (a ² G)4p	a ² G - x ² G°	7/2 - 7/2	E6, G22
Fe II	1841.60	0		3d ⁷ - 3d ⁶ (a ³ D)4p	a ² P - y ² P°	? 1/2 - 1/2	J6, K8
Fe II	1841.701	200h	65	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ P)4p	a ⁴ D - y ⁴ D°	7/2 - 7/2	E6, G22
Fe II	1841.988	20w		3d ⁶ (a ³ P)4s - 3d ⁶ (a ¹ D)4p	b ² P - a ² P°	? 1/2 - 1/2	S1, K8
Fe II	1842.256	10	65	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ P)4p	a ⁴ D - y ⁴ D°	7/2 - 7/2	G22
Fe II	1844.590	100h	397	3d ⁶ (a ⁵ D)4p - 3d ⁶ (a ³ H)5s	z ⁴ F° - e ⁴ H	7/2 - 7/2	M23
Fe II	1846.27	4		3d ⁷ - 3d ⁶ (a ³ D)4p	a ² P - w ⁴ D°	? 7/2 - 7/2	J6, K8
Fe II	1846.573	240	98	3d ⁷ - 3d ⁶ (a ² G)4p	a ² G - x ² G°	7/2 - 7/2	E6, G22
Fe II	1847.893	10	65	3d ⁶ (a ⁵ D)4s - 3d ⁶ (a ³ P)4p	a ⁴ D - y ⁴ D°	1/2 - 7/2	S1
Fe II	1848.231	100	7	3d ⁶ (a ⁵ D)4s - 3d ⁵ 4s(a ² S)4p	g ⁴ a ² D - z ² P°	7/2 - 7/2	M23
Fe II	1848.771	240	141	3d ⁷ - 3d ⁶ (a ³ D)4p	a ² D - x ² D°	7/2 - 7/2	E6, G22

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	1851.517	20	65	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1852.458	10d	65	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S1
Fe II	1853.754	6		$3d^7 - 3d^6(a^2G)4p$	$a^2G - x^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S1
Fe II	1855.928	1		$3d^7 - 3d^6(a^3D)4p$	$a^2P - w^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S1
Fe II	1857.935	240	7	$3d^6(a^5D)4s - 3d^5 4s(a^7S)4p$	$ga^4D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M23
Fe II	1859.741	300	65	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	E6, G22
Fe II	1860.055	400	97	$3d^7 - 3d^6(a^2G)4p$	$a^2G - y^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	F6, G22
Fe II	1862.774	8		$3d^7 - 3d^6(a^3D)4p$	$a^2P - w^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1864.656	40	126	$3d^7 - 3d^6(a^1I)4p$	$a^2H - y^2I^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M23
Fe II	1864.743	400	126	$3d^7 - 3d^6(a^1I)4p$	$a^2H - y^2I^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M23
Fe II	1869.56	3		$3d^6(a^5D)4p - 3d^6(a^3H)5s$	$z^4F^{\circ} - e^4H$? $\frac{3}{2} - \frac{7}{2}$	J6, K8
Fe II	1870.72	1		$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^2P - w^2P^{\circ}$? $\frac{3}{2} - \frac{7}{2}$	J6, K8
Fe II	1872.65	2		$3d^6(a^5D)4s - 3d^6(a^3F)4p$	$a^4D - y^4F^{\circ}$? $\frac{1}{2} - \frac{3}{2}$	J6, K8
Fe II	1874.931	10	65	$3d^6(a^5D)4s - 3d^6(a^3P)4p$	$a^4D - y^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1875.43	0		$3d^6(b^3F)4s -$	$d^2F - 2^3$? $\frac{3}{2} - \frac{3}{2}$	J6, K8
Fe II	1875.536	300	345	$3d^6(a^3D)4s -$	$b^2D - 3^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M23
Fe II	1876.181	160b	141	$3d^7 - 3d^6(a^3D)4p$	$a^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E6, G22
Fe II	1876.838	300	97	$3d^7 - 3d^6(a^2G)4p$	$a^2G - y^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	E6, G22
Fe II	1877.467	400	125	$3d^7 -$	$a^2H - w^2H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E6, G22
Fe II	1878.39	0		$3d^7 - 3d^6(a^2G)4p$	$a^2G - y^2F^{\circ}$? $\frac{7}{2} - \frac{7}{2}$	J6, K8
Fe II	1880.046	40	141	$3d^7 - 3d^6(a^3D)4p$	$a^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1880.976	400	126	$3d^7 - 3d^6(a^1I)4p$	$a^2H - y^2I^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M23
Fe II	1888.733	400	125	$3d^7 -$	$a^2H - w^2H^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1894.006	200w	125	$3d^7 -$	$a^2H - w^2H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	G22
Fe II	1895.675	200	124	$3d^7 - 3d^6(a^1G)4p$	$a^2H - w^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M23
Fe II	1898.538	200	140	$3d^7 - 3d^6(a^3D)4p$	$a^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1900.667	10	362	$3d^6(a^1D)4s -$	$c^2D - 8^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M23
Fe II	1903.370	20b	139	$3d^7 - 3d^6(a^3D)4p$	$a^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1904.784	300	139	$3d^7 - 3d^6(a^3D)4p$	$a^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	E6, G22
Fe II	1909.95	1		$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - y^2P^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	J6, K8
Fe II	1910.150	20		$3d^6(a^3H)4s -$	$a^4H - w^2H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	G22
Fe II	1910.669	160	124	$3d^7 - 3d^6(a^1G)4p$	$a^2H - w^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M23
Fe II	1912.582	2	124	$3d^7 - 3d^6(a^1G)4p$	$a^2H - w^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1917.337	300w	96	$3d^7 - 3d^6(a^2G)4p$	$a^4G - y^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1918.114	40	138	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1922.234	10		$3d^6(a^3H)4s -$	$a^4H - w^2H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	G22
Fe II	1922.797	400w	138	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1925.983	400w	123	$3d^7 -$	$a^2H - x^2H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	E6, G22
Fe II	1927.481	20w	140	$3d^7 - 3d^6(a^3D)4p$	$a^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1929.194	20		$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1930.888	20b		$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1932.477	300	139	$3d^7 - 3d^6(a^3D)4p$	$a^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1933.451	10d		$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1934.475	1d		$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1935.296	300	96	$3d^7 - 3d^6(a^2G)4p$	$a^2G - y^2H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	G22
Fe II	1935.45	0		$3d^6(a^3F)4s - 3d^6(a^3D)4p$	$b^4F - x^2D^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	J6, K8
Fe II	1936.799	400	96	$3d^7 - 3d^6(a^2G)4p$	$a^2G - y^2H^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	E6, G22
Fe II	1938.899	160b	188	$3d^6(a^3F)4s - 3d^6(a^3D)4p$	$b^4F - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1941.99	2		$3d^7 - 3d^6(a^1F)4p$	$b^2F - v^2G^{\circ}$? $\frac{3}{2} - \frac{7}{2}$	J6, K8
Fe II	1946.429	2		$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$a^2F - w^2D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S1
Fe II	1946.85	2		$3d^6(a^1F)4s - 3d^6(b^3F)4p$	$c^2F - t^2F^{\circ}$? $\frac{7}{2} - \frac{3}{2}$	J6, K8
Fe II	1948.372	200w	123	$3d^7 -$	$a^2H - x^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G22
Fe II	1955.639	20		$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1956.085	10d	138	$3d^7 - 3d^6(a^3D)4p$	$a^2D - w^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S1
Fe II	1958.086	5		$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$a^2F - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1958.121	100	170	$3d^6(a^2H)4s - 3d^6(a^3D)4p$	$a^4H - w^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	G22
Fe II	1962.071	1		$3d^6(a^3F)4s -$	$b^4F - w^2H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S1
Fe II	1963.110	500b	170	$3d^6(a^3H)4s - 3d^6(a^3D)4p$	$a^4H - w^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	G22
Fe II	1964.342	240	170	$3d^6(a^3H)4s - 3d^6(a^3D)4p$	$a^4H - w^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	E6, G22
Fe II	1967.670	1		$3d^6(a^3F)4s - 3d^6(a^1D)4p$	$a^2F - v^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S1
Fe II	1968.060	20		$3d^7 - 3d^6(a^3F)4p$	$a^4P - z^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S1
Fe II	1968.210	1		$3d^6(a^3P)4s - 3d^6(a^3D)4p$	$b^4P - w^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1968.872	20d		$3d^6(a^3P)4s - 3d^6(a^1S)4p$	$b^2P - x^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S1
Fe II	1970.329	2		$3d^7 - 3d^6(a^3F)4p$	$a^4P - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1
Fe II	1970.680	20		$3d^7 - 3d^6(a^2G)4p$	$a^2G - y^4H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S1

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe II	1970.989	1d		3d ⁷ - 3d ⁶ (a ³ D)4p	a ³ D - w ⁴ P°	7/2 - 7/2	S1
Fe II	1974.489	1		3d ⁷ - 3d ⁶ (a ¹ I)4p	a ³ H - z ³ K'	11/2 - 11/2	S1
Fe II	1975.542	20		3d ⁷ - 3d ⁶ (a ³ G)4p	a ² G - y ⁴ H°	7/2 - 11/2	G22
Fe II	1983.05	0		3d ⁶ (a ² F) - s - 3d ⁶ (a ¹ D)4p	a ² F - v ² F°	? 7/2 - 7/2	J6, K8
Fe II	1984.94	0		3d ⁶ (a ² F)4s - 3d ⁶ (a ¹ D)4p	b ² F - x ³ F°	? 7/2 - 7/2	J6, K8
Fe II	1986.423	40		3d ⁶ (a ² P)4s - 3d ⁶ (a ¹ S)4p	b ² P - x ² P°	7/2 - 7/2	S1
Fe II	1990.805	1		3d ⁶ (z ² P)4s - 3d ⁶ (a ² D)4p	b ² P - w ⁴ P°	7/2 - 7/2	S1
Fe II	1993.289	160w	95	3d ⁷ - 3d ⁶ (a ² G)4p	a ² G - x ⁴ F°	7/2 - 7/2	G22
Fe II	1994.857	400	228	3d ⁶ (a ² P)4s -	b ² P - w ² F°	? 7/2 - 7/2	G22
Fe II	1997.034	4d		3d ⁶ (a ² G)4s - 3d ⁶ (a ¹ S)4p	a ⁴ G - x ² P°	7/2 - 7/2	S1
Fe II	1999.430	200	187	3d ⁶ (a ² F)4s - 3d ⁶ (a ¹ D)4p	b ² F - w ⁴ D°	7/2 - 7/2	G22
Fe II	1999.462	150	186	3d ⁶ (a ² F)4s - 3d ⁶ (a ² D)4p	b ² F - w ⁴ F°	7/2 - 7/2	G22, J6
Fe II	1999.727	20		3d ⁷ - 3d ⁶ (a ² G)4p	a ² D - x ² G°	7/2 - 7/2	G22

IRON III (Fe²⁺), Z = 26
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁶ ⁵D₄ (24 electrons)
 Ionization Potential 247 221 cm⁻¹; 30.651 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	679.129	200		3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - t ³ G°	6 - 5	E25
Fe III	680.700	150		3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - t ³ G°	5 - 4	E25
Fe III	682.10	150		3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - t ³ G°	4 - 3	E25
Fe III	684.28	70		3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - v ³ H°	6 - 6	F25
Fe III	684.858	70		3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - r ² F°	4 - 3	E25
Fe III	686.63	70		3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - v ³ H°	5 - 5	E25
Fe III	688.53	20		3d ⁶ - 3d ⁵ (b ² G)4p	a ³ H - v ³ H°	4 - 4	E25
Fe III	700.575	70		3d ⁶ - 3d ⁵ (b ² G)4p	a ² G - t ³ G°	5 - 5	E25
Fe III	703.506	70		3d ⁶ - 3d ⁵ (b ² G)4p	a ² G - t ³ G°	4 - 3	E25
Fe III	704.923	70		3d ⁶ - 3d ⁵ (b ² G)4p	a ² G - r ³ F°	3 - 2	E25
Fe III	705.892	150		3d ⁶ - 3d ⁵ (b ² G)4p	a ² G - r ² F°	5 - 4	E25
Fe III	707.444	70		3d ⁶ - 3d ⁵ (b ² G)4p	a ² G - r ² F°	3 - 3	E25
Fe III	722.419	250		3d ⁶ - 3d ⁵ (b ² G)4p	a ¹ I - w ¹ H°	6 - 5	E25
Fe III	727.681	200	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	4 - 3	E25
Fe III	728.52	70		3d ⁶ - 3d ⁵ (b ² D)4p	a ² F - t ³ D°	4 - 3	E25
Fe III	728.810	400	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	4 - 4	E25
Fe III	729.349	200	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	3 - 2	E25
Fe III	729.996	300	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	3 - 3	E25
Fe III	730.96	150	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	2 - 2	E25
Fe III	731.130	70	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	3 - 4	E25
Fe III	731.443	70		3d ⁶ - 3d ⁵ (b ² D)4p	a ² F - t ³ D°	3 - 2	E25
Fe III	731.612	150	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	2 - 3	E25
Fe III	731.846	150	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	1 - 0	E25
Fe III	731.90	70	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	1 - 1	E25
Fe III	732.004	200	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	1 - 2	E25
Fe III	732.425	150	8	3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ D°	0 - 1	E25
Fe III	733.13	70		3d ⁶ - 3d ⁵ (b ² D)4p	a ² F - t ³ D°	2 - 1	E25
Fe III	734.296	250		3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ F°	4 - 5	E25
Fe III	735.338	70		3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ F°	4 - 4	E25
Fe III	736.47	20		3d ⁶ - 3d ⁵ (b ² G)4p	a ² D - r ² F°	2 - 3	E25
Fe III	737.708	300		3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ F°	3 - 4	E25
Fe III	738.742	70		3d ⁶ - 3d ⁵ (b ² G)4p	a ² D - r ² F°	3 - 4	E25
Fe III	739.264	300		3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ F°	2 - 3	E25
Fe III	739.594	150		3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ F°	0 - 1	E25
Fe III	739.724	250		3d ⁶ - 3d ⁵ (a ⁴ F)4p	g a ⁵ D - x ⁵ F°	1 - 2	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	746.247	200		$3d^6 - 3d^5(b^2D)4p$	$a^2G - s^2F^{\circ}$	5 - 4	E25
Fe III	751.427	150					E25
Fe III	751.648	150		$3d^6 - 3d^5(b^2D)4p$	$a^2G - s^2F^{\circ}$	4 - 3	E25
Fe III	754.478	150		$3d^6 - 3d^5(b^2D)4p$	$a^2G - s^2F^{\circ}$	3 - 2	E25
Fe III	757.167	150		$3d^6 - 3d^5(a^2D)4p$	$ga^5D - x^2F^{\circ}$? 4 - 3	E25
Fe III	757.279	150					
Fe III	776.097	150		$3d^6 - 3d^5(a^2S)4p$	$a^2P - w^2P^{\circ}$? 1 - 2	E25
Fe III	782.035	200		$3d^6 - 3d^5(b^2D)4p$	$a^2D - t^2D^{\circ}$	3 - 3	F25
Fe III	783.069	200		$3d^6 - 3d^5(a^2D)4p$	$a^2D - s^2F^{\circ}$	3 - 4	E25
Fe III	785.76	70		$3d^6 - 3d^5(b^2D)4p$	$a^2D - s^2F^{\circ}$	2 - 3	E25
Fe III	792.559	200					
Fe III	794.01	70		$3d^6 - 3d^5(b^2F)4p$	$a^2F - u^2D^{\circ}$	4 - 3	E25
Fe III	794.19	150		$3d^6 - 3d^5(b^2F)4p$	$a^2F - u^2G^{\circ}$	4 - 5	E25
Fe III	795.550	150		$3d^6 - 3d^5(b^2F)4p$	$a^2F - u^2D^{\circ}$	3 - 2	E25
Fe III	797.055	150		$3d^6 - 3d^5(b^2F)4p$	$a^2F - u^2D^{\circ}$	2 - 1	E25
Fe III	797.16	150		$3d^6 - 3d^5(b^2F)4p$	$a^2F - u^2G^{\circ}$	3 - 4	E25
Fe III	801.32	70		$3d^6 - 3d^5(a^4D)4p$	$ga^5L - y^2F^{\circ}$	4 - 4	E25
Fe III	807.547	600	19	$3d^6 - 3d^5(a^2H)4p$	$a^2H - x^1H^{\circ}$	6 - 5	E25
Fe III	807.855	550	19	$3d^6 - 3d^5(a^2G)4p$	$a^2F - v^2G^{\circ}$	6 - 5	E25
Fe III	808.079	300	7	$3d^6 - 3d^5(a^2G)4p$	$a^2H - v^2G^{\circ}$	5 - 4	E25
Fe III	808.840	550	19	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - x^2P^{\circ}$	4 - 3	E25
Fe III	809.675	200		$3d^6 - 3d^5(a^2G)4p$	$a^2H - v^2G^{\circ}$	4 - 3	E25
Fe III	810.940	450	7	$3d^6 - 3d^5(a^2H)4p$	$a^2F - x^1G^{\circ}$	4 - 4	E25
Fe III	811.246	250		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - x^2P^{\circ}$	3 - 3	E25
Fe III	811.284	550	7	$3d^6 - 3d^5(a^2H)4p$	$a^2F - x^1G^{\circ}$	3 - 4	E25
Fe III	811.284	550	7	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - x^2P^{\circ}$	3 - 2	E25
Fe III	812.931	300					
Fe III	813.288	250	7	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - x^2P^{\circ}$	2 - 3	E25
Fe III	813.382	650	6	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - x^2P^{\circ}$	2 - 2	E25
Fe III	813.862	300		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	4 - 4	E25
Fe III	814.148	70		$3d^6 - 3d^5(b^2F)4p$	$a^2F - t^2F^{\circ}$	4 - 4	E25
Fe III	814.148	70		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	4 - 3	E25
Fe III	814.242	400	7				
Fe III	814.565	300		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - x^2P^{\circ}$	2 - 1	E25
Fe III	815.363	200		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - x^2P^{\circ}$	1 - 2	E25
Fe III	815.52	70		$3d^6 - 3d^5(b^2F)4p$	$a^2F - t^2F^{\circ}$	2 - 2	E25
Fe III	815.612	200		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - x^2P^{\circ}$	1 - 1	E25
Fe III	815.612	200		$3d^6 - 3d^5(a^2H)4p$	$a^2H - w^2H^{\circ}$	5 - 5	E25
Fe III	816.163	400	6				
Fe III	816.273	400	6	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	1 - 0	E25
Fe III	817.038	450	6	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	3 - 4	E25
Fe III	817.166	200		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	3 - 3	E25
Fe III	817.348	200		$3d^6 - 3d^5(a^2H)4p$	$a^2H - w^2H^{\circ}$	4 - 4	E25
Fe III	817.348	200		$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^2D^{\circ}$	4 - 3	E25
Fe III	818.383	200					
Fe III	818.598	250	6	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^2D^{\circ}$	3 - 2	E25
Fe III	818.981	70		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	2 - 2	E25
Fe III	819.066	250		$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^2D^{\circ}$	2 - 1	E25
Fe III	819.742	70		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	2 - 3	F25
Fe III	819.742	70		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	1 - 1	E25
Fe III	819.898	200					
Fe III	820.271	200		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2D^{\circ}$	1 - 2	E25
Fe III	820.409	200		$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^2D^{\circ}$	3 - 3	E25
Fe III	820.915	200		$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^2D^{\circ}$	2 - 2	E25
Fe III	821.723	200		$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^2D^{\circ}$	0 - 1	E25
Fe III	821.723	200		$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^2D^{\circ}$	1 - 2	E25
Fe III	822.314	200					
Fe III	823.257	400	5	$3d^6 - 3d^5(a^4P)4p$	$ga^5D - z^2D^{\circ}$	2 - 3	E25
Fe III	824.800	200	5	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2F^{\circ}$	4 - 5	E25
Fe III	827.777	400	5	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2F^{\circ}$	4 - 4	E25
Fe III	829.375	250	5	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2F^{\circ}$	3 - 4	E25
Fe III	829.375	250	5	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2F^{\circ}$	3 - 3	E25
Fe III	830.500	70					
Fe III	831.464	300	5	$3d^6 - 3d^5(a^2H)4p$	$a^2G - x^1G^{\circ}$	5 - 4	E25
Fe III	832.328	300	18	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2F^{\circ}$	2 - 3	E25
Fe III	833.532	150		$3d^6 - 3d^5(a^2H)4p$	$a^2H - y^2I^{\circ}$	6 - 7	E25
Fe III	834.067	250	5	$3d^6 - 3d^5(a^2F)4p$	$a^2H - y^1F^{\circ}$	4 - 3	F25
Fe III	834.067	250	5	$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2F^{\circ}$	1 - 2	E25
Fe III	834.944	400	43				
Fe III	835.627	150		$3d^6 - 3d^5(b^2F)4p$	$a^1G - w^1F^{\circ}$	4 - 3	E25
Fe III	835.917	150		$3d^6 - 3d^5(a^4D)4p$	$ga^5D - y^2F^{\circ}$	0 - 1	E25
Fe III	836.521	450	18	$3d^6 - 3d^5(b^2F)4p$	$a^2G - t^2F^{\circ}$	4 - 3	E25
Fe III	836.628	200	33	$3d^6 - 3d^5(a^4F)4p$	$a^2F - v^2D^{\circ}$	2 - 2	E25
Fe III	836.628	200	33	$3d^6 - 3d^5(a^2G)4p$	$a^2G - v^2G^{\circ}$	5 - 4	E25

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	837.439	450	17	3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ H - w ³ G ^o	6 - 5	E25
Fe III	837.803	200		3d ⁶ - 3d ⁵ (b ² F)4p	a ³ G - t ³ F ^o	3 - 2	E25
Fe III	838.048	550	17	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ G - v ³ G ^o	5 - 5	E25
Fe III	838.498	150		3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - z ³ P ^o	3 - 2	E25
Fe III	838.868	150	18	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - y ³ I ^o	5 - 5	E25
Fe III	838.956	300	17	3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ H - w ³ G ^o	4 - 3	E25
Fe III	838.997	250		3d ⁶ - 3d ⁵ (b ² F)4p	a ³ G - t ³ F ^o	3 - 4	E25
Fe III	839.092	150	33	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ G - v ³ G ^o	4 - 3	E25
Fe III	859.195	150	17	3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ H - w ³ G ^o	5 - 5	E25
Fe III	839.319	300	17	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ G - v ³ G ^o	4 - 4	E25
Fe III	839.981	200		3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - z ³ P ^o	1 - 1	E25
Fe III	840.141	250	18	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - y ³ I ^o	4 - 5	E25
Fe III	840.381	300	25	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ F - v ³ F ^o	3 - 3	E25
Fe III	840.518	250	33	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ G - v ³ G ^o	3 - 3	E25
Fe III	840.629	200		3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - z ³ P ^o	2 - 2	E25
Fe III	840.741	150	33	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ G - v ³ G ^o	4 - 5	E25
Fe III	841.088	300	25	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ F - v ³ F ^o	2 - 2	E25
Fe III	841.688	150		3d ⁶ - 3d ⁵ (a ² S)4p	a ³ D - w ³ P ^o	2 - 2	E25
Fe III	842.020	400	32	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ G - w ³ H ^o	5 - 6	E25
Fe III	842.09	300		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ F - y ³ F ^o	3 - 3	E25
Fe III	842.686	300		3d ⁶ - 3d ⁵ (a ² S)4p	a ³ D - w ³ P ^o	3 - 2	E25
Fe III	844.284	650	4	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - y ³ P ^o	4 - 3	E25
Fe III	844.838	250		3d ⁶ - 3d ⁵ (a ² G)4p	a ³ F - y ³ G ^o	4 - 4	E25
Fe III	844.954	150	32	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ G - w ³ H ^o	5 - 5	E25
Fe III	845.408	600	4	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - y ³ P ^o	3 - 2	E25
Fe III	845.686	70		3d ⁶ - 3d ⁵ (a ² G)4p	ga ⁵ D - z ³ F ^o	4 - 3	E25
Fe III	845.925	450	16	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ H - x ³ H ^o	6 - 6	E25
Fe III	846.035	200		3d ⁶ - 3d ⁵ (a ² S)4p	a ³ D - w ³ P ^o	2 - 1	E25
Fe III	846.089	150		3d ⁶ - 3d ⁵ (a ² S)4p	a ³ D - w ³ P ^o	1 - 1	E25
Fe III	846.534	400	4	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - y ³ P ^o	2 - 1	E25
Fe III	847.425	550		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ H - x ³ G ^o	6 - 5	E25
Fe III	847.578	450	4	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - y ³ P ^o	2 - 2	E25
Fe III	847.700	400	32	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ G - w ³ H ^o	4 - 5	E25
Fe III	847.924	400	4	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - y ³ P ^o	1 - 1	E25
Fe III	847.984	300		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ F - w ³ G ^o	3 - 4	E25
Fe III	848.07	70	32	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ G - w ³ H ^o	4 - 4	E25
Fe III	848.601	250	4	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - y ³ P ^o	0 - 1	E25
Fe III	848.729	250		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ F - w ³ G ^o	2 - 3	E25
Fe III	848.977	200	4	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - y ³ P ^o	1 - 2	E25
Fe III	849.524	300	32	3d ⁶ - 3d ⁵ (a ² H)4p	a ³ G - w ³ H ^o	3 - 4	E25
Fe III	849.569	250		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ I ₁ - x ³ G ^o	4 - 3	E25
Fe III	851.150	450	31	3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ G - u ³ F ^o	5 - 4	E25
Fe III	851.332	450	16	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ H - x ³ H ^o	5 - 5	E25
Fe III	851.842	400	31	3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ G - u ³ F ^o	3 - 2	E25
Fe III	851.992	400	31	3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ G - u ³ F ^o	4 - 3	E25
Fe III	852.644	150	16	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ H - x ³ H ^o	4 - 5	E25
Fe III	853.045	70	16	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ H - x ³ H ^o	5 - 4	E25
Fe III	853.456	70	31	3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ G - u ³ F ^o	3 - 3	E25
Fe III	854.073	300	3	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - z ³ D ^o	3 - 4	E25
Fe III	854.205	70	2	3d ⁶ - 3d ⁵ (a ² G)4p	ga ⁵ D - z ³ F ^o	4 - 3	E25
Fe III	854.367	400	16	3d ⁶ - 3d ⁵ (a ² G)4p	a ³ H - x ³ H ^o	4 - 4	E25
Fe III	854.532	150		3d ⁶ - 3d ⁵ (b ² G)4p	b ³ F - t ³ G ^o	4 - 5	E25
Fe III	855.336	70		3d ⁶ - 3d ⁵ (b ² G)4p	b ³ F - t ³ G ^o	3 - 4	E25
Fe III	855.441	200		3d ⁶ - 3d ⁵ (b ² F)4p	a ³ D - u ³ D ^o	2 - 2	E25
Fe III	855.879	150		3d ⁶ - 3d ⁵ (b ² F)4p	a ³ D - u ³ D ^o	2 - 1	E25
Fe III	855.935	150		3d ⁶ - 3d ⁵ (b ² F)4p	a ³ D - u ³ D ^o	1 - 1	E25
Fe III	856.039	150		3d ⁶ - 3d ⁵ (b ² G)4p	b ³ F - r ³ F ^o	2 - 2	E25
Fe III	856.244	70		3d ⁶ - 3d ⁵ (b ² G)4p	b ³ F - t ³ G ^o	3 - 3	E25
Fe III	856.325	300		3d ⁶ - 3d ⁵ (b ² F)4p	a ³ D - u ³ D ^o	3 - 3	E25
Fe III	856.480	70		3d ⁶ - 3d ⁵ (b ² F)4p	a ³ D - u ³ D ^o	3 - 2	E25
Fe III	857.392	300	2	3d ⁶ - 3d ⁵ (a ² G)4p	ga ⁵ D - z ³ F ^o	3 - 3	E25
Fe III	857.690	300		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ F - x ³ G ^o	4 - 5	E25
Fe III	858.565	250	3	3d ⁶ - 3d ⁵ (a ⁴ P)4p	ga ⁵ D - z ³ D ^o	4 - 3	E25
Fe III	858.602	400	2	3d ⁶ - 3d ⁵ (a ² G)4p	ga ⁵ D - z ³ F ^o	4 - 4	E25
Fe III	859.086	200		3d ⁶ - 3d ⁵ (a ² H)4p	a ³ I ₁ - x ³ G ^o	3 - 4	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	859.626	400	2	$3d^6 - 3d^5(a^6G)4p$	$g^aD - z^2F^o$	2-3	E25
Fe III	859.721	550	2	$3d^6 - 3d^5(a^6G)4p$	$g^aD - z^2F^o$	4-5	E25
Fe III	859.838	400	11	$3d^6 - 3d^5(a^2F)4p$	$a^2P - w^2D^o$	2-3	E25
Fe III	860.315	300	2	$3d^6 - 3d^5(a^6G)4p$	$g^aD - z^2F^o$	2-2	E25
Fe III	860.565	150		$3d^6 - 3d^5(h^2G)4p$	$b^2F - r^2F^o$	3-3	E25
Fe III	860.889	150		$3d^6 - 3d^5(a^6P)4p$	$g^aD - z^2S^o$	2-2	E25
Fe III	861.087	150		$3d^6 - 3d^5(a^6F)4p$	$a^2H - x^2F^o$	6-5	E25
Fe III	861.284	250	11	$3d^6 - 3d^5(a^2F)4p$	$a^2P - w^2D^o$	1-2	E25
Fe II ⁺	861.761	550	2	$3d^6 - 3d^5(a^6G)4p$	$g^aD - z^2F^o$	1-2	E25
Fe III	861.832	650	2	$3d^6 - 3d^5(a^6G)4p$	$g^aD - z^2F^o$	3-4	E25
Fe III	862.028	300	2	$3d^6 - 3d^5(a^6G)4p$	$g^aD - z^2F^o$	1-1	E25
Fe III	862.191	150	3	$3d^6 - 3d^5(a^6P)4p$	$g^aD - z^2D^o$	3-2	E25
Fe III	862.326	150		$3d^6 - 3d^5(a^6P)4p$	$g^aD - z^2S^o$	1-2	E25
Fe III	862.468	200		$3d^6 - 3d^5(b^2G)4p$	$b^2F - r^2F^o$	4-4	E25
Fe III	862.735	300	2	$3d^6 - 3d^5(a^6G)4p$	$g^aD - z^2F^o$	0-1	E25
Fe III	863.004	70		$3d^6 - 3d^5(a^2D)4p$	$a^2P - x^2D^o$	2-2	E25
Fe III	863.232	250		$3d^6 - 3d^5(a^2F)4p$	$a^2P - w^2F^o$	1-2	E25
Fe III	863.302	250		$3d^6 - 3d^5(a^2S)4p$	$a^1D - y^1P^o$	2-1	E25
Fe III	863.730	70	11	$3d^6 - 3d^5(a^2F)4p$	$a^2P - w^2D^o$	1-1	E25
Fe III	864.034	400	3	$3d^6 - 3d^5(a^6P)4p$	$g^aD - z^2D^o$	2-3	E25
Fe III	864.375	150		$3d^6 - 3d^5(a^2F)4p$	$a^2H - y^2G^o$	6-6	E25
Fe III	864.425	250	3	$3d^6 - 3d^5(a^6P)4p$	$g^aD - z^2D^o$	2-2	E25
Fe III	865.267	70		$3d^6 - 3d^5(a^2D)4p$	$a^2P - x^2D^o$	2-3	E25
Fe III	865.896	250	3	$3d^6 - 3d^5(a^6P)4p$	$g^aD - z^2D^o$	1-2	E25
Fe III	866.905	70	3	$3d^6 - 3d^5(a^6P)4p$	$g^aD - z^2D^o$	0-1	E25
Fe III	867.639	300	11	$3d^6 - 3d^5(a^2F)4p$	$a^2P - w^2D^o$	0-1	E25
Fe III	868.450	250		$3d^6 - 3d^5(a^2F)4p$	$a^2F - w^2F^o$	4-4	E25
Fe III	868.836	300		$3d^6 - 3d^5(a^2F)4p$	$a^2F - w^2F^o$	3-3	E25
Fe III	870.041	200		$3d^6 - 3d^5(a^2F)4p$	$a^2F - w^2D^o$	2-2	E25
Fe III	870.235	150		$3d^6 - 3d^5(a^2F)4p$	$a^2F - w^2F^o$	3-4	E25
Fe III	870.274	150		$3d^6 - 3d^5(a^2F)4p$	$a^2G - w^2G^o$	5-5	E25
Fe III	870.621	300		$3d^6 - 3d^5(a^2D)4p$	$a^2P - x^2P^o$	2-2	E25
Fe III	871.552	150		$3d^6 - 3d^5(a^2D)4p$	$a^2F - z^1F^o$	4-3	E25
Fe III	871.968	250		$3d^6 - 3d^5(a^2F)4p$	$a^2G - w^2G^o$	4-4	E25
Fe III	872.027	250		$3d^6 - 3d^5(a^2F)4p$	$a^2F - w^2F^o$	2-2	E25
Fe III	873.080	200		$3d^6 - 3d^5(a^2F)4p$	$a^2G - w^2G^o$	3-3	E25
Fe III	873.130	150		$3d^6 - 3d^5(a^2F)4p$	$a^2F - x^2F^o$	4-4	E25
Fe III	873.462	550	38	$3d^6 - 3d^5(a^2H)4p$	$a^1I - x^1H^o$	6-5	E25
Fe III	873.988	70		$3d^6 - 3d^5(a^2F)4p$	$a^2F - x^2F^o$	3-2	E25
Fe III	874.129	150		$3d^6 - 3d^5(a^2D)4p$	$a^2P - x^2P^o$	1-0	E25
Fe III	874.560	70		$3d^6 - 3d^5(a^2D)4p$	$a^2F - z^1F^o$	2-3	E25
Fe III	875.090	150		$3d^6 - 3d^5(a^2F)4p$	$a^2F - y^2G^o$	4-5	E25
Fe III	875.423	300		$3d^6 - 3d^5(a^2G)4p$	$a^1I - x^1H^o$	6-5	E25
Fe III	876.021	300		$3d^6 - 3d^5(a^2G)4p$	$a^1G - x^1F^o$	4-3	E25
Fe III	876.483	200		$3d^6 - 3d^5(a^2F)4p$	$a^2F - y^2G^o$	4-4	E25
Fe III	876.564	200		$3d^6 - 3d^5(a^2H)4p$	$a^1G - x^1G^o$	4-4	E25
Fe III	876.679	200		$3d^6 - 3d^5(a^2F)4p$	$a^2H - y^2G^o$	4-3	E25
Fe III	878.287	250		$3d^6 - 3d^5(a^2F)4p$	$a^2F - y^2G^o$	4-5	E25
Fe III	879.505	250		$3d^6 - 3d^5(a^2G)4p$	$a^1G - y^1H^o$	4-5	E25
Fe III	880.008	300		$3d^6 - 3d^5(a^2F)4p$	$a^2F - y^2G^o$	4-3	E25
Fe III	880.447	400	24	$3d^6 - 3d^5(a^2D)4p$	$a^2F - x^2D^o$	3-2	E25
Fe III	880.949	400	24	$3d^6 - 3d^5(a^2D)4p$	$a^2F - x^2D^o$	4-3	E25
Fe III	881.088	450	30	$3d^6 - 3d^5(a^2H)4p$	$a^2G - x^2G^o$	5-5	E25
Fe III	881.477	200		$3d^6 - 3d^5(b^2F)4p$	$a^1G - t^2F^o$	4-4	E25
Fe III	882.147	250	24	$3d^6 - 3d^5(a^2I)4p$	$a^2F - x^2D^o$	2-1	E25
Fe III	882.295	70		$3d^6 - 3d^5(a^2D)4p$	$a^2P - x^2P^o$	0-1	E25
Fe III	883.090	200		$3d^6 - 3d^5(a^2F)4p$	$a^2F - y^2G^o$	2-3	E25
Fe III	883.688	400	30	$3d^6 - 3d^5(a^2H)4p$	$a^2G - x^2G^o$	4-4	E25
Fe III	884.263	250		$3d^6 - 3d^5(b^2G)4p$	$b^1G - u^1F^o$	4-3	E25
Fe III	884.600	300	30	$3d^6 - 3d^5(a^2H)4p$	$a^2G - x^2G^o$	3-3	E25
Fe III	886.138	70		$3d^6 - 3d^5(a^2I)4p$	$a^2F - y^2G^o$	3-3	E25
Fe III	887.372	200		$3d^6 - 3d^5(a^2F)4p$	$a^2F - y^2G^o$	2-3	E25
Fe III	888.777	150	15	$3d^6 - 3d^5(a^2I)4p$	$a^2H - y^2H^o$	6-5	E25
Fe III	890.008	150	15	$3d^6 - 3d^5(a^2I)4p$	$a^2H - y^2H^o$	5-4	E25
Fe III	890.755	600	15	$3d^6 - 3d^5(a^2I)4p$	$a^2H - y^2H^o$	5-5	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	891.172	650	15	3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - y ³ H ^o	6 - 6	E25
Fe III	891.442	550	15	3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - y ³ H ^o	4 - 4	E25
Fe III	892.417	400		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ G - w ³ F ^o	5 - 4	E25
Fe III	894.008	250		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ G - w ³ F ^o	4 - 3	E25
Fe III	896.072	70		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ D - u ³ F ^o	2 - 3	E25
Fe III	896.380	70		3d ⁶ - 3d ⁵ (b ² G)4p	b ¹ G - w ¹ H ^o	4 - 5	E25
Fe III	897.580	70		3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - z ¹ H ^o	5 - 5	E25
Fe III	897.747	150		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ G - w ³ F ^o	3 - 2	E25
Fe III	898.805	70		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ G - z ¹ F ^o	4 - 3	E25
Fe III	899.052	70		3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - z ¹ H ^o	4 - 5	E25
Fe III	899.417	550	37	3d ⁶ - 3d ⁵ (a ² H)4p	a ¹ I - y ¹ I ^o	6 - 6	E25
Fe III	900.432	150		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ G - z ¹ F ^o	3 - 3	E25
Fe III	900.940	200		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ G - y ³ G ^o	5 - 4	E25
Fe III	901.034	300	14	3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - z ³ K ^o	6 - 7	E25
Fe III	902.869	200		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ G - y ³ G ^o	5 - 5	E25
Fe III	904.320	200		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ¹ G - v ³ D ^o	4 - 3	E25
Fe III	905.338	450	14	3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - z ³ K ^o	5 - 6	E25
Fe III	905.964	70		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ F - x ³ F ^o	3 - 3	E25
Fe III	907.041	70		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ F - x ³ F ^o	2 - 2	E25
Fe III	907.891	250		3d ⁶ - 3d ⁵ (a ² G)4p	a ³ D - v ³ F ^o	3 - 4	E25
Fe III	908.131	300		3d ⁶ - 3d ⁵ (a ² G)4p	a ¹ G - v ³ F ^o	4 - 4	E25
Fe III	908.800	70		3d ⁶ - 3d ⁵ (a ² G)4p	a ³ D - v ³ F ^o	2 - 2	E25
Fe III	908.885	150		3d ⁶ - 3d ⁵ (a ² G)4p	a ³ D - v ³ F ^o	1 - 2	E25
Fe III	909.178	250		3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - z ³ I ^o	6 - 7	E25
Fe III	909.279	150		3d ⁶ - 3d ⁵ (a ² G)4p	a ³ D - v ³ F ^o	2 - 3	E25
Fe III	910.639	200		3d ⁶ - 3d ⁵ (b ² F)4p	a ¹ D - x ¹ D ^o	2 - 2	E25
Fe III	910.693	250		3d ⁶ - 3d ⁵ (a ² G)4p	a ¹ G - v ³ F ^o	4 - 3	E25
Fe III	910.961	400		3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - z ³ I ^o	4 - 5	E25
Fe III	911.205	70		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ F - z ¹ D ^o	3 - 2	E25
Fe III	911.265	150		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ D - y ¹ F ^o	2 - 3	E25
Fe III	912.197	150		3d ⁶ - 3d ⁵ (b ² D)4p	b ³ P - v ³ P ^o	2 - 2	E25
Fe III	912.683	300		3d ⁶ - 3d ⁵ (a ² F)4p	a ¹ G - y ¹ F ^o	4 - 3	E25
Fe III	912.794	200		3d ⁶ - 3d ⁵ (a ² I)4p	a ³ H - z ³ I ^o	5 - 6	E25
Fe III	913.132	70		3d ⁶ - 3d ⁵ (a ⁴ I)4p	a ³ P - y ³ P ^o	2 - 2	E25
Fe III	913.324	70		3d ⁶ - 3d ⁵ (a ² H)4p	a ¹ I - y ³ I ^o	6 - 6	E25
Fe III	913.919	150		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ G - z ¹ G ^o	4 - 4	E25
Fe III	915.455	200		3d ⁶ - 3d ⁵ (a ² G)4p	a ¹ D - x ¹ F ^o	2 - 3	E25
Fe III	917.684	150		3d ⁶ - 3d ⁵ (a ² G)4p	a ³ D - y ¹ G ^o	3 - 4	E25
Fe III	917.932	250		3d ⁶ - 3d ⁵ (a ² G)4p	a ¹ G - y ¹ G ^o	4 - 4	E25
Fe III	918.800	70		3d ⁶ - 3d ⁵ (b ² D)4p	b ³ P - t ³ D ^o	1 - 2	E25
Fe III	923.215	70		3d ⁶ - 3d ⁵ (b ² D)4p	b ³ P - t ³ D ^o	2 - 3	E25
Fe III	928.004	250		3d ⁶ - 3d ⁵ (b ² F)4p	a ¹ F - w ¹ F ^o	3 - 3	E25
Fe III	928.474	360b		3d ⁶ - 3d ⁵ (a ² I)4p	a ³ G - y ³ H ^o	5 - 6	E25
Fe III	929.163	300		3d ⁶ - 3d ⁵ (a ² I)4p	a ³ G - y ³ H ^o	4 - 5	E25
Fe III	931.086	250		3d ⁶ - 3d ⁵ (a ² G)4p	a ¹ I - x ³ H ^o	6 - 5	E25
Fe III	931.124	70		3d ⁶ - 3d ⁵ (a ⁴ I)4p	a ³ P - y ³ P ^o	0 - 1	E25
Fe III	934.703	450	10	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ S ^o	2 - 1	E25
Fe III	942.363	150		3d ⁶ - 3d ⁵ (b ² F)4p	a ¹ F - w ¹ G ^o	3 - 4	E25
Fe III	946.056	400b	10	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ S ^o	1 - 1	E25
Fe III	948.322	300		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ P - y ³ D ^o	2 - 3	E25
Fe III	948.916	250		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ¹ I - y ⁵ G ^o	6 - 6	E25
Fe III	950.334	650	36	3d ⁶ - 3d ⁵ (a ² I)4p	a ¹ I - z ¹ I ^o	6 - 6	E25
Fe III	950.722	200	10	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ S ^o	0 - 1	E25
Fe III	953.383	200		3d ⁶ - 3d ⁵ (a ² G)4p	a ¹ D - v ³ F ^o	2 - 3	E25
Fe III	955.141	150		3d ⁶ - 3d ⁵ (a ² F)4p	a ³ D - y ³ G ^o	3 - 4	E25
Fe III	955.572	300	46	3d ⁶ - 3d ⁵ (a ² F)4p	a ¹ D - y ¹ F ^o	2 - 3	E25
Fe III	956.355	70		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ F - x ³ D ^o	2 - 2	E25
Fe III	959.070	70		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ P - y ³ D ^o	1 - 1	E25
Fe III	959.329	70		3d ⁶ - 3d ⁵ (a ⁴ F)4p	a ³ D - y ⁵ G ^o	3 - 3	E25
Fe III	959.552	250		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ P - y ³ D ^o	1 - 2	E25
Fe III	960.454	70		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ D - x ³ D ^o	3 - 3	E25
Fe III	961.709	150		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ I ^o	4 - 4	E25
Fe III	961.881	450	45	3d ⁶ - 3d ⁵ (a ² F)4p	a ¹ D - y ¹ D ^o	2 - 2	E25
Fe III	962.108	70		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ F ^o	3 - 3	E25
Fe III	962.655	300	44	3d ⁶ - 3d ⁵ (a ² D)4p	a ¹ S - z ¹ P ^o	0 - 1	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	963.197	150		3d ⁶ - 3d ⁵ (a ³ D)4p	a ³ D - x ³ P ^o	1 - 1	E25
Fe III	963.880	200		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ P - y ³ D ^o	0 - 1	E25
Fe III	965.717	70		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ D - x ³ P ^o	2 - 2	E25
Fe III	967.127	400	23	3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ D ^o	4 - 3	E25
Fe III	968.955	250	23	3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ D ^o	3 - 2	E25
Fe III	969.423	150		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ D ^o	3 - 3	E25
Fe III	969.954	200	23	3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ D ^o	2 - 1	E25
Fe III	970.381	150					E25
Fe III	970.435	150		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ D ^o	2 - 2	E25
Fe III	971.929	200		3d ⁶ - 3d ⁵ (a ³ D)4p	a ¹ D - z ¹ P ^o	2 - 1	E25
Fe III	973.505	250		3d ⁶ - 3d ⁵ (³ F)4p	a ¹ F - x ¹ D ^o	3 - 2	E25
Fe III	977.790	150		3d ⁶ - 3d ⁵ (³ D)4p	b ¹ G - v ¹ F ^o	4 - 3	E25
Fe III	979.032	300		3d ⁶ - 3d ⁵ (a ² G)4p	a ¹ F - x ¹ F ^o	3 - 3	E25
Fe III	979.704	150		3d ⁶ - 3d ⁵ (a ³ H)4p	a ¹ F - x ¹ G ^o	3 - 4	E25
Fe III	980.416	70		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - x ³ P ^o	3 - 2	E25
Fe III	981.084	70		3d ⁶ - 3d ⁵ (a ² D)4p	a ³ D - x ³ F ^o	3 - 4	E25
Fe III	981.373	650	13	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ H - z ³ G ^o	6 - 5	E25
Fe III	983.510	150		3d ⁶ - 3d ⁵ (a ³ I)4p	a ¹ G - y ¹ H ^o	4 - 5	E25
Fe III	983.877	650w	13	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ H - z ³ G ^o	5 - 4	E25
Fe III	985.824	550	13	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ H - z ³ G ^o	4 - 3	E25
Fe III	986.514	250		3d ⁶ - 3d ⁵ (a ³ D)4p	a ³ D - x ³ F ^o	2 - 3	E25
Fe III	986.637	300		3d ⁶ - 3d ⁵ (a ² I)4p	a ¹ I - z ¹ H ^o	6 - 5	E25
Fe III	988.148	150		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ D ^o	3 - 2	E25
Fe III	989.467	250		3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ F - y ³ D ^o	2 - 1	E25
Fe III	990.235	250	22	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ F - z ³ D ^o	2 - 1	E25
Fe III	990.800	400	22	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ F - z ³ D ^o	3 - 2	E25
Fe III	991.232	600	22	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ F - z ³ D ^o	4 - 3	E25
Fe III	991.829	400	42	3d ⁶ - 3d ⁵ (a ² I)4p	a ¹ G - z ¹ H ^o	4 - 5	E25
Fe III	992.337	150	22	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ F - z ³ D ^o	2 - 2	E25
Fe III	993.080	450	29	3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ G - y ³ F ^o	4 - 3	E25
Fe III	994.257	200	9	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ P ^o	2 - 1	E25
Fe III	994.724	400	29	3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ G - y ³ F ^o	3 - 2	E25
Fe III	995.150	400	21	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ G ^o	4 - 5	E25
Fe III	995.223	150	21	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ G ^o	4 - 4	E25
Fe III	997.081	450	9	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ P ^o	2 - 2	E25
Fe III	997.599	400	21	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ G ^o	3 - 4	E25
Fe III	997.794	70	21	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ G ^o	3 - 3	E25
Fe III	999.376	300	21	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ G ^o	2 - 3	E25
Fe III	1005.106	150		3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ P ^o	1 - 0	E25
Fe III	1006.341	150		3d ⁶ - 3d ⁵ (a ² I)4p	a ¹ G - z ¹ I ^o	4 - 5	E25
Fe III	1007.113	200	9	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ P ^o	1 - 1	E25
Fe III	1010.005	250	9	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ P ^o	1 - 2	E25
Fe III	1012.411	200	9	3d ⁶ - 3d ⁵ (a ⁴ P)4p	a ³ P - z ³ P ^o	0 - 1	E25
Fe III	1017.254	600	12	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ H - z ³ H ^o	6 - 6	E25
Fe III	1017.745	550	12	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ H - z ³ H ^o	5 - 5	E25
Fe III	1018.286	550	12	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ H - z ³ H ^o	4 - 4	E25
Fe III	1019.789	400	41	3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ D - y ³ P ^o	3 - 2	E25
Fe III	1020.022	150		3d ⁶ - 3d ⁵ (b ² F)4p	b ³ P - u ³ D ^o	1 - 2	E25
Fe III	1021.561	250	41	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ D - y ³ P ^o	2 - 1	E25
Fe III	1024.108	200	41	3d ⁶ - 3d ⁵ (a ⁴ D)4p	a ³ D - y ³ P ^o	1 - 0	E25
Fe III	1026.790	400	28	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ G - z ³ G ^o	5 - 5	E25
Fe III	1029.551	150		3d ⁶ - 3d ⁵ (b ² F)4p	b ³ F - u ³ G ^o	4 - 5	E25
Fe III	1030.844	150	28	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ G - z ³ G ^o	4 - 5	E25
Fe III	1030.924	400	28	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ G - z ³ G ^o	4 - 4	E25
Fe III	1032.123	550	20	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ F ^o	4 - 4	E25
Fe III	1032.342	250		3d ⁶ - 3d ⁵ (b ² F)4p	b ³ F - u ³ G ^o	3 - 4	E25
Fe III	1033.079	70	28	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ G - z ³ G ^o	3 - 4	E25
Fe III	1033.225	150	20	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ F ^o	4 - 3	E25
Fe III	1033.298	300	28	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ G - z ³ G ^o	3 - 3	E25
Fe III	1034.054	150		3d ⁶ - 3d ⁵ (b ² F)4p	b ³ F - u ³ G ^o	2 - 3	E25
Fe III	1034.654	150	20	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ F ^o	3 - 4	E25
Fe III	1035.768	400	20	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ F ^o	3 - 3	E25
Fe III	1036.659	150	20	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ F ^o	3 - 2	E25
Fe III	1037.462	70	20	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ F ^o	2 - 3	E25
Fe III	1038.355	400	20	3d ⁶ - 3d ⁵ (a ⁴ G)4p	a ³ F - z ³ F ^o	2 - 2	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	1060.258	250		$3d^6 - 3d^5(b^3F)4p$	$b^3F - t^3F^o$	2 - 2	E25
Fe III	1060.723	250		$3d^6 - 3d^5(b^3F)4p$	$b^3F - t^3F^o$	3 - 3	E25
Fe III	1061.127	250		$3d^6 - 3d^5(a^1D)4p$	$a^3D - y^3D^o$	2 - 1	E25
Fe III	1061.245	300	40	$3d^6 - 3d^5(a^1D)4p$	$a^3D - y^3D^o$	1 - 1	E25
Fe III	1061.708	400	40	$3d^6 - 3d^5(a^1D)4p$	$a^3D - y^3D^o$	2 - 2	E25
Fe III	1061.827	250	40	$3d^6 - 3d^5(a^1D)4p$	$a^3D - y^3D^o$	1 - 2	E25
Fe III	1062.272	200	40	$3d^6 - 3d^5(a^1D)4p$	$a^3D - y^3D^o$	2 - 3	E25
Fe III	1063.188	250		$3d^6 - 3d^5(b^3F)4p$	$b^3F - t^3F^o$	4 - 4	E25
Fe III	1063.309	200	40	$3d^6 - 3d^5(a^1D)4p$	$a^3D - y^3D^o$	3 - 2	E25
Fe III	1063.872	550	40	$3d^6 - 3d^5(a^1D)4p$	$a^3D - y^3D^o$	3 - 3	E25
Fe III	1064.611	70		$3d^6 - 3d^5(a^4G)4p$	$b^3F - v^3G^o$	2 - 3	E25
Fe III	1066.143	350	27	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3H^o$	5 - 6	E25
Fe III	1066.181	300	26	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3H^o$	5 - 4	E25
Fe III	1068.190	300	27	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3H^o$	4 - 5	E25
Fe III	1068.299	200		$3d^6 - 3d^5(a^4G)4p$	$b^3F - v^3G^o$	4 - 5	E25
Fe III	1069.019	300	27	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3H^o$	3 - 4	E25
Fe III	1070.284	250		$3d^6 - 3d^5(b^3F)4p$	$b^1G - w^1F^o$	4 - 3	E25
Fe III	1070.556	200	26	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3F^o$	4 - 4	E25
Fe III	1071.746	300	26	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3F^o$	4 - 3	E25
Fe III	1072.217	250					E25
Fe III	1074.061	70	26	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3F^o$	3 - 3	E25
Fe III	1075.024	250	26	$3d^6 - 3d^5(a^4G)4p$	$a^3G - z^3F^o$	3 - 2	E25
Fe III	1082.838	250		$3d^6 - 3d^5(a^4F)4p$	$b^3F - u^3F^o$	2 - 2	E25
Fe III	1083.176	150		$3d^6 - 3d^5(a^4F)4p$	$b^3P - v^3D^o$	0 - 1	E25
Fe III	1086.748	300		$3d^6 - 3d^5(a^4F)4p$	$b^3F - u^3F^o$	3 - 3	E25
Fe III	1088.224	70		$3d^6 - 3d^5(a^4F)4p$	$b^3P - v^3D^o$	1 - 1	E25
Fe III	1089.061	200		$3d^6 - 3d^5(a^4F)4p$	$b^3P - v^3D^o$	1 - 2	E25
Fe III	1089.416	250		$3d^6 - 3d^5(b^3F)4p$	$b^1G - w^1G^o$	4 - 4	E25
Fe III	1089.671	250		$3d^6 - 3d^5(a^4F)4p$	$b^3F - u^3F^o$	4 - 4	E25
Fe III	1093.332	P 150		$3d^6 - 3d^5(a^4F)4p$	$a^1F - z^1G^o$	3 - 4	E25
Fe III	1095.476	P 300		$3d^6 - 3d^5(a^4F)4p$	$b^3F - v^3D^o$	2 - 1	E25
Fe III	1096.606	P 200		$3d^6 - 3d^5(a^4F)4p$	$b^3F - v^3D^o$	4 - 3	E25
Fe III	1097.649	P 70		$3d^6 - 3d^5(a^4F)4p$	$b^3F - v^3D^o$	3 - 2	E25
Fe III	1098.247	P 300		$3d^6 - 3d^5(a^4F)4p$	$b^3P - v^3D^o$	2 - 3	E25
Fe III	1099.061	P 150		$3d^6 - 3d^5(a^4F)4p$	$b^3P - v^3D^o$	2 - 2	E25
Fe III	1122.526	600	t	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	4 - 3	E25
Fe III	1124.883	600	1	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	3 - 2	E25
Fe III	1126.728	P 400	1	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	2 - 1	E25
Fe III	1128.050	P 550	1	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	3 - 3	E25
Fe III	1128.723	P 450	1	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	2 - 2	E25
Fe III	1129.190	P 450	1	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	1 - 1	E25
Fe III	1130.404	300	1	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	0 - 1	E25
Fe III	1131.194	450	1	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	1 - 2	E25
Fe III	1131.914	200	1	$3d^6 - 3d^5(a^6S)4p$	$ga^5D - z^5P^o$	2 - 3	E25
Fe III	1141.272	200		$3d^6 - 3d^5(a^2H)4p$	$b^1G - x^1H^o$	4 - 5	E25
Fe III	1142.464	250	39	$3d^6 - 3d^5(a^4G)4p$	$a^3D - z^3F^o$	2 - 3	E25
Fe III	1142.955	300	39	$3d^6 - 3d^5(a^4G)4p$	$a^3D - z^3F^o$	3 - 4	E25
Fe III	1143.545	P 70	39	$3d^6 - 3d^5(a^4G)4p$	$a^3D - z^3F^o$	2 - 2	E25
Fe III	1143.671	P 200	39	$3d^6 - 3d^5(a^4G)4p$	$a^3D - z^3F^o$	1 - 2	E25
Fe III	1382.857	70		$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^3G - y^3G^o$	6 - 6	E25
Fe III	1394.024	70		$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3G^o$	2 - 3	E25
Fe III	1395.213	200		$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3G^o$	4 - 5	E25
Fe III	1395.382	20		$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3G^o$	4 - 4	E25
Fe III	1395.750	150		$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3G^o$	3 - 4	E25
Fe III	1465.309	200h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^o - f^5G$	2 - 3	G11
Fe III	1465.763	200h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^o - f^5G$	3 - 3	G11
Fe III	1465.820	20h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^o - f^5G$	3 - 4	G11
Fe III	1466.492	250h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^o - f^5G$	4 - 4	G11
Fe III	1467.751	250h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^o - f^5G$	5 - 5	G11
Fe III	1468.526	20h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^o - f^5G$	5 - 6	G11
Fe III	1468.986	150		$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3F^o$	4 - 4	E25
Fe III	1469.881	400h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5G^o - f^5G$	6 - 6	G11
Fe III	1471.051	20		$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3F^o$	2 - 2	E25
Fe III	1471.638	70		$3d^6 - 3d^5(a^4G)4p$	$b^3F - z^3F^o$	3 - 3	E25
Fe III	1481.169	150		$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$b^5D - x^5D^o$	4 - 4	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	1484.241	20		$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$b^3G - x^3G^o$	4 - 4	E25
Fe III	1484.546	70		$3d^5(a^4G)4s - 3d^5(a^2H)4p$	$b^3G - x^3G^o$	5 - 5	E25
Fe III	1486.265	450h	85	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^7P^o - e^7S$	2 - 3	E25
Fe III	1493.640	600h	85	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^7P^o - e^7S$	3 - 3	E25
Fe III	1495.210	79h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^o - f^5G$	3 - 2	G11
Fe III	1498.825	70h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^o - f^5G$	4 - 3	G11
Fe III	1502.964	150h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^o - f^5G$	5 - 4	G11
Fe III	1504.002	150		$3d^5(a^4D)4s - 3d^5(a^4F)4p$	$b^5D - x^5F^o$	4 - 5	E25
Fe III	1505.166	650h	85	$3d^5(a^6S)4p - 3d^5(a^6S)5s$	$z^7P^o - e^7S$	4 - 3	E25
Fe III	1507.530	150h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^o - f^5G$	6 - 5	G11
Fe III	1511.133	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5G$	2 - 2	G11
Fe III	1511.617	300h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5G$	3 - 3	G11
Fe III	1512.192	150h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^o - f^5G$	7 - 6	G11
Fe III	1512.262	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5G$	4 - 3	G11
Fe III	1512.346	200h		$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5D^o - f^5F$	0 - 1	G11
Fe III	1512.830	20		$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5D^o - f^5F$	1 - 2	G11
Fe III	1512.896	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5F$	2 - 1	G11
Fe III	1513.539	300h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5F$	3 - 2	G11
Fe III	1514.563	150		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5F$	4 - 3	G11
Fe III	1514.948	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5G$	6 - 5	G11
Fe III	1515.481	300h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5G$	6 - 6	G11
Fe III	1516.222	200h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5F$	5 - 4	G11
Fe III	1516.591	20		$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5D^o - f^5F$	3 - 4	G11
Fe III	1516.790	20h		$3d^5(a^4F)4p - 3d^5(a^4F)5s$	$x^5F^o - g^5F$	4 - 4	G11
Fe III	1517.771	20h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^o - e^5D$	2 - 1	G11
Fe III	1518.842	300h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5F$	6 - 5	G11
Fe III	1521.891	20h		$3d^5(a^4F)4p - 3d^5(a^4F)5s$	$x^5F^o - g^5F$	5 - 5	G11
Fe III	1524.522	300		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5H$	2 - 3	G11
Fe III	1524.658	300		$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5S^o - f^5F$	2 - 1	G11
Fe III	1524.799	70		$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5S^o - f^5F$	2 - 2	G11
Fe III	1525.041	400		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5H$	3 - 3	G11
Fe III	1525.343	70		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5H$	4 - 4	G11
Fe III	1525.634	150		$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5S^o - f^5F$	2 - 3	G11
Fe III	1525.801	400		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5H$	5 - 6	G11
Fe III	1526.016	150h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^o - e^5D$	5 - 4	G11
Fe III	1527.145	400		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5H$	6 - 7	G11
Fe III	1527.260	200h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5G^o - e^5H$	6 - 6	G11
Fe III	1527.767	70h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5F^o - f^5G$	5 - 6	G11
Fe III	1528.884	20h		$3d^5(a^2D)4p - 3d^5(a^4F)4d$	$x^3D^o - h^5G$	3 - 3	G11
Fe III	1529.764	200h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^o - g^5G$	3 - 4	G11
Fe III	1530.220	150h		$3d^5(a^2D)4p - 3d^5(a^4F)4d$	$x^3D^o - h^5G$	3 - 4	G11
Fe III	1530.431	20h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5F^o - f^5G$	4 - 5	G11
Fe III	1531.293	400h	84	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	2 - 3	E25
Fe III	1531.644	550h	84	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	2 - 2	E25
Fe III	1531.864	450h	84	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	2 - 1	E25
Fe III	1533.439	250h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^o - g^5G$	4 - 5	G11
Fe III	1535.421	250h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5F^o - g^5G$	5 - 6	G11
Fe III	1536.421	150h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - h^5G$	4 - 4	G11
Fe III	1536.591	70h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - h^5G$	5 - 5	G11
Fe III	1536.640	150h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^o - e^5G$	6 - 5	G11
Fe III	1536.830	70h		$3d^5(a^4D)4p - 3d^5(a^4D)5s$	$y^5D^o - f^5D$	4 - 4	G11
Fe III	1538.632	650h	84	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	3 - 4	E25
Fe III	1539.128	550h	84	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	3 - 3	E25
Fe III	1539.480	300h	84	$3d^5(a^6S)4p - 3d^5(a^6S)4d$	$z^7P^o - e^7D$	3 - 2	E25
Fe III	1540.165	450h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	3 - 4	G11
Fe III	1540.362	20h		$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$y^3G^o - h^5G$	5 - 6	G11
Fe III	1540.428	70h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - h^5G$	6 - 6	G11
Fe III	1540.815	150h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^o - e^5G$	5 - 4	G11
Fe III	1541.818	300h		$3d^5(a^4P)4p - 3d^5(a^4P)4d$	$z^5D^o - f^5F$	4 - 5	G11
Fe III	1542.625	70h		$3d^5(a^4D)4p - 3d^5(a^4D)5s$	$y^5D^o - e^5D$	3 - 3	G11
Fe III	1542.965	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5G$	3 - 2	G11
Fe III	1543.640	400h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	4 - 5	G11
Fe III	1544.067	200h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - f^5H$	2 - 3	G11
Fe III	1544.232	250h		$3d^5(a^4G)4p - 3d^5(a^4G)5s$	$z^5H^o - e^5G$	3 - 4	G11
Fe III	1545.411	200h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - f^5H$	3 - 4	G11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	1546.120	550h		$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$w^3D^o - h^5G$	3 - 3	G11
Fe III	1546.570	20		$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$y^3G^o - h^5G$	5 - 5	G11
Fe III	1546.928	250h		$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$y^5G^o - f^5H$	4 - 5	G11
Fe III	1547.494	20h		$3d^5(a^2F)4p - 3d^5(a^4F)4d$	$w^3D^o - h^5G$	3 - 4	G11
Fe III	1547.640	550h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	5 - 6	G11
Fe III	1548.251	300h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$y^5G^o - f^5H$	5 - 6	G11
Fe III	1550.196	800h	84	$3d^5(a^2S)4p - 3d^5(a^2S)4d$	$z^7P^o - e^7D$	4 - 5	E25
Fe III	1550.450	300h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3H^o - e^3I$	6 - 7	G11
Fe III	1550.862	550h	84	$3d^5(a^2S)4p - 3d^5(a^2S)4d$	$z^7P^o - e^7D$	4 - 4	E25
Fe III	1551.085	150h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$x^5F^o - h^5G$	5 - 6	G11
Fe III	1551.149	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5G$	5 - 4	G11
Fe III	1551.377	250h	84	$3d^5(a^2S)4p - 3d^5(a^2S)4d$	$z^7P^o - e^7D$	4 - 3	E25
Fe III	1552.067	550h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	6 - 7	G11
Fe III	1552.681	20h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$x^5F^o - h^5G$	4 - 5	G11
Fe III	1555.166	20h		$3d^5(a^2I)4p - 3d^5(a^2I)4d$	$z^3I^o - f^5H$	6 - 5	G11
Fe III	1555.861	200h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3H^o - e^3I$	5 - 6	G11
Fe III	1556.075	300h		$3d^5(a^2F)4p - 3d^5(a^2F)4d$	$y^5G^o - f^5H$	6 - 7	G11
Fe III	1556.427	70h		$3d^5(a^2F)4p - 3d^5(a^2F)4d$	$y^3G^o - f^5H$	4 - 4	G11
Fe III	1556.493	550h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	7 - 8	G11
Fe III	1556.756	70h		$3d^5(a^4D)4p - 3d^5(a^4D)5s$	$y^5F^o - e^5D$	4 - 3	G11
Fe III	1556.902	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3I^o - e^3F$	2 - 2	G11
Fe III	1557.561	150h		$3d^5(a^4F)4p - 3d^5(a^4F)4d$	$x^5F^o - h^5G$	1 - 2	G11
Fe III	1558.310	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3F^o - e^3F$	3 - 4	G11
Fe III	1558.5	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^3F^o - e^3F$	3 - 3	G11
Fe III	1559.463	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5I$	4 - 5	G11
Fe III	1560.483	200h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5G$	7 - 6	G11
Fe III	1560.857	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	4 - 3	G11
Fe III	1561.179	20h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5D^o - e^5D$	4 - 4	G11
Fe III	1564.281	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	5 - 6	G11
Fe III	1564.512	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	5 - 5	G11
Fe III	1565.100	200h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5D^o - e^5D$	2 - 2	G11
Fe III	1567.650	70h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^5D^o - e^5D$	1 - 1	G11
Fe III	1568.7	200h	P	$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	6 - 7	G11
Fe III	1568.820	200h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	6 - 6	G11
Fe III	1569.066	70h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	6 - 5	G11
Fe III	1571.255	70h		$3d^5(a^2F)4p - 3d^5(a^2F)4d$	$w^3D^o - h^5G$	2 - 2	G11
Fe III	1572.776	200h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^3F^o - f^5G$	4 - 5	G11
Fe III	1572.841	300h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	7 - 7	G11
Fe III	1572.984	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5H^o - e^5H$	7 - 6	G11
Fe III	1577.084	200		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5G$	5 - 6	G11
Fe III	1577.926	150h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$y^3F^o - f^5G$	3 - 4	G11
Fe III	1578.759	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5D^o - e^5G$	3 - 2	G11
Fe III	1580.237	300h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5D^o - e^5G$	3 - 4	G11
Fe III	1580.690	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5F$	5 - 5	G11
Fe III	1581.057	70h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$x^5P^o - e^5D$	3 - 4	G11
Fe III	1582.419	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5F$	4 - 3	G11
Fe III	1582.621	20h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$x^5P^o - e^5D$	2 - 3	G11
Fe III	1583.199	200h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5F$	4 - 4	G11
Fe III	1583.973	20h		$3d^5(a^4D)4p - 3d^5(a^4D)4d$	$x^5P^o - e^5D$	3 - 3	G11
Fe III	1591.803	150h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5G$	1 - 2	G11
Fe III	1592.721	70h		$3d^5(a^4P)4p - 3d^5(a^4G)4d$	$z^5S^o - e^5F$	2 - 1	G11
Fe III	1592.913	70h		$3d^5(a^4P)4p - 3d^5(a^4G)4d$	$z^5S^o - e^5F$	2 - 2	G11
Fe III	1593.741	70h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5F$	1 - 1	G11
Fe III	1593.897	70h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5F$	1 - 2	G11
Fe III	1594.844	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5F$	2 - 2	G11
Fe III	1595.180	20h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5G$	3 - 4	G11
Fe III	1595.597	400h	119	$3d^5(a^2S)4p - 3d^5(a^2S)5s$	$z^5P^o - e^5S$	3 - 2	E25
Fe III	1597.631	70h		$3d^5(a^4G)4p - 3d^5(a^4G)4d$	$z^5F^o - e^5F$	3 - 3	G11
Fe III	1601.211	650h	118	$3d^5(a^2S)4p - 3d^5(a^2S)4d$	$z^5P^o - e^5D$	3 - 4	E25
Fe III	1601.289	400h	118	$3d^5(a^2S)4p - 3d^5(a^2S)4d$	$z^5P^o - e^5D$	3 - 3	E25
Fe III	1602.060	300h	119	$3d^5(a^2S)4p - 3d^5(a^2S)5s$	$z^5P^o - e^5S$	2 - 2	E25
Fe III	1606.014	200h	119	$3d^5(a^2S)4p - 3d^5(a^2S)5s$	$z^5P^o - e^5S$	1 - 2	E25
Fe III	1607.723	600h	118	$3d^5(a^2S)4p - 3d^5(a^2S)4d$	$z^5P^o - e^5D$	2 - 3	E25
Fe III	1611.723	450h	118	$3d^5(a^2S)4p - 3d^5(a^2S)4d$	$z^5P^o - e^5D$	1 - 1	E25
Fe III	1611.763	450h	118	$3d^5(a^2S)4p - 3d^5(a^2S)4d$	$z^5P^o - e^5D$	1 - 2	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	1614.611	70		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² I)4p	b ³ G - y ³ H ^o	3 - 4	E25
Fe III	1617.171	70		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² I)4p	b ³ G - y ³ H ^o	4 - 5	E25
Fe III	1624.206	150		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ² I)4p	b ³ G - y ³ H ^o	5 - 6	E25
Fe III	1628.304	200		3d ⁵ (a ² F)4s - 3d ⁵ (a ² H)4p	b ¹ I - x ¹ H ^o	6 - 5	E25
Fe III	1656.831	150		3d ⁵ (a ² I)4s - 3d ⁵ (a ² H)4p	a ² I - y ² I ^o	7 - 7	E25
Fe III	1695.036	150		3d ⁵ (a ² S)4s - 3d ⁵ (a ² S)4p	a ² S - z ² P ^o	3 - 3	E25
Fe III	1709.892	250		3d ⁵ (a ² H)4s - 3d ⁵ (b ² F)4p	b ³ H - u ² G ^o	6 - 5	E25
Fe III	1710.374	200		3d ⁵ (a ² H)4s - 3d ⁵ (b ² F)4p	b ³ H - u ² G ^o	5 - 4	E25
Fe III	1717.414	150		3d ⁵ (a ² H)4s - 3d ⁵ (b ² F)4p	b ³ H - u ² G ^o	4 - 3	E25
Fe III	1722.837	250		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ D)4p	a ² G - y ² F ^o	6 - 5	E25
Fe III	1730.842	250		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ D)4p	a ² G - y ² F ^o	5 - 4	E25
Fe III	1738.468	200		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ D)4p	a ² G - y ² F ^o	4 - 3	E25
Fe III	1739.201	20		3d ⁵ (a ² G)4s - 3d ⁵ (b ² F)4p	e ² G - u ² G ^o	5 - 5	E25
Fe III	1744.233	200		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ D)4p	a ² G - y ² F ^o	3 - 2	E25
Fe III	1745.638	250		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - x ² P ^o	3 - 3	E25
Fe III	1747.260	70		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - x ² P ^o	3 - 2	E25
Fe III	1748.177	150		3d ⁵ (a ⁴ G)4s - 3d ⁵ (a ⁴ D)4p	a ² G - y ² F ^o	2 - 1	E25
Fe III	1749.052	70		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - x ² P ^o	2 - 2	E25
Fe III	1753.455	20		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - x ² P ^o	2 - 1	E25
Fe III	1770.247	200		3d ⁵ (a ² H)4s - 3d ⁵ (b ² F)4p	a ¹ H - w ¹ G ^o	5 - 4	F25
Fe III	1770.554	400		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - y ² D ^o	3 - 4	E25
Fe III	1771.975	150		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - y ² D ^o	3 - 2	E25
Fe III	1773.098	70		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - y ² D ^o	2 - 1	E25
Fe III	1775.267	70		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - y ² D ^o	1 - 1	E25
Fe III	1775.590	20		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	a ² P - z ² D ^o	2 - 1	E25
Fe III	1775.983	400		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	a ² P - y ² D ^o	2 - 3	E25
Fe III	1777.737	70		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	a ² P - z ² D ^o	1 - 1	E25
Fe III	1791.345	20		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	a ² P - z ² D ^o	2 - 3	E25
Fe III	1793.785	70		3d ⁵ (a ⁴ D)4s - 3d ⁵ (a ⁴ D)4p	b ² D - y ² F ^o	4 - 4	E25
Fe III	1797.769	20		3d ⁵ (b ² F)4s - 3d ⁵ (b ² F)4p	e ² F - w ¹ G ^o	4 - 4	E25
Fe III	1801.766	200		3d ⁵ (a ² G)4s - 3d ⁵ (b ² F)4p	e ¹ G - w ¹ G ^o	4 - 4	E25
Fe III	1803.330	70		3d ⁵ (a ² H)4s - 3d ⁵ (a ² G)4p	b ² I _g - v ² G ^o	4 - 3	E25
Fe III	1805.337	150		3d ⁵ (a ² H)4s - 3d ⁵ (a ² G)4p	b ² H - v ² G ^o	5 - 4	E25
Fe III	1808.203	20		3d ⁵ (a ² F)4s - 3d ⁵ (a ² F)4p	c ² F - w ² G ^o	4 - 5	E25
Fe III	1811.924	200		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	e ² P - y ² P ^o	2 - 2	E25
Fe III	1812.974	150		3d ⁵ (a ⁴ D)4s - 3d ⁵ (a ⁴ D)4p	b ² D - y ² D ^o	4 - 3	E25
Fe III	1819.480	150		3d ⁵ (a ² H)4s - 3d ⁵ (a ² G)4p	b ² H - v ² G ^o	6 - 5	E25
Fe III	1819.718	70		3d ⁵ (a ² F)4s - 3d ⁵ (a ² F)4p	c ² F - w ² G ^o	3 - 4	E25
Fe III	1820.496	70		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	a ² G - z ² H ^o	6 - 6	E25
Fe III	1821.865	20		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	a ² G - z ² H ^o	5 - 6	E25
Fe III	1822.183	70		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	c ² P - y ² P ^o	2 - 1	E25
Fe III	1824.659	70		3d ⁵ (a ² G)4s - 3d ⁵ (b ² F)4p	c ² G - t ² F ^o	3 - 2	E25
Fe III	1826.156	70		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	a ² G - z ² F ^o	4 - 3	E25
Fe III	1826.267	20		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	c ² P - y ² P ^o	1 - 1	E25
Fe III	1828.857	70		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	e ² G - y ¹ H ^o	5 - 5	E25
Fe III	1829.172	150		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	a ² G - z ² F ^o	3 - 2	E25
Fe III	1830.623	200	117	3d ⁵ (a ² H)4s - 3d ⁵ (a ² H)4p	b ² H - w ² H ^o	5 - 6	E25
Fe III	1834.096	70		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ D)4p	e ² P - y ² P ^o	1 - 0	E25
Fe III	1837.422	70		3d ⁵ (a ² G)4s - 3d ⁵ (b ² F)4p	e ² G - t ² F ^o	5 - 4	E25
Fe III	1837.588	250		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	c ² G - v ² G ^o	3 - 3	E25
Fe III	1838.309	450	117	3d ⁵ (a ² H)4s - 3d ⁵ (a ² H)4p	b ² H - w ² H ^o	6 - 6	E25
Fe III	1838.621	70		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	e ² G - v ² G ^o	3 - 4	E25
Fe III	1838.698	70		3d ⁵ (a ² D)4s - 3d ⁵ (a ² F)4p	c ² D - w ² F ^o	2 - 3	E25
Fe III	1841.387	200	97	3d ⁵ (a ² F)4s - 3d ⁵ (a ² F)4p	a ² F - x ² D ^o	3 - 2	E25
Fe III	1841.536	300		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	c ² G - v ² G ^o	4 - 4	E25
Fe III	1842.927	300	97	3d ⁵ (a ² F)4s - 3d ⁵ (a ² F)4p	a ² F - x ² D ^o	4 - 3	E25
Fe III	1843.409	250		3d ⁵ (b ² F)4s - 3d ⁵ (b ² F)4p	e ² F - u ² D ^o	4 - 3	E25
Fe III	1843.502	150	117	3d ⁵ (a ² H)4s - 3d ⁵ (a ² H)4p	b ² H - w ² H ^o	4 - 5	E25
Fe III	1843.999	200		3d ⁵ (a ² D)4s - 3d ⁵ (a ² F)4p	e ² D - w ² F ^o	3 - 4	E25
Fe III	1844.263	300		3d ⁵ (b ² F)4s - 3d ⁵ (b ² F)4p	e ² F - u ² D ^o	3 - 2	E25
Fe III	1844.547	400	117	3d ⁵ (a ² H)4s - 3d ⁵ (a ² H)4p	b ² H - w ² H ^o	5 - 5	E25
Fe III	1844.942	200	97	3d ⁵ (a ² F)4s - 3d ⁵ (a ² F)4p	a ² F - x ² D ^o	2 - 1	E25
Fe III	1845.304	300	117	3d ⁵ (a ² H)4s - 3d ⁵ (a ² H)4p	b ² H - w ² H ^o	4 - 4	E25
Fe III	1845.521	450	97	3d ⁵ (a ² F)4s - 3d ⁵ (a ² F)4p	a ² F - x ² D ^o	3 - 3	E25
Fe III	1845.749	70w		3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	e ² G - v ² G ^o	5 - 4	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	1846.943	200		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$c^3F - u^3D^o$	2 - 1	E25
Fe III	1847.348	70		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - v^3P^o$	2 - 2	E25
Fe III	1847.637	150		$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$c^1G - u^3D^o$	4 - 3	E25
Fe III	1848.130	150		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - v^3P^o$	3 - 2	E25
Fe III	1848.428	20		$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3G^o$	4 - 5	E25
Fe III	1848.492	70		$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$d^3F - t^3F^o$	4 - 3	E25
Fe III	1848.883	70		$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$d^3F - t^3F^o$	3 - 3	E25
Fe III	1849.172	70		$3d^5(a^4F)4s - 3d^5(b^2F)4p$	$d^3F - t^3F^o$	2 - 2	E25
Fe III	1849.407	450	97	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5D^o$	5 - 4	E25
Fe III	1849.648	70	97	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5D^o$	2 - 3	E25
Fe III	1849.960	300	53	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^5G - z^5D^o$	5 - 4	E25
Fe III	1850.200	300	97	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5D^o$	4 - 4	E25
Fe III	1850.650	70	53	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^5G - z^5D^o$	4 - 4	E25
Fe III	1851.261	400		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$c^3F - u^3G^o$	4 - 5	E25
Fe III	1852.366	70		$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - w^3H^o$	6 - 5	E25
Fe III	1852.677	400		$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3G^o$	5 - 5	E25
Fe III	1852.812	150	97	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5D^o$	3 - 4	E25
Fe III	1854.384	200	97	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5D^o$	1 - 0	E25
Fe III	1854.826	600w	63	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - x^5P^o$	3 - 3	E25
Fe III	1854.975	300	63	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - x^5P^o$	1 - 2	E25
Fe III	1855.510	200		$3d^5(a^2G)4s - 3d^5(b^2F)4p$	$c^1G - u^3G^o$	4 - 5	E25
Fe III	1856.690	450	63	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - x^5P^o$	2 - 2	E25
Fe III	1858.542	300	63	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - x^5P^o$	0 - 1	E25
Fe III	1859.813	300		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$c^3F - u^3G^o$	3 - 4	E25
Fe III	1859.955	200	63	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - x^5P^o$	1 - 1	E25
Fe III	1861.665	200	63	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - x^5P^o$	2 - 1	E25
Fe III	1862.446	150		$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3G^o$	2 - 3	E25
Fe III	1863.317	250	62	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	1 - 0	E25
Fe III	1864.534	70		$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3G^o$	3 - 3	E25
Fe III	1865.202	450		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$c^3F - w^3F^o$	3 - 3	E25
Fe III	1865.445	150	154	$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$b^3D - v^3F^o$	2 - 3	E25
Fe III	1865.606	150		$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3G^o$	3 - 4	E25
Fe III	1866.305	600	52	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	4 - 3	E25
Fe III	1866.554	300	52	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	3 - 3	E25
Fe III	1866.900	150		$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$b^3F - v^3D^o$	3 - 3	E25
Fe III	1869.828	650	52	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	3 - 2	E25
Fe III	1869.925	250		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$c^3F - u^3G^o$	2 - 3	E25
Fe III	1871.152	600	52	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	2 - 1	E25
Fe III	1871.319	150		$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^5F - w^3F^o$	2 - 3	E25
Fe III	1871.448	20		$3d^5(b^2F)4p - 3d^5(a^4F)4d$	$u^3G^o - h^5G$	3 - 4	E25
Fe III	1872.214	400		$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - w^3H^o$	5 - 6	E25
Fe III	1872.515	250		$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^5G - z^5S^o$	3 - 2	E25
Fe III	1873.534	150		$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^5F - w^3F^o$	3 - 4	E25
Fe III	1877.989	800	63	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	4 - 4	E25
Fe III	1878.550	150		$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^3P^o$	3 - 2	E25
Fe III	1880.620	200	62	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	0 - 1	E25
Fe III	1880.704	250		$3d^5(a^2D)4s - 3d^5(a^2F)4p$	$c^3D - y^3G^o$	3 - 4	E25
Fe III	1881.178	300		$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - w^3H^o$	3 - 4	E25
Fe III	1881.578	200		$3d^5(a^4F)4s - 3d^5(a^2F)4p$	$a^5F - w^3D^o$	1 - 2	E25
Fe III	1882.047	650	62	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	4 - 3	E25
Fe III	1882.357	300		$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - w^3H^o$	4 - 5	E25
Fe III	1882.979	250	62	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	3 - 4	E25
Fe III	1883.185	150		$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$b^3F - v^3F^o$	3 - 4	E25
Fe III	1883.394	70		$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$b^5D - z^3D^o$	0 - 1	E25
Fe III	1883.816	200	62	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	2 - 1	E25
Fe III	1884.253	150w		$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^3G - w^3H^o$	4 - 4	E25
Fe III	1884.596	550	62	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	3 - 2	E25
Fe III	1885.125	600	96	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	5 - 5	E25
Fe III	1885.947	300	96	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - x^5F^o$	4 - 5	E25
Fe III	1886.607	300		$3d^5(a^4D)4s - 3d^5(a^4P)4p$	$b^5D - z^3D^o$	2 - 1	E25
Fe III	1886.757	800	52	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5F^o$	5 - 4	E25
Fe III	1887.085	70	62	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5D^o$	2 - 3	E25
Fe III	1887.197	550	53	$3d^5(a^4G)4s - 3d^5(a^4F)4p$	$a^5G - z^5D^o$	4 - 3	E25
Fe III	1887.471	550	52	$3d^5(a^4G)4s - 3d^5(a^4P)4p$	$a^5G - z^5D^o$	2 - 3	E25
Fe III	1887.734	250		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - t^3G^o$	5 - 5	E25

Element	Wavelength	Intensity	Multiplicity	Configuration	Term	J - J	References
Fe III	1888.260	150		3d ⁵ (b ² G)4s - 3d ⁵ (b ² G)4p	d ² G - t ² G°	4 - 5	E25
Fe III	1889.451	300	53	3d ⁵ (a ² G)4s - 3d ⁵ (a ² P)4p	a ² G - z ² D°	3 - 2	E25
Fe III	1889.735	250		3d ⁵ (a ² D)4s - 3d ⁵ (a ² F)4p	b ¹ D - y ¹ D°	2 - 2	E25
Fe III	1890.669	900	52	3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	a ² G - z ² F°	6 - 5	E25
Fe III	1890.893	150	53	3d ⁵ (a ² G)4s - 3d ⁵ (a ² P)4p	a ² G - z ² D°	2 - 1	E25
Fe III	1891.070	250	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	3 - 2	E25
Fe III	1891.186	200	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	2 - 1	E25
Fe III	1891.339	70		3d ⁵ (a ² F)4s - 3d ⁵ (a ⁴ F)4p	c ² F - x ⁵ D°	3 - 2	E25
Fe III	1891.516	300 ^w		3d ⁵ (b ² G)4s - 3d ⁵ (b ² G)4p	d ² G - t ² G°	4 - 4	E25
Fe III	1891.909	200		3d ⁵ (a ² D)4s - 3d ⁵ (a ⁴ F)4p	c ² D - y ⁵ G°	3 - 4	E25
Fe III	1892.073	300	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	5 - 4	E25
Fe III	1892.140	300	52	3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	a ⁵ G - z ⁵ F°	5 - 5	E25
Fe III	1892.247	300	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	4 - 3	E25
Fe III	1892.339	70		3d ⁵ (a ² H)4s - 3d ⁵ (a ² H)4p	b ² H - y ¹ I°	5 - 6	E25
Fe III	1892.488	70		3d ⁵ (a ² D)4s - 3d ⁵ (a ¹ P)4p	b ⁵ D - z ³ D°	1 - 2	E25
Fe III	1892.598	70		3d ⁵ (a ² G)4s - 3d ⁵ (a ⁴ F)4p	c ² G - u ³ F°	3 - 2	E25
Fe III	1892.890	300	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	4 - 4	E25
Fe III	1893.113	200		3d ⁵ (b ² D)4s - 3d ⁵ (b ² D)4p	d ² D - t ² D°	2 - 3	E25
Fe III	1893.981	700	83	3d ⁵ (a ² I)4s - 3d ⁵ (a ² I)4p	a ³ I - y ² H°	5 - 4	E25
Fe III	1894.252	300		3d ⁵ (a ² F)4s - 3d ⁵ (a ² G)4p	b ¹ F - v ³ F°	3 - 3	E25
Fe III	1894.509	200		3d ⁵ (a ² D)4s - 3d ⁵ (a ² D)4p	c ² D - x ² D°	1 - 2	E25
Fe III	1894.983	250	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	3 - 3	E25
Fe III	1895.456	1000	34	3d ⁵ (a ⁶ S)4s - 3d ⁵ (a ⁶ S)4p	a ⁷ S - z ⁷ P°	3 - 4	E25
Fe III	1895.635	P	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	3 - 4	E25
Fe III	1895.912	70		3d ⁵ (b ² G)4s - 3d ⁵ (b ² G)4p	d ² G - t ² G°	4 - 3	E25
Fe III	1896.333	250		3d ⁵ (b ² G)4s - 3d ⁵ (b ² G)4p	d ² G - t ² G°	3 - 3	E25
Fe III	1896.734	250		3d ⁵ (a ² D)4s - 3d ⁵ (a ² D)4p	c ³ D - x ³ D°	1 - 1	E25
Fe III	1896.803	600	83	3d ⁵ (a ² I)4s - 3d ⁵ (a ² I)4p	a ³ I - y ³ H°	6 - 5	E25
Fe III	1897.028	250		3d ⁵ (a ² D)4s - 3d ⁵ (a ⁴ F)4p	c ³ D - y ⁵ G°	3 - 3	E25
Fe III	1897.379	200	83	3d ⁵ (a ² I)4s - 3d ⁵ (a ² I)4p	a ³ I - y ³ H°	5 - 5	E25
Fe III	1898.870	400		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	c ³ P - z ² S°	2 - 1	E25
Fe III	1899.318	300	96	3d ⁵ (b ² G)4s - 3d ⁵ (b ² G)4p	d ² G - r ² F°	3 - 2	E25
Fe III	1899.931	300		3d ⁵ (b ² D)4s - 3d ⁵ (b ² D)4p	d ³ D - s ² F°	3 - 4	E25
Fe III	1900.575	70		3d ⁵ (a ² G)4s - 3d ⁵ (a ⁴ F)4p	c ² G - u ³ F°	3 - 3	E25
Fe III	1901.096	600	95	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - y ⁵ G°	5 - 6	E25
Fe III	1901.379	300		3d ⁵ (a ² D)4s - 3d ⁵ (a ² D)4p	c ³ D - x ³ D°	3 - 3	E25
Fe III	1901.540	200	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	1 - 1	E25
Fe III	1902.076	300	94	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ² F)4p	a ⁵ F - y ⁵ G°	4 - 5	E25
Fe III	1902.492	400		3d ⁵ (a ² D)4s - 3d ⁵ (a ² D)4p	c ³ D - x ³ D°	2 - 3	E25
Fe III	1902.902	300		3d ⁵ (a ² F)4s - 3d ⁵ (a ² F)4p	b ¹ F - y ¹ F°	3 - 3	E25
Fe III	1903.159	70		3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ² F)4p	a ⁵ F - w ³ D°	4 - 3	E25
Fe III	1903.257	200		3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	c ³ P - z ³ S°	1 - 1	E25
Fe III	1903.706	70		3d ⁵ (a ² G)4s - 3d ⁵ (a ⁴ F)4p	c ³ G - u ³ F°	4 - 3	E25
Fe III	1903.983	70		3d ⁵ (b ² D)4s - 3d ⁵ (b ² D)4p	d ³ D - t ³ D°	1 - 2	E25
Fe III	1904.257	150		3d ⁵ (b ² D)4s - 3d ⁵ (b ² D)4p	c ¹ D - w ¹ D°	2 - 2	E25
Fe III	1904.402	250		3d ⁵ (a ⁴ D)4s - 3d ⁵ (a ⁴ P)4p	b ⁵ D - z ³ D°	3 - 3	E25
Fe III	1905.214	70		3d ⁵ (b ² D)4s - 3d ⁵ (b ² D)4p	d ³ D - t ³ D°	3 - 2	E25
Fe III	1905.818	150	96	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - x ⁵ F°	1 - 2	E25
Fe III	1906.457	400	108	3d ⁵ (a ² F)4s - 3d ⁵ (a ² F)4p	c ³ F - w ³ F°	4 - 4	E25
Fe III	1906.814	400		3d ⁵ (b ² G)4p - 3d ⁵ (a ⁶ S)5g	t ³ G° - ⁵ G	5 - 4	E25
Fe III	1907.577	650	83	3d ⁵ (a ² I)4s - 3d ⁵ (a ² I)4p	a ³ I - y ³ H°	7 - 6	E25
Fe III	1907.741	250	83	3d ⁵ (a ² I)4s - 3d ⁵ (a ² I)4p	a ³ I - y ³ H°	6 - 6	E25
Fe III	1909.782	150		3d ⁵ (b ² D)4s - 3d ⁵ (b ² D)4p	d ³ D - t ³ D°	1 - 1	E25
Fe III	1909.846	150		3d ⁵ (b ² G)4s - 3d ⁵ (b ² G)4p	d ¹ G - u ¹ F°	4 - 3	E25
Fe III	1910.172	70		3d ⁵ (b ² D)4s - 3d ⁵ (b ² D)4p	d ² D - t ³ D°	2 - 1	E25
Fe III	1910.401	400	57	3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	a ⁵ P - y ⁵ F°	2 - 1	E25
Fe III	1911.338	450	135	3d ⁵ (a ² H)4s - 3d ⁵ (a ² H)4p	a ¹ H - x ¹ H°	5 - 5	E25
Fe III	1911.703	150		3d ⁵ (a ² I)4s - 3d ⁵ (a ⁴ F)4p	b ¹ I - y ⁵ G°	6 - 6	E25
Fe III	1912.920	250	57	3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	a ⁵ P - y ⁵ P°	1 - 1	E25
Fe III	1913.386	70		3d ⁵ (a ² G)4s - 3d ⁵ (a ⁴ F)4p	c ³ G - u ³ F°	4 - 4	E25
Fe III	1913.622	250	57	3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	a ⁵ P - y ⁵ P°	3 - 2	E25
Fe III	1914.056	1000	34	3d ⁵ (a ⁶ S)4s - 3d ⁵ (a ⁶ S)4p	a ⁷ S - z ⁷ P°	3 - 3	E25
Fe III	1915.083	750	51	3d ⁵ (a ² G)4s - 3d ⁵ (a ² G)4p	a ⁵ G - z ⁵ H°	6 - 7	E25
Fe III	1915.750	150	57	3d ⁵ (a ⁴ P)4s - 3d ⁵ (a ⁴ P)4p	a ⁵ P - y ⁵ P°	2 - 2	E25
Fe III	1916.507	300	95	3d ⁵ (a ⁴ F)4s - 3d ⁵ (a ⁴ F)4p	a ⁵ F - y ⁵ G°	5 - 5	E25

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	1917.087	150	108	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3F^o$	2 - 2	E25
Fe III	1917.250	250		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - r^3F^o$	4 - 3	E25
Fe III	1917.351	550	95	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^o$	4 - 5	E25
Fe III	1917.453	600	101	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$b^1I - z^1I^o$	6 - 6	E25
Fe III	1917.665	150		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^2I - z^1K^o$	6 - 7	E25
Fe III	1917.960	400		$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^3P^o$	2 - 1	E25
Fe III	1918.284	450	57	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^o$	1 - 2	E25
Fe III	1918.480	450	108	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3F^o$	3 - 3	E25
Fe III	1918.966	200		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - u^3F^o$	2 - 2	E25
Fe III	1919.572	250	107	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3D^o$	2 - 1	E25
Fe III	1920.186	250	95	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^o$	4 - 4	E25
Fe III	1920.260	150		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - s^3F^o$	2 - 3	E25
Fe III	1920.752	150		$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$a^4H - y^1H^o$	5 - 5	E25
Fe III	1921.132	150		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^3D - s^3F^o$	3 - 3	E25
Fe III	1921.990	70		$3d^5(a^2H)4s - 3d^5(a^2G)4p$	$b^2H - v^2F^o$	4 - 3	E25
Fe III	1922.132	70		$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$c^3F - x^5F^o$	4 - 5	E25
Fe III	1922.789	1000	51	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	5 - 6	E25
Fe III	1923.003	450	95	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^o$	3 - 4	E25
Fe III	1923.877	450	57	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^o$	3 - 3	E25
Fe III	1924.119	250		$3d^5(b^2F)4s - 3d^5(b^2F)4p$	$c^1F - w^1G^o$	3 - 4	E25
Fe III	1924.532	400	79	$3d^5(a^2D)4s - 3d^5(a^4D)4p$	$b^3D - y^3P^o$	3 - 2	E25
Fe III	1925.271	250		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - w^3F^o$	3 - 4	E25
Fe III	1925.855	200		$3d^5(a^2F)4s - 3d^5(a^2G)4p$	$b^1F - y^1G^o$	3 - 4	E25
Fe III	1926.013	500	57	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - y^5P^o$	2 - 3	E25
Fe III	1926.304	1000	34	$3d^5(a^4S)4s - 3d^5(a^4S)4p$	$a^7S - z^7P^o$	3 - 2	E25
Fe III	1926.898	200		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - r^3F^o$	5 - 4	E25
Fe III	1927.436	300		$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$c^3D - x^5P^o$	3 - 2	E25
Fe III	1927.679	150		$3d^5(a^4F)4p - 3d^5(a^4D)5s$	$x^5F^o - f^5D$	1 - 0	E25, K8
Fe III	1928.178	250		$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$b^1F - y^1D^o$	3 - 2	E25
Fe III	1928.265	300w	95	$3d^5(a^1F)4s - 3d^5(a^1F)4p$	$a^5F - y^5G^o$	3 - 3	E25
Fe III	1928.642	250		$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^2I - z^1H^o$	5 - 5	E25
Fe III	1928.837	250		$3d^5(a^2D)4s - 3d^5(a^2D)4p$	$b^1D - z^1P^o$	2 - 1	E25
Fe III	1928.991	70		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^5F - u^5F^o$	4 - 3	E25
Fe III	1929.413	250w		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - u^3F^o$	3 - 3	E25
Fe III	1929.532	70	51	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	5 - 5	E25
Fe III	1929.941	150	79	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^3P^o$	2 - 2	E25
Fe III	1930.184	150w		$3d^5(a^2H)4s - 3d^5(b^2F)4p$	$a^1H - t^5F^o$	5 - 4	E25
Fe III	1930.387	1000	51	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	4 - 5	E25
Fe III	1930.917	150b		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^5D - s^5F^o$	1 - 2	E25
Fe III	1931.309	70		$3d^5(b^2D)4s - 3d^5(b^2D)4p$	$d^5D - s^5F^o$	2 - 2	E25
Fe III	1931.507	950	61	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^o$	4 - 5	E25
Fe III	1932.818	300	95	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^o$	2 - 3	E25
Fe III	1936.806	250b		$3d^5(a^2G)4s - 3d^5(a^2H)4p$	$c^5G - y^1I^o$	5 - 6	E25
Fe III	1937.077	200	51	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	4 - 4	E25
Fe III	1937.345	950	51	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	3 - 4	E25
Fe III	1937.996	250		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - v^3H^o$	4 - 5	E25
Fe III	1938.775	250	95	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^o$	2 - 2	E25
Fe III	1938.901	650b	106	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - y^5G^o$	4 - 5	E25
Fe III	1939.107	70		$3d^5(a^4F)4s - 3d^5(a^2D)4p$	$a^5F - x^3D^o$	1 - 1	E25
Fe III	1940.018	550	61	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^o$	4 - 4	E25
Fe III	1940.631	150	79	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^3P^o$	1 - 1	E25
Fe III	1940.769	250		$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^1G - x^1F^o$	4 - 3	E25
Fe III	1941.633	200	79	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^3P^o$	2 - 1	E25
Fe III	1943.481	950	51	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5H^o$	2 - 3	E25
Fe III	1943.715	150		$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$c^5F - x^5F^o$	3 - 2	E25
Fe III	1945.342	800	61	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^5F^o$	3 - 4	E25
Fe III	1945.724	150	106	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^5F - y^5G^o$	4 - 4	E25
Fe III	1946.321	20		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - v^5H^o$	4 - 4	E25
Fe III	1946.769	200		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^3G - v^3H^o$	3 - 4	E25
Fe III	1948.280	200		$3d^5(b^2G)4s - 3d^5(b^2G)4p$	$d^1G - v^1G^o$	4 - 4	E25
Fe III	1949.462	150	79	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^5D - y^3P^o$	1 - 0	E25
Fe III	1949.666	200	95	$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$a^5F - y^5G^o$	1 - 2	E25
Fe III	1950.334	650	116	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - y^3I^o$	6 - 7	E25
Fe III	1951.007	800	68	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^5G - z^5G^o$	5 - 5	E25
Fe III	1951.318	200	68	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^5G - z^5G^o$	5 - 4	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	1952.362	150w	68	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	4 - 5	E25
Fe III	1952.514	200	68	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	3 - 4	E25
Fe III	1952.648	700	68	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	4 - 4	E25
Fe III	1953.202	250		$3d^5(b^3F)4s - 3d^5(a^2G)4p$	$e^3F - y^1H^o$	4 - 5	E25
Fe III	1953.322	900	58	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	3 - 3	E25
Fe III	1953.488	650	68	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$b^3G - z^3G^o$	4 - 3	E25
Fe III	1953.821	70		$3d^5(b^3F)4s - 3d^5(b^3F)4p$	$e^3F - t^3F^o$	4 - 3	E25
Fe III	1953.968	250		$3d^5(b^3F)4s - 3d^5(b^3F)4p$	$e^3F - t^3F^o$	3 - 3	E25
Fe III	1954.223	650w	61	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^5F^o$	2 - 3	E25
Fe III	1954.769	250		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$c^3F - y^5G^o$	4 - 5	E25
Fe III	1954.975	550	116	$3d^5(a^2H)4s - 3d^5(a^2H)4p$	$b^3H - y^3I^o$	5 - 6	E25
Fe III	1955.943	20		$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$c^3P - y^3D^o$	2 - 3	E25
Fe III	1957.137	200		$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3F^o$	5 - 4	E25
Fe III	1957.375	150		$3d^5(b^3F)4s - 3d^5(b^3F)4p$	$e^3F - t^3F^o$	2 - 2	E25
Fe III	1957.938	400	147	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^1G - y^1H^o$	4 - 5	E25
Fe III	1958.583	700	55	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^5D^o$	3 - 4	E25
Fe III	1958.732	300		$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3F^o$	3 - 2	E25
Fe III	1959.026	200		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^o$	2 - 1	E25
Fe III	1959.324	550	61	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^5F^o$	1 - 2	E25
Fe III	1960.318	900	82	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3K^o$	7 - 8	E25
Fe III	1961.010	300		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^o$	4 - 3	E25
Fe III	1961.230	400	61	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^5F^o$	2 - 2	E25
Fe III	1961.456	70		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^o$	3 - 3	E25
Fe III	1961.724	70		$3d^5(a^4F)4s - 3d^5(a^4F)4p$	$d^3F - v^3D^o$	2 - 2	E25
Fe III	1962.717	300	61	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^5F^o$	0 - 1	E25
Fe III	1962.958	250		$3d^5(b^3F)4s - 3d^5(b^3F)4p$	$e^3F - t^3F^o$	4 - 4	E25
Fe III	1963.209	70		$3d^5(a^3F)4s - 3d^5(a^4F)4p$	$c^3F - y^5G^o$	4 - 3	E25
Fe III	1963.461	70		$3d^5(a^3H)4s - 3d^5(a^4F)4p$	$b^3H - w^3G^o$	5 - 4	E25
Fe III	1964.019	300	82	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3K^o$	7 - 6	E25
Fe III	1964.169	550	82	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3K^o$	6 - 6	E25
Fe III	1964.260	450	61	$3d^5(a^2G)4s - 3d^5(a^2G)4p$	$c^3G - v^3F^o$	4 - 3	E25
Fe III	1964.776	550	82	$3d^5(a^3I)4s - 3d^5(a^3I)4p$	$a^3I - z^3K^o$	5 - 6	E25
Fe III	1965.309	550	106	$3d^5(a^3F)4s - 3d^5(a^2F)4p$	$c^3F - y^5G^o$	3 - 4	E25
Fe III	1966.074	200		$3d^5(a^5S)4s - 3d^5(a^5S)4p$	$a^5S - w^5P^o$	1 - 2	G11
Fe III	1966.201	150	61	$3d^5(a^4D)4s - 3d^5(a^4D)4p$	$b^3D - y^5F^o$	2 - 1	E25
Fe III	1966.740	550	116	$3d^5(a^2H)4s - 3d^5(a^3H)4p$	$b^3H - y^3I^o$	4 - 5	E25
Fe III	1967.352	250		$3d^5(b^3G)4s - 3d^5(b^3G)4p$	$d^1G - w^1H^o$	4 - 5	E25
Fe III	1968.625	150		$3d^5(a^3H)4s - 3d^5(a^2H)4p$	$a^1H - w^3H^o$	5 - 6	E25
Fe III	1972.245	150		$3d^5(b^3F)4s - 3d^5(a^2G)4p$	$e^3F - v^3G^o$	2 - 3	E25
Fe III	1972.638	150		$3d^5(b^3F)4s - 3d^5(a^2G)4p$	$e^3F - v^3G^o$	3 - 4	E25
Fe III	1973.578	20		$3d^5(a^2G)4s - 3d^5(a^2F)4p$	$c^3G - y^1F^o$	4 - 3	E25
Fe III	1976.126	550	54	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$a^5P - z^5F^o$	3 - 3	E25
Fe III	1978.417	250	54	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$a^5P - z^5F^o$	2 - 3	E25
Fe III	1978.626	150		$3d^5(a^2H)4s - 3d^5(a^4F)4p$	$b^3H - w^3G^o$	6 - 5	E25
Fe III	1979.002	70		$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3F^o$	4 - 4	E25
Fe III	1980.392	150		$3d^5(b^3F)4s - 3d^5(a^2G)4p$	$e^3F - v^3G^o$	4 - 5	E25
Fe III	1982.076	400	54	$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$a^5P - z^5F^o$	2 - 2	E25
Fe III	1982.805	550	56	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^5S^o$	3 - 2	E25
Fe III	1983.123	20		$3d^5(a^2F)4s - 3d^5(a^4F)4p$	$c^3F - y^5G^o$	3 - 3	E25
Fe III	1983.676	150	81	$3d^5(a^2I)4s - 3d^5(a^3I)4p$	$a^3I - z^3I^o$	6 - 5	E25
Fe III	1984.027	450	86	$3d^5(a^2D)4s - 3d^5(a^3D)4p$	$c^3D - x^3F^o$	3 - 4	E25
Fe III	1984.288	600	81	$3d^5(a^2I)4s - 3d^5(a^3I)4p$	$a^3I - z^3I^o$	5 - 5	E25
Fe III	1985.105	200	56	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^5S^o$	2 - 2	E25
Fe III	1987.006	70		$3d^5(a^4F)4s - 3d^5(a^2G)4p$	$d^3F - v^3F^o$	2 - 2	E25
Fe III	1987.503	1000	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^o$	6 - 6	E25
Fe III	1987.810	200	56	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^5P - z^5S^o$	1 - 2	E25
Fe III	1989.975	450	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^o$	6 - 5	E25
Fe III	1991.613	950	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^o$	5 - 5	E25
Fe III	1992.017	600	81	$3d^5(a^3I)4s - 3d^5(a^3I)4p$	$a^3I - z^3I^o$	7 - 7	E25
Fe III	1992.196	600	81	$3d^5(a^2I)4s - 3d^5(a^2I)4p$	$a^3I - z^3I^o$	6 - 7	E25
Fe III	1992.427	70	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^o$	4 - 5	E25
Fe III	1992.858	400	106	$3d^5(a^2F)4s - 3d^5(a^2F)4p$	$c^3F - y^3G^o$	2 - 3	E25
Fe III	1993.262	450	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^o$	5 - 4	E25
Fe III	1994.073	900	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^o$	4 - 4	E25
Fe III	1994.366	70	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^5G - z^5G^o$	3 - 4	E25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe III	1995.66	450	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^4G - z^4G^\circ$	4 - 3	E25
Fe III	1995.563	800	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^4G - z^4G^\circ$	3 - 3	E25
Fe III	1996.420	800	50	$3d^5(a^4G)4s - 3d^5(a^4G)4p$	$a^4G - z^4G^\circ$	2 - 2	E25
Fe III	1999.100	70		$3d^5(a^4P)4s - 3d^5(a^4D)4p$	$c^3P - x^3P^\circ$	2 - 3	E25
Fe III	1999.588	600	55	$3d^5(a^4P)4s - 3d^5(a^4P)4p$	$a^3P - z^3D^\circ$	3 - 3	E25
Fe III	1999.893	200		$3d^5(a^4P)4s - 3d^5(a^4G)4p$	$a^3P - z^3F^\circ$	3 - 4	E25

IRON IV (Fe^{3+}), $Z = 26$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)Ionization Potential [452 000] cm^{-1} ; [56] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe IV	525.68	1000		$3d^5 - 3d^4(^5D)4p$	$g^6S - ^6P^\circ$	$\frac{5}{2} - \frac{7}{2}$	K21
Fe IV	526.28	750		$3d^5 - 3d^4(^5D)4p$	$g^6S - ^6P^\circ$	$\frac{5}{2} - \frac{5}{2}$	K21
Fe IV	526.60	600		$3d^5 - 3d^4(^5D)4p$	$g^6S - ^6P^\circ$	$\frac{5}{2} - \frac{3}{2}$	K21
Fe IV	597.54	P		$3d^5 - 3d^4(^5D)4p$	$a^4P - z^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$	K8
Fe IV	598.82	P		$3d^5 - 3d^4(^5D)4p$	$a^4P - z^4D^\circ$	$\frac{3}{2} - \frac{5}{2}$	K8
Fe IV	607.54	P		$3d^5 - 3d^4(^5D)4p$	$a^4G - z^4F^\circ$	$\frac{4}{2} - \frac{5}{2}$	K8
Fe IV	608.81	P		$3d^5 - 3d^4(^5D)4p$	$a^4G - z^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$	K8
Fe IV	610.39	P		$3d^5 - 3d^4(^5D)4p$	$a^4D - z^4D^\circ$	$\frac{7}{2} - \frac{7}{2}$	K8
Fe IV	612.02	P		$3d^5 - 3d^4(^5D)4p$	$a^4D - z^4D^\circ$	$\frac{5}{2} - \frac{5}{2}$	K8
Fe IV	621.01	P		$3d^5 - 3d^4(^5D)4p$	$a^4G - z^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$	K8
Fe IV	632.64	P		$3d^5 - 3d^4(^5D)4p$	$a^4D - z^4F^\circ$	$\frac{7}{2} - \frac{5}{2}$	K8
Fe IV	634.45	P		$3d^5 - 3d^4(^5D)4p$	$a^4D - z^4F^\circ$	$\frac{5}{2} - \frac{7}{2}$	K8
Fe IV	635.56	P		$3d^5 - 3d^4(^5D)4p$	$a^4P - z^4P^\circ$	$\frac{5}{2} - \frac{5}{2}$	K8
Fe IV	647.68	P		$3d^5 - 3d^4(^5D)4p$	$a^4D - z^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$	K8
Fe IV	650.12	P		$3d^5 - 3d^4(^5D)4p$	$a^4D - z^4P^\circ$	$\frac{7}{2} - \frac{5}{2}$	K8
Fe IV	654.62	P		$3d^5 - 3d^4(^5D)4p$	$a^4D - z^4P^\circ$	$\frac{3}{2} - \frac{5}{2}$	K8
Fe IV	666.74	P		$3d^5 - 3d^4(^5D)4p$	$a^4F - z^4D^\circ$	$\frac{5}{2} - \frac{7}{2}$	K8
Fe IV	668.31	P		$3d^5 - 3d^4(^5D)4p$	$a^4F - z^4D^\circ$	$\frac{7}{2} - \frac{5}{2}$	K8
Fe IV	693.36	P		$3d^5 - 3d^4(^5D)4p$	$a^4F - z^4F^\circ$	$\frac{5}{2} - \frac{5}{2}$	K8

IRON V (Fe^{4+}), $Z = 26$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)Ionization Potential [621 000] cm^{-1} ; [77] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe V	364.292	300		$3d^4 - 3d^3(a^4P)4p$	$ga^5D - z^5P^\circ$	2 - 3	B25
Fe V	364.795	400		$3d^4 - 3d^3(a^4P)4p$	$ga^5D - z^5P^\circ$	3 - 3	B25
Fe V	364.973	300		$3d^4 - 3d^3(a^4P)4p$	$ga^5D - z^5P^\circ$	1 - 2	B25
Fe V	365.339	300		$3d^4 - 3d^3(a^4P)4p$	$ga^5D - z^5P^\circ$	2 - 2	B25
Fe V	365.440	600		$3d^4 - 3d^3(a^4P)4p$	$ga^5D - z^5P^\circ$	4 - 3	B25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe V	305.634	300		$3d^4 - 3d^3(a^4P)4p$	$g^2_2D - z^2P^o$	1 - 1	B25
Fe V	365.858	600		$3d^4 - 3d^3(a^4P)4p$	$g^1_1D - z^2P^o$	3 - 2	B25
Fe V	366.001	300		$3d^4 - 3d^3(a^4P)4p$	$g^2_2D - z^2P^o$	2 - 1	B25
Fe V	373.720	500		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^2G^o$	4 - 3	B25
Fe V	374.240	400		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^2G^o$	5 - 4	B25
Fe V	374.464	200		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^2G^o$	5 - 5	B25
Fe V	374.864	500		$3d^4 - 3d^3(a^2H)4p$	$a^3H - x^2G^o$	6 - 5	B25
Fe V	379.032	100		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2G^o$	4 - 5	B25
Fe V	379.294	300		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2G^o$	3 - 4	B25
Fe V	380.664	300		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^o$	3 - 3	B25
Fe V	381.152	200		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^o$	4 - 3	B25
Fe V	381.260	300		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^o$	4 - 4	B25
Fe V	381.467	50		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^o$	4 - 5	B25
Fe V	381.671	50		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^o$	5 - 4	B25
Fe V	381.881	400		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^o$	5 - 5	B25
Fe V	383.484	300		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	2 - 3	B25
Fe V	384.212	300		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	1 - 2	B25
Fe V	384.610	200		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	2 - 2	B25
Fe V	384.826	100		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	1 - 1	B25
Fe V	384.957	600		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	4 - 5	B25
Fe V	385.023	400		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	3 - 4	B25
Fe V	385.740	500		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	1 - 2	B25
Fe V	385.869	500		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	3 - 3	B25
Fe V	386.156	400		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	2 - 2	B25
Fe V	386.256	50		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	0 - 1	B25
Fe V	386.483	100		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	1 - 1	B25
Fe V	386.585	100		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	4 - 3	B25
Fe V	386.737	300		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	3 - 2	B25
Fe V	386.783	400		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	3 - 4	B25
Fe V	386.897	400		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2F^o$	2 - 1	B25
Fe V	387.199	500		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	2 - 3	B25
Fe V	387.500	600		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	4 - 4	B25
Fe V	387.616	400		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	1 - 2	B25
Fe V	387.775	400		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	3 - 3	B25
Fe V	387.983	300		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	0 - 1	B25
Fe V	388.500	200		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	4 - 3	B25
Fe V	388.607	200		$3d^4 - 3d^3(a^4F)4p$	$g^2_2D - z^2D^o$	3 - 2	B25
Fe V	392.907	600		$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^2G^o$	6 - 5	B25
Fe V	393.270	500		$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^2G^o$	5 - 4	B25
Fe V	393.911	400		$3d^4 - 3d^3(a^2G)4p$	$a^3H - y^2G^o$	4 - 3	B25
Fe V	395.155	300		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^o$	4 - 5	B25
Fe V	395.789	200		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^o$	3 - 4	B25
Fe V	396.773	300		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^o$	2 - 3	B25
Fe V	396.902	50		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^o$	3 - 3	B25
Fe V	400.625	400		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^2G^o$	5 - 5	B25
Fe V	401.030	200		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^2G^o$	4 - 4	B25
Fe V	401.639	200		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^2G^o$	3 - 3	B25
Fe V	402.197	100		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^2G^o$	4 - 3	B25
Fe V	414.790	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^o$	3 - 4	B25
Fe V	415.006	400		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^o$	4 - 4	B25
Fe V	415.825	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^o$	2 - 3	B25
Fe V	415.972	300		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^o$	3 - 3	B25
Fe V	416.208	500		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^o$	4 - 3	B25
Fe V	416.910	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^o$	2 - 2	B25
Fe V	417.048	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^o$	3 - 2	B25
Fe V	417.382	600		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^2G^o$	6 - 5	B25
Fe V	417.516	50		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^2G^o$	4 - 4	B25
Fe V	418.033	600		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^2G^o$	5 - 4	B25
Fe V	418.457	500		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^2G^o$	4 - 3	B25
Fe V	419.915	300		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^o$	4 - 5	B25
Fe V	420.546	500		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2F^o$	4 - 4	B25
Fe V	420.874	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^o$	3 - 4	B25
Fe V	421.045	500		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2F^o$	5 - 4	B25
Fe V	421.682	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^o$	2 - 3	B25
Fe V	421.765	400		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2F^o$	4 - 3	B25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe V	422.287	600		3d ⁴ - 3d ³ (a ⁴ F)4p	a ² G - z ³ F ^o	3 - 2	B25
Fe V	423.833	200		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ D ^o	0 - 1	B25
Fe V	424.733	300		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ D ^o	1 - 2	B ²⁵
Fe V	425.476	100		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ D ^o	1 - 1	B25
Fe V	425.589	100		3d ⁴ - 3d ³ (a ⁴ F)4p	a ² G - z ³ G ^o	4 - 5	B25
Fe V	425.840	50		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ F ^o	0 - 1	B25
Fe V	426.345	500		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ D ^o	2 - 3	B25
Fe V	426.097	500		3d ⁴ - 3d ³ (a ⁴ F)4p	a ² G - z ³ G ^o	5 - 5	B25
Fe V	426.609	100		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ F ^o	1 - 2	B25
Fe V	426.745	300		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ D ^o	3 - 3	B25
Fe V	426.814	400		3d ⁴ - 3d ³ (a ⁴ F)4p	a ² G - z ³ G ^o	4 - 4	B25
Fe V	426.969	300		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ D ^o	4 - 3	B25
Fe V	427.190	300		3d ⁴ - 3d ³ (a ⁴ F)4p	a ² G - z ³ G ^o	3 - 3	B25
Fe V	427.320	100		3d ⁴ - 3d ³ (a ⁴ F)4p	a ² G - z ³ G ^o	5 - 4	B25
Fe V	427.442	200		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ D ^o	2 - 2	B25
Fe V	427.782	100		3d ⁴ - 3d ³ (a ⁴ F)4p	a ² G - z ³ G ^o	4 - 3	B25
Fe V	427.918	200		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ D ^o	0 - 1	B25
Fe V	428.000	50		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ D ^o	2 - 2	B25
Fe V	428.131	300		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ D ^o	3 - 2	B25
Fe V	428.292	50		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ F ^o	2 - 3	B25
Fe V	428.763	500		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ D ^o	2 - 1	B25
Fe V	428.909	500		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ D ^o	1 - 2	B25
Fe V	429.206	100		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ F ^o	4 - 3	B25
Fe V	430.053	100		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ F ^o	3 - 2	B25
Fe V	430.624	200		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ P - z ³ D ^o	2 - 3	B25
Fe V	431.541	300		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ D ^o	4 - 3	B25
Fe V	432.340	300		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ D ^o	3 - 2	B25
Fe V	432.919	100		3d ⁴ - 3d ³ (a ⁴ F)4p	a ³ F - z ³ D ^o	2 - 1	B25
Fe V	1302.99	100		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ G ^o	3 - 3	B25
Fe V	1303.59	100		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ G ^o	5 - 5	B25
Fe V	1357.18	100		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	2 - 2	B25
Fe V	1359.41	100		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	1 - 1	B25
Fe V	1361.42	500		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	4 - 3	B25
Fe V	1363.00	400		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	3 - 4	B25
Fe V	1363.72	300		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	4 - 5	B25
Fe V	1365.14	300		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	3 - 2	B25
Fe V	1365.73	300		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	2 - 3	B25
Fe V	1371.00	400		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	1 - 2	B25
Fe V	1373.68	600		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	3 - 3	B25
Fe V	1376.45	600		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	5 - 5	B25
Fe V	1380.18	200		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	1 - 1	B25
Fe V	1384.37	100		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	4 - 3	B25
Fe V	1384.75	100		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	3 - 2	B25
Fe V	1385.32	200		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	3 - 4	B25
Fe V	1386.43	50		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ F ^o	5 - 4	B25
Fe V	1388.17	500		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	b ³ F - z ³ F ^o	2 - 3	B25
Fe V	1389.05	100		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	b ³ F - z ³ F ^o	3 - 4	B25
Fe V	1389.97	50		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	2 - 3	B25
Fe V	1394.77	300		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	1 - 2	B25
Fe V	1398.15	300		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	3 - 3	B25
Fe V	1400.30	400		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	b ³ F - z ³ F ^o	2 - 2	B25
Fe V	1402.45	600		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	b ³ F - z ³ F ^o	3 - 3	B25
Fe V	1406.78	700		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	b ³ F - z ³ F ^o	4 - 4	B25
Fe V	1408.19	100		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	2 - 1	B25
Fe V	1409.19	600		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	4 - 3	B25
Fe V	1409.51	700		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ D ^o	5 - 4	B25
Fe V	1420.39	300		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	b ³ F - z ³ F ^o	4 - 3	B25
Fe V	1430.61	800		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ G ^o	5 - 6	B25
Fe V	1440.59	700		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ G ^o	4 - 5	B25
Fe V	1448.91	600		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ G ^o	3 - 4	B25
Fe V	1454.71	300		3d ³ (a ⁴ F)4s - 3a ¹ (a ⁴ F)4p	a ⁵ F - z ⁵ G ^o	5 - 5	B25
Fe V	1455.59	500		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	b ³ F - z ³ G ^o	2 - 3	B25
Fe V	1456.23	500		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ G ^o	2 - 3	B25
Fe V	1459.85	500		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	b ³ F - z ³ G ^o	3 - 4	B25
Fe V	1460.86	200		3d ³ (a ⁴ F)4s - 3d ³ (a ⁴ F)4p	a ⁵ F - z ⁵ G ^o	4 - 4	B25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe V	1462.67	300		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^4G^o$	1 - 2	B25
Fe V	1464.73	600		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$b^4F - z^4G^o$	4 - 5	B25
Fe V	1465.37	300		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$a^4F - z^4G^o$	3 - 3	B25
Fe V	1479.29	400		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$b^4F - z^4G^o$	4 - 4	B25
Fe V	1532.80	400		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$b^4F - z^4D^o$	3 - 3	B25
Fe V	1533.57	200		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$b^4F - z^4D^o$	2 - 2	B25
Fe V	1543.66	200		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$b^4F - z^4D^o$	2 - 1	B25
Fe V	1544.50	300		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$b^4F - z^4F^o$	2 - 3	B25
Fe V	1550.90	200		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$b^4F - z^4D^o$	3 - 2	B25
Fe V	1554.27	100		$3d^3(a^4F)4s - 3d^3(a^4F)4p$	$b^4F - z^4D^o$	4 - 3	B25

IRON VI (Fe^{5+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 4F_{3/2}$ (21 electrons)
 Ionization Potential [815 000] cm^{-1} ; [101] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe VI	276.947	300		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	277.569	600		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	277.610	200		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	277.951	300		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	278.149	500		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	276.339	500		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	276.471	300		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	283.770	500		$3d^3 - 3d^2(a^1G)4p$	$a^2G - z^2H^o$	$7/2 - 11/2$	B24
Fe VI	284.504	400		$3d^3 - 3d^2(a^1G)4p$	$a^2G - z^2H^o$	$7/2 - 7/2$	B24
Fe VI	287.333	100		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2G^o$	$7/2 - 7/2$	B24
Fe VI	288.551	400		$3d^3 - 3d^2(a^2P)4p$	$z^4P - z^4P^o$	$7/2 - 7/2$	B24
Fe VI	289.112	500		$3d^3 - 3d^2(a^2P)4p$	$z^4P - z^4P^o$	$7/2 - 7/2$	B24
Fe VI	289.302	400		$3d^3 - 3d^2(a^2P)4p$	$z^4P - z^4P^o$	$7/2 - 7/2$	B24
Fe VI	289.468	300		$3d^3 - 3d^2(a^2P)4p$	$z^4P - z^4P^o$	$7/2 - 7/2$	B24
Fe VI	289.520	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2D^o$	$7/2 - 7/2$	B24
Fe VI	289.672	200		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$7/2 - 7/2$	B24
Fe VI	289.851	400		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$7/2 - 7/2$	B24
Fe VI	290.038	400		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$7/2 - 7/2$	B24
Fe VI	290.089	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2D^o$	$7/2 - 7/2$	B24
Fe VI	290.146	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2D^o$	$7/2 - 7/2$	B24
Fe VI	290.271	600		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^o$	$11/2 - 11/2$	B24
Fe VI	290.302	500		$3d^3 - 3d^2(a^1G)4p$	$a^2G - y^2G^o$	$7/2 - 7/2$	B24
Fe VI	290.499	200		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4D^o$	$7/2 - 7/2$	B24
Fe VI	290.577	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2D^o$	$7/2 - 7/2$	B24
Fe VI	290.737	400		$3d^3 - 3d^2(a^1G)4p$	$a^2G - y^2G^o$	$7/2 - 7/2$	B24
Fe VI	290.890	200		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4D^o$	$7/2 - 7/2$	B24
Fe VI	291.020	500		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4D^o$	$7/2 - 7/2$	B24
Fe VI	291.184	600		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4D^o$	$7/2 - 7/2$	B24
Fe VI	291.229	600		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^o$	$7/2 - 7/2$	B24
Fe VI	291.473	500		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4D^o$	$7/2 - 7/2$	B24
Fe VI	291.632	200		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^o$	$11/2 - 7/2$	B24
Fe VI	291.800	500		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4D^o$	$7/2 - 7/2$	B24
Fe VI	291.829	500		$3d^3 - 3d^2(a^2P)4p$	$a^4P - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	291.931	50		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2F^o$	$7/2 - 7/2$	B24
Fe VI	292.038	200		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2F^o$	$7/2 - 7/2$	B24
Fe VI	292.343	100		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2F^o$	$7/2 - 7/2$	B24
Fe VI	292.597	400		$3d^3 - 3d^2(a^2P)4p$	$a^4P - y^4D^o$	$7/2 - 7/2$	B24
Fe VI	292.736	700		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2F^o$	$7/2 - 7/2$	B24
Fe VI	292.925	500		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2F^o$	$7/2 - 7/2$	B24
Fe VI	293.046	200		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^2F^o$	$7/2 - 7/2$	B24

Eler ent	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe VI	293.214	100		$3d^3 - 3d^2(a^3P)4p$	$a^4P - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	293.292	400		$3d^3 - 3d^2(a^3P)4p$	$a^2G - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	293.384	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	293.488	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4G^o$	$\frac{1}{2} - \frac{1}{2}$	B24
Fe VI	293.745	806		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	293.820	100		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	293.966	800		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	294.040	50		$3d^3 - 3d^2(a^3P)4p$	$a^2G - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	294.265	700		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	294.339	500		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4G^o$	$\frac{1}{2} - \frac{1}{2}$	B24
Fe VI	294.520	700		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	294.665	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	294.850	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	294.960	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	295.014	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	295.042	200		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	295.634	400		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	296.117	100		$3d^3 - 3d^2(a^3F)4p$	$ga^4F - z^4G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	296.723	300		$3d^3 - 3d^2(a^3P)4p$	$a^2D - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	296.808	500		$3d^3 - 3d^2(a^3P)4p$	$a^4P - z^4S^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	296.998	600		$3d^3 - 3d^2(a^3P)4p$	$a^4P - z^4S^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	297.131	200		$3d^3 - 3d^2(a^3G)4p$	$a^3H - y^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	297.308	700		$3d^3 - 3d^2(a^3G)4p$	$a^2H - y^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	297.568	800d		$3d^3 - 3d^2(a^3G)4p$	$a^3H - y^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	299.579	100		$3d^3 - 3d^2(a^3P)4p$	$a^2D - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	299.803	100		$3d^3 - 3d^2(a^3P)4p$	$a^2H - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	300.997	200		$3d^3 - 3d^2(a^3P)4p$	$a^2D - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	303.558	400		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	304.221	700		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	304.551	700		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	305.200	400		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	305.837	100		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	306.460	100		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	306.823	200		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	306.922	500		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	307.013	200		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	307.375	400		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	307.404	300		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	307.800	300		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{1}{2}$	B24
Fe VI	307.884	50		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	308.007	300		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	308.187	200		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	308.383	200		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	308.534	400		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	308.644	500		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	308.960	300		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	308.993	300		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	309.627	100		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	310.274	500		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	310.601	400		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	310.807	50		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	311.138	100		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	311.236	200		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	311.702	700		$3d^3 - 3d^2(a^3F)4p$	$a^2H - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	312.263	700		$3d^3 - 3d^2(a^3F)4p$	$a^2H - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	314.299	300		$3d^3 - 3d^2(a^3F)4p$	$a^2H - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	314.814	100		$3d^3 - 3d^2(a^3F)4p$	$^2P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	315.027	400		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^4G^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	315.506	300		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	317.319	300		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI	318.364	300		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^2F^o$	$\frac{1}{2} - \frac{3}{2}$	B24
Fe VI				$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^2F^o$	$\frac{1}{2} - \frac{3}{2}$	B24

IRON VII (Fe⁶⁺), Z = 26
Ground State 1s²2s²2p⁶3s²3p⁶3d² ³F₂ (20 electrons)
Ionization Potential [1 016 000] cm⁻¹; [126] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe VII	150.185	50		3d ² - 3d4f	ga ³ F - y ³ D ^o	2 - 1	E5
Fe VII	150.280	100		3d ² - 3d4f	ga ³ F - y ¹ F ^o	2 - 3	E5
Fe VII	150.402	50		3d ² - 3d4f	ga ³ F - y ³ D ^o	3 - 2	E5
Fe VII	150.524	100		3d ² - 3d4f	ga ³ F - y ³ D ^o	4 - 3	E5
Fe VII	150.806	500		3d ² - 3d4f	ga ³ F - z ³ G ^o	2 - 3	E5
Fe VII	150.851	500		3d ² - 3d4f	ga ³ F - z ³ G ^o	3 - 4	E5
Fe VII	151.022	600		3d ² - 3d4f	ga ³ F - z ³ G ^o	4 - 5	E5
Fe VII	151.044	100		3d ² - 3d4f	ga ³ F - z ³ G ^o	3 - 3	E5
Fe VII	151.143	200		3d ² - 3d4f	ga ³ F - z ³ G ^o	4 - 4	E5
Fe VII	151.268	50		3d ² - 3d4f	ga ³ F - z ³ H ^o	3 - 4	E5
Fe VII	151.430	400		3d ² - 3d4f	ga ³ F - z ³ H ^o	4 - 5	E5
Fe VII	151.485	50		3d ² - 3d4f	ga ³ F - y ³ F ^o	3 - 4	E5
Fe VII	151.510	400		3d ² - 3d4f	ga ³ F - y ³ F ^o	2 - 2	E5
Fe VII	151.673	420		3d ² - 3d4f	ga ³ F - y ³ F ^o	3 - 3	E5
Fe VII	151.748	100		3d ² - 3d4f	ga ³ F - y ³ F ^o	3 - 2	E5
Fe VII	151.780	500		3d ² - 3d4f	ga ³ F - y ³ F ^o	4 - 4	E5
Fe VII	151.968	100		3d ² - 3d4f	ga ³ F - y ³ F ^o	4 - 3	E5
Fe VII	152.069	300		3d ² - 3d4f	ga ³ F - z ¹ G ^o	4 - 4	E5
Fe VII	152.906	50		3d ² - 3d4f	a ¹ D - y ¹ P ^o	2 - 1	E5
Fe VII	153.658	50		3d ² - 3d4f	a ¹ D - y ² P ^o	2 - 1	E5
Fe VII	153.742	20		3d ² - 3d4f	a ¹ D - y ² P ^o	2 - 2	E5
Fe VII	154.039	300		3d ² - 3d4f	a ¹ D - y ³ D ^o	2 - 3	E5
Fe VII	154.214	50		3d ² - 3d4f	a ¹ D - y ³ D ^o	2 - 2	E5
Fe VII	154.269	100		3d ² - 3d4f	a ² P - y ³ P ^o	0 - 1	E5
Fe VII	154.304	200		3d ² - 3d4f	a ² P - y ² P ^o	1 - 0	E5
Fe VII	154.334	400		3d ² - 3d4f	a ¹ D - y ¹ F ^o	2 - 3	E5
Fe VII	154.359	100		3d ² - 3d4f	a ² P - y ² P ^o	1 - 1	E5
Fe VII	154.446	50		3d ² - 3d4f	a ² P - y ² P ^o	1 - 2	E5
Fe VII	154.562	200		3d ² - 3d4f	a ² P - y ³ P ^o	2 - 1	E5
Fe VII	154.648	500		3d ² - 3d4f	a ² P - y ² P ^o	2 - 2	E5
Fe VII	154.701	400		3d ² - 3d4f	a ¹ D - y ¹ D ^o	2 - 2	E5
Fe VII	154.846	300		3d ² - 3d4f	a ² P - y ² D ^o	0 - 1	E5
Fe VII	154.885	100		3d ² - 3d4f	a ¹ D - z ³ G ^o	2 - 3	E5
Fe VII	154.920	400		3d ² - 3d4f	a ² P - y ³ D ^o	1 - 2	E5
Fe VII	154.945	400		3d ² - 3d4f	a ² P - y ² D ^o	2 - 3	E5
Fe VII	155.122	50		3d ² - 3d4f	a ² P - y ² D ^o	2 - 2	E5
Fe VII	155.243	200		3d ² - 3d4f	a ² P - y ¹ F ^o	2 - 3	E5
Fe VII	155.412	50		3d ² - 3d4f	a ² P - y ¹ D ^o	1 - 2	E5
Fe VII	155.548	50		3d ² - 3d4f	a ¹ D - y ³ F ^o	2 - 3	E5
Fe VII	155.991	500		3d ² - 3d4f	a ¹ G - z ¹ H ^o	4 - 5	E5
Fe VII	158.163	300		3d ² - 3d4f	a ¹ G - y ³ F ^o	4 - 4	E5
Fe VII	158.477	400		3d ² - 3d4f	a ¹ G - z ¹ G ^o	4 - 4	E5
Fe VII	165.081	300		3d ² - 3d4f	a ¹ S - y ¹ P ^o	0 - 1	E5
Fe VII	165.95	600		3d ² - 3d4f	a ¹ S - y ³ P ^o	? 0 - 1	F11, K8
Fe VII	166.629	50		3d ² - 3d4f	a ¹ S - y ³ D ^o	0 - 1	E5
Fe VII	228.866	20		3d ² - 3d4p	ga ³ F - z ³ P ^o	? 2 - 1	B5, K8
Fe VII	231.043	100		3d ² - 3d4p	ga ³ F - z ³ F ^o	3 - 4	E5
Fe VII	231.726	300		3d ² - 3d4p	ga ³ F - z ³ F ^o	4 - 4	E5
Fe VII	232.256	200		3d ² - 3d4p	ga ³ F - z ³ F ^o	3 - 3	E5
Fe VII	232.442	200		3d ² - 3d4p	ga ³ F - z ³ F ^o	2 - 2	E5
Fe VII	232.948	100		3d ² - 3d4p	ga ³ F - z ² F ^o	4 - 3	E5
Fe VII	233.021	300		3d ² - 3d4p	ga ³ F - z ² F ^o	3 - 2	E5
Fe VII	233.762	50		3d ² - 3d4p	ga ³ F - z ² D ^o	2 - 2	E5
Fe VII	234.336	200		3d ² - 3d4p	ga ³ F - z ³ D ^o	3 - 2	E5
Fe VII	234.754	200		3d ² - 3d4p	a ¹ D - z ¹ P ^o	2 - 1	E5
Fe VII	235.659	200		3d ² - 3d4p	ga ³ F - z ¹ D ^o	3 - 2	E5
Fe VII	236.388	50		3d ² - 3d4p	a ² P - z ¹ P ^o	1 - 1	E5
Fe VII	236.779	20		3d ² - 3d4p	a ¹ D - z ¹ F ^o	2 - 3	E5
Fe VII	236.865	20		3d ² - 3d4p	a ² P - z ¹ P ^o	2 - 1	E5
Fe VII	238.040	20		3d ² - 3d4p	a ¹ D - z ³ P ^o	2 - 2	E5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe VII	238.386	100		3d ² - 3d4p	a ¹ D - z ² P ^o	2 - 1	E5
Fe VII	239.728	100		3d ² - 3d4p	a ³ P - z ² P ^o	1 - 2	E5
Fe VII	239.851	50		3d ² - 3d4p	a ³ P - z ² P ^o	0 - 1	E5
Fe VII	240.049	50		3d ² - 3d4p	a ³ P - z ² P ^o	1 - 0	E5
Fe VII	240.076	50		3d ² - 3d4p	a ³ P - z ² P ^o	1 - 1	E5
Fe VII	240.216	200		3d ² - 3d4p	a ³ P - z ² P ^o	2 - 2	E5
Fe VII	240.565	50		3d ² - 3d4p	a ³ P - z ² P ^o	2 - 1	E5
Fe VII	243.370	400		3d ² - 3d4p	a ¹ G - z ¹ F ^o	4 - 3	E5
Fe VII	244.535	100		3d ² - 3d4p	a ³ P - z ² F ^o	2 - 2	E5
Fe VII	245.151	120		3d ² - 3d4p	a ¹ D - z ¹ D ^o	2 - 2	E5
Fe VII	245.492	120		3d ² - 3d4p	a ³ P - z ² D ^o	1 - 2	E5
Fe VII	246.005	20		3d ² - 3d4p	a ³ P - z ² D ^o	2 - 2	E5
Fe VII	247.458	50		3d ² - 3d4p	a ³ P - z ¹ D ^o	2 - 2	E5

IRON VIII (Fe⁷⁺), Z = 26Ground State 1s²2s²2p⁶3s²3p⁶3d²D_{3/2} (19 electrons)Ionization Potential 1 218 400 cm⁻¹; 151.06 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe VIII	93.46	100		3d - 7f	g ² D - ² F ^o	3/2 - 5/2	A1
Fe VIII	93.61	200		3d - 7f	g ² D - ² F ^o	5/2 - 7/2	A1
Fe VIII	98.37	200		3d - 6f	g ² D - ² F ^o	3/2 - 5/2	A1
Fe VIII	98.54	300		3d - 6f	g ² D - ² F ^o	5/2 - 7/2	A1
Fe VIII	107.872	400		3d - 5f	g ² D - ² F ^o	3/2 - 5/2	K28
Fe VIII	108.083	400		3d - 5f	g ² D - ² F ^o	5/2 - 7/2	K28
Fe VIII	112.25	250		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	3/2 - 5/2	F31, C16
Fe VIII	112.47	350		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	3/2 - 5/2	F31, C16
Fe VIII	112.49	350		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	5/2 - 7/2	F31, C16
Fe VIII	112.70	250		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	5/2 - 7/2	F31, C16
Fe VIII	112.93	500		3p ⁶ 3d - 3p ⁵ 3d(¹ F ^o)4s	g ² D - ² F ^o	5/2 - 7/2	F31, C16
Fe VIII	114.05	150		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	3/2 - 5/2	F31, C16
Fe VIII	114.29	300		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	5/2 - 7/2	F31, C16
Fe VIII	114.36	300		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	5/2 - 7/2	F31, C16
Fe VIII	116.18	400		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ² F ^o	3/2 - 5/2	F31, C16
Fe VIII	116.43	0		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ² F ^o	5/2 - 7/2	F31, C16
Fe VIII	117.18	500		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ² F ^o	5/2 - 7/2	F31, C16
Fe VIII	117.65	300		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ⁴ F ^o	3/2 - 5/2	F31, C16
Fe VIII	118.28	300		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ⁴ F ^o	5/2 - 7/2	F31, C16
Fe VIII	118.63	150		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² P ^o	3/2 - 5/2	F31, C16
Fe VIII	118.89	400		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² P ^o	5/2 - 7/2	F31, C16
Fe VIII	119.37	400		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² P ^o	3/2 - 5/2	F31, C16
Fe VIII	120.31	150		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ⁴ P ^o	5/2 - 7/2	F31, C16
Fe VIII	130.939	400		3d - 4f	g ² D - ² F ^o	3/2 - 5/2	K28
Fe VIII	131.242	450		3d - 4f	g ² D - ² F ^o	5/2 - 7/2	K28
Fe VIII	167.49	700		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	3/2 - 5/2	G1, F11
Fe VIII	167.64	700		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	5/2 - 7/2	G1, F11
Fe VIII	168.03	700		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	5/2 - 7/2	G1, F11
Fe VIII	168.18	800		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	5/2 - 7/2	G1, F11
Fe VIII	168.54	800		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² P ^o	5/2 - 7/2	F11, C17
Fe VIII	168.90	700		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² P ^o	5/2 - 7/2	F11, C17
Fe VIII?	174.03	100					A2, F11
Fe VIII	185.22	800		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	5/2 - 7/2	G1, F11
Fe VIII	186.60	800		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	3/2 - 5/2	G1, F11
Fe VIII	187.27	600		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	5/2 - 7/2	F11, C17

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe VIII	194.762	250		3d - 4p	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	K28
Fe VIII	195.476	1000		3d - 4p	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	K28
Fe VIII	196.046	750		3d - 4p	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	K28
Fe VIII	222.189	200		4p - 6s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K28
Fe VI.1	223.870	206		4p - 6s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K28
Fe VIII	365.873	400		4p - 5s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K28
Fe VIII	370.432	500		4p - 5s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K28
Fe VIII?	373.20	306					A1

IRON IX (Fe^{8+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1S_0$ (18 electrons)
 Ionization Potential $1\ 895\ 800\ cm^{-1}$; 235.04 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe IX	72.85	10		$3p^6 - 3p^5(^2P^o) 5s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	A1
Fe IX	73.63	20		$3p^6 - 3p^5(^2P^o) 5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	A1
Fe IX	82.43	30		$3p^6 - 3p^5(^2P^o) 4d$	$g^1S - (\frac{1}{2}, \frac{3}{2})^o$	0 - 1	A1
Fe IX	83.45	40		$3p^6 - 3p^5(^2P^o) 4d$	$g^1S - (\frac{3}{2}, \frac{1}{2})^o$	0 - 1	A1
Fe IX	103.566	86		$3p^6 - 3p^5 4s$	$g^1S - ^1P^o$	0 - 1	F10, K29
Fe IX	105.208	60		$3p^6 - 3p^5 4s$	$g^1S - ^3P^o$	0 - 1	F10, K29
Fe IX	111.713	10		$3p^5 3d - 3p^5 4f$	$^3P^o - ^3D$	0 - 1	F10, W1
Fe IX	111.791	20		$3p^5 3d - 3p^5 4f$	$^3P^o - ^3D$	1 - 2	F10, W1
Fe IX	112.01	10		$3p^5 3d - 3p^5 4f$	$^3P^o - ^3D$	1 - 1	W1
Fe IX	112.096	40		$3p^5 3d - 3p^5 4f$	$^3P^o - ^3D$	2 - 3	F10, W1
Fe IX	112.37	10		$3p^5 3d - 3p^5 4f$	$^3F^o - ^1G$	3 - 4	W1, K8
Fe IX	113.793	60		$3p^5 3d - 3p^5 4f$	$^3F^o - ^3G$	4 - 5	F10, W1
Fe IX	114.024	40		$3p^5 3d - 3p^5 4f$	$^3F^o - ^3G$	3 - 4	F10, W1
Fe IX	114.111	20		$3p^5 3d - 3p^5 4f$	$^3F^o - ^3G$	2 - 3	F10, W1
Fe IX	115.353	30		$3p^5 3d - 3p^5 4f$	$^1I^o - ^1F$	2 - 3	F10, W1
Fe IX	115.996	30		$3p^5 3d - 3p^5 4f$	$^3D^o - ^3F$	3 - 4	F10, W1
Fe IX	116.193			$3p^5 3d - 3p^5 4f$	$^1F^o - ^1D$	3 - 2	F10, K8
Fe IX	116.42	40		$3p^5 3d - 3p^5 4f$	$^3D^o - ^3F$	2 - 3	W1
Fe IX	116.803	50		$3p^5 3d - 3p^5 4f$	$^3D^o - ^1G$	3 - 4	F10, W1
Fe IX	171.075	900		$3p^6 - 3p^5 3d$	$g^1S - ^1P^o$	0 - 1	F2, F11
Fe IX	217.108	400		$3p^6 - 3p^5 3d$	$g^1S - ^3D^o$	0 - 1	F2, B5

IRON X (Fe⁹⁺), Z = 26
Ground State 1s²2s²2p³3s²3p⁵ 2P_{3/2} (17 electrons)
Ionization Potential 2 114 000 cm⁻¹; 262.1 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe X	62.8	P		3p ⁵ - 3p ⁴ (1D)5s	g ² P° - 2D	3/2 - 5/2	F23
Fe X	75.865			3p ⁵ - 3p ⁴ (1D)4d	g ² P° - 2D	3/2 - 5/2	F10
Fe X	76.006			3p ⁵ - 3p ⁴ (1D)4d	g ² P° - 2P	3/2 - 3/2	F10
Fe X	76.495		30b	3p ⁵ - 3p ⁴ (1D)4d	g ² P° - 2D	1/2 - 3/2	F10, B5
Fe X	76.53	P		3p ⁵ - 3p ⁴ (1D)4d	g ² P° - 2S	3/2 - 1/2	F23
Fe X	76.822			3p ⁵ - 3p ⁴ (1D)4d	g ² P° - 2P	1/2 - 1/2	F10
Fe X	77.45	P		3p ⁵ - 3p ⁴ (1D)4d	g ² P° - 2S	1/2 - 1/2	F23
Fe X	77.627			3p ⁵ - 3p ⁴ (2P)4d	g ² P° - 2F	3/2 - 3/2	F10
Fe X	77.728			3p ⁵ - 3p ⁴ (2P)4d	g ² P° - 4F	3/2 - 5/2	F10
Fe X	77.212			3p ⁵ - 3p ⁴ (2P)4d	g ² P° - 2D	3/2 - 3/2	F10
Fe X	77.855	20		3p ⁵ - 3p ⁴ (2P)4d	g ² P° - 2D	3/2 - 3/2	F10, B5
Fe X	78.151			3p ⁵ - 3p ⁴ (2P)4d	g ² P° - 2P	1/2 - 3/2	F10
Fe X	78.769	20b		3p ⁵ - 3p ⁴ (2P)4d	g ² P° - 2D	1/2 - 3/2	F10, B5
Fe X	89.577	10		3p ⁴ (2P)3d - 3p ⁴ (1S)4f	4D - 2F°	3/2 - 7/2	B5, K6
Fe X	94.012	400		3p ⁵ - 3p ⁴ (1D)4s	g ² P° - 2D	3/2 - 3/2	E20
Fe X	95.338	100		3p ⁵ - 3p ⁴ (2P)4s	g ² P° - 2P	3/2 - 1/2	E20
Fe X	95.374	300		3p ⁵ - 3p ⁴ (1D)4s	g ² P° - 2D	1/2 - 3/2	E20
Fe X	96.122	400		3p ⁵ - 3p ⁴ (2P)4s	g ² P° - 2P	3/2 - 3/2	E20
Fe X	96.788	200		3p ⁵ - 3p ⁴ (2P)4s	g ² P° - 2P	1/2 - 1/2	E20
Fe X	97.122	300		3p ⁵ - 3p ⁴ (2P)4s	g ² P° - 4P	3/2 - 3/2	E20
Fe X	97.591	10		3p ⁵ - 3p ⁴ (2P)4s	g ² P° - 2P	1/2 - 3/2	E20
Fe X	97.838	10		3p ⁵ - 3p ⁴ (2P)4s	g ² P° - 4F	3/2 - 5/2	E20
Fe X	100.590	400		3p ⁴ (2P)3d - 3p ⁴ (2P)4f	4D - 4F°	3/2 - 3/2	F10, B5
Fe X	101.435			3p ⁴ (2P)3d - 3p ⁴ (2P)4f	4F - 2G°	3/2 - 3/2	F10
Fe X	101.733			3p ⁴ (2P)3d - 3p ⁴ (2P)4f	4F - 4G°	3/2 - 3/2	F10
Fe X	101.846			3p ⁴ (2P)3d - 3p ⁴ (2P)4f	4F - 4G°	3/2 - 3/2	F10
Fe X	102.095			3p ⁴ (2P)3d - 3p ⁴ (2P)4f	4F - 4G°	3/2 - 1/2	F10
Fe X	102.192			3p ⁴ (1D)3d - 3p ⁴ (1D)4f	2G - 2H°	3/2 - 1/2	F10
Fe X	102.544			3p ⁴ (2P)3d - 3p ⁴ (2P)4f	4F - 4G°	3/2 - 3/2	F10
Fe X	102.829			3p ⁴ (1S)3d - 3p ⁴ (1S)4f	2D - 2F°	3/2 - 3/2	F10
Fe X	103.164			3p ⁴ (2P)3d - 3p ⁴ (2P)4f	2F - 2G°	3/2 - 3/2	F10
Fe X	103.319			3p ⁴ (1S)3d - 3p ⁴ (1S)4f	2D - 2F°	3/2 - 3/2	F10
Fe X	103.724			3p ⁴ (2P)3d - 3p ⁴ (2P)4f	2F - 2G°	3/2 - 3/2	F10
Fe X	104.248			3p ⁴ (1D)3d - 3p ⁴ (1D)4f	2F - 2G°	3/2 - 3/2	F10
Fe X	104.638			3p ⁴ (1D)3d - 3p ⁴ (1D)4f	2F - 2G°	3/2 - 3/2	F10
Fe X	137.027			3p ⁴ (2P)3d - 3p ⁴ (2P)4p	4D - 4P°	3/2 - 5/2	F10
Fe X	139.868			3p ⁴ (1D)3d - 3p ⁴ (1D)4p	2G - 2F°	3/2 - 3/2	F10
Fe X	140.296			3p ⁴ (2P)3d - 3p ⁴ (2P)4p	4F - 4D°	3/2 - 3/2	F10
Fe X	140.678			3p ⁴ (1D)3d - 3p ⁴ (1D)4p	2G - 2F°	3/2 - 3/2	F10
Fe X	142.019	20		3p ⁴ (1P)3d - 3p ⁴ (1D)4p	2D - 2F°	3/2 - 3/2	B5, K8
Fe X	144.328			3p ⁴ (1D)3d - 3p ⁴ (1D)4p	2F - 2D°	3/2 - 3/2	F10
Fe X	170.58	100		3p ⁵ - 3p ⁴ (1D)3d	g ² P° - 2D	3/2 - 3/2	F13, B5
Fe X	174.58	700		3p ⁵ - 3p ⁴ (1D)3d	g ² P° - 2D	3/2 - 3/2	F13, F11
Fe X	175.26	600		3p ⁵ - 3p ⁴ (1D)3d	g ² P° - 2D	1/2 - 3/2	F13, F11
Fe X	175.48			3p ⁵ - 3p ⁴ (1D)3d	g ² P° - 2P	3/2 - 1/2	F13
Fe X	177.24	800		3p ⁵ - 3p ⁴ (1D)	g ² P° - 2P	3/2 - 3/2	F13, F11
Fe X	180.45	700b		3p ⁵ - 3p ⁴ (1D)	g ² P° - 2P	1/2 - 1/2	F13, F11
Fe X	182.31	300		3p ⁵ - 3p ⁴ (1D)4d	g ² P° - 2P	1/2 - 3/2	F13, B5
Fe X	184.53	600		3p ⁵ - 3p ⁴ (1D)3d	g ² P° - 2S	3/2 - 1/2	F13, F11
Fe X	190.02	400		3p ⁵ - 3p ⁴ (1D)3d	g ² P° - 2S	1/2 - 1/2	F13, E31
Fe X	210.67	200		3p ⁵ - 3p ⁴ (2P)3d	g ² P° - 2D	3/2 - 3/2	F11, W14
Fe X	345.75	10		3s ² 3p ⁵ - 3s3p ⁶	g ² P° - 2S	3/2 - 1/2	F2, B5
Fe X	365.57			3s ² 3p ⁵ - 3s3p ⁶	g ² P° - 2S	1/2 - 1/2	F2

IRON XI (Fe^{10+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
 Ionization Potential $2\ 342\ 000\ \text{cm}^{-1}$; $290.4\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XI	72.166			$3p^4 - 3p^3(^3D^o)4d$	$^1D - ^1F^o$	2 - 3	F10
Fe XI	72.310			$3p^4 - 3p^3(^3D^o)4d$	$^1D - ^1D^o$	2 - 2	F10
Fe XI	72.635			$3p^4 - 3p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3	F10
Fe XI	77.00	40		$3p^4 - 3p^3(^4S^o)4d$	$^1S - ^3D^o$? 0 - 1	F23, K8
Fe XI	86.149	10		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^1D^o$	2 - 2	E19
Fe XI	86.513	100		$3p^4 - 3p^3(^3P^o)4s$	$^1D - ^1P^o$	2 - 1	E19
Fe XI	86.772	200		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2 - 3	E19
Fe XI	87.025	120		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	2 - 2	E19
Fe XI	87.995	10		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	1 - 2	E19
Fe XI	88.029	10		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	1 - 1	E19
Fe XI	84.167	10		$3p^4 - 3p^3(^3D^o)4s$	$g^3P - ^3D^o$	0 - 1	E19
Fe XI	89.104	200		$3p^4 - 3p^3(^3D^o)4s$	$^1D - ^1D^o$	2 - 2	E19
Fe XI	89.185	100		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	2 - 1	E19
Fe XI	89.703	10		$3p^4 - 3p^3(^3D^o)4s$	$^1D - ^3D^o$? 2 - 3	B5, K8
Fe XI	89.771	10		$3p^4 - 3p^3(^3P^o)4s$	$^1S - ^1P^o$	0 - 1	E19
Fe XI	90.170	10		$3p^3(^3D^o)3d - 3p^3(^3P^o)4f$	$^3P^o - ^3G$? 2 - 3	B5, K8
Fe XI	90.205	100		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	1 - 1	E19
Fe XI	90.345	10		$3p^4 - 3p^3(^4S^o)4s$	$g^3P - ^3S^o$	0 - 1	E19
Fe XI	91.394			$3p^3(^3D^o)3d - 3p^3(^3D^o)4f$	$^3F^o - ^3G$	2 - 3	F10
Fe XI	91.472			$3p^3(^3D^o)3d - 3p^3(^3D^o)4f$	$^3F^o - ^3G$	3 - 4	F10
Fe XI	91.63			$3p^3(^3D^o)3d - 3p^3(^3D^o)4f$	$^3F^o - ^3G$	4 - 5	F10
Fe XI	91.733			$3p^3(^4S^o)3d - 3p^3(^4S^o)4f$	$^5D^o - ^5F$	4 - 5	F10
Fe XI	92.81			$3p^3(^3D^o)3d - 3p^3(^3D^o)4f$	$^3G^o - ^3H$	4 - 5	F10
Fe XI	92.87			$3p^3(^3D^o)3d - 3p^3(^3D^o)4f$	$^3G^o - ^3H$	5 - 6	F10
Fe XI	93.02			$3p^3(^3P^o)3d - 3p^3(^3P^o)4f$	$^3F^o - ^3G$	2 - 3	F10
Fe XI	93.433			$3p^3(^3D^o)3d - 3p^3(^3D^o)4f$	$^1G^o - ^1H$	4 - 5	F10
Fe XI	121.419			$3p^3(^4S^o)3d - 3p^3(^4S^o)4p$	$^5D^o - ^5P$	4 - 3	F10
Fe XI	121.747			$3p^3(^4S^o)3d - 3p^3(^4S^o)4p$	$^5D^o - ^5P$	3 - 2	F10
Fe XI	123.49	200		$3p^3(^3D^o)3d - 3p^3(^3D^o)4p$	$^3G^o - ^3F$	5 - 4	F10, B5
Fe XI	123.572			$3p^3(^3P^o)3d - 3p^3(^3P^o)4p$	$^3F^o - ^3D$	3 - 2	F10
Fe XI	123.822			$3p^3(^3D^o)3d - 3p^3(^3D^o)4p$	$^3G^o - ^3F$? 3 - 2	F10
Fe XI	124.725			$3p^3(^3D^o)3d - 3p^3(^3D^o)4p$	$^1G^o - ^1F$	4 - 3	F10
Fe XI	125.587	10		$3p^3(^3D^o)3d - 3p^3(^3P^o)4p$	$^3G^o - ^3D$? 4 - 3	B5, K8
Fe XI	130.713	10		$3p^3(^3D^o)3d - 3p^3(^3D^o)4p$	$^3D^o - ^1F$? 3 - 3	B5, K8
Fe XI	176.694	40		$3p^4 - 3p^3(^3P^o)3d$	$g^3P - ^3P^o$? 2 - 2	B5, K8
Fe XI	178.060	400		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	2 - 2	F2, B5
Fe XI	179.762	600		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1F^o$	2 - 3	F2, F11
Fe XI	180.407	700		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	2 - 3	F2, F11
Fe XI	180.600	300		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	1 - 1	F2, B5
Fe XI	181.140	400		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	0 - 1	F2, B5
Fe XI	182.173	500		$3p^4 - 3p^3(^4S^o)3d$	$g^3P - ^3D^o$	1 - 2	F2, F11
Fe XI	184.41			$3p^4 - 3p^3(^3D^o)3d$	$^1S - ^1P^o$	0 - 1	F2
Fe XI	184.860	600		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^1D^o$	2 - 2	F2, F11
Fe XI	188.305	400		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$	2 - 2	F2, F11
Fe XI	192.819	250		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$	1 - 2	F2, B5
Fe XI	193.46	200		$3p^4 - 3p^3(^3D^o)3d$	$g^3P - ^3P^o$? 0 - 1	E31, Z1, K8
Fe XI	202.67			$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^3P^o$	2 - 1	F7
Fe XI	202.723	30		$3p^4 - 3p^3(^3D^o)3d$	$^1D - ^3P^o$? 2 - 2	B5, K8
Fe XI	308.61			$3s^2 3p^4 - 3s 3p^5$	$^1D - ^1P^o$	2 - 1	F2
Fe XI	341.115	10		$3s^2 3p^4 - 3s 3p^5$	$g^2P - ^2P^o$	2 - 1	F2
Fe XI	348.97			$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1 - 0	F2
Fe XI	352.680	30		$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	2 - 2	F2, B5
Fe XI	356.55			$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1 - 1	F2
Fe XI	358.64			$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	0 - 1	F2
Fe XI	369.23			$3s^2 3p^4 - 3s 3p^5$	$g^3P - ^3P^o$	1 - 2	F2
Fe XI?	1445.89	40					B35
Fe XI	1467.4	f		$3p^4 - 3p^4$	$g^3P - ^1S$	1 - 0	S28

IRON XII (Fe¹¹⁺), Z = 26
 Ground State 1s²2s²2p⁶3s²3p³ 4S_{3/2} (15 electrons)
 Ionization Potential [2 646 000] cm⁻¹; [328] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XII	63.56	60		3p ² - 3p ² 4d	² D° - ² F	? ½ - ½	F23, K8
Fe XII	65.63	40		3p ² - 3p ² (² P)4d	⁴ S° - ⁴ F	? ½ - ½	F23, K8
Fe XII	65.805			3p ² - 3p ² (¹ D)4d	² D° - ² P	½ - ½	F10
Fe XII	65.905			3p ² - 3p ² (² P)4d	⁴ S° - ⁴ P	½ - ½	F10
Fe XII	65.98	60		3p ² - 3p ² (² P)4d	⁴ S° - ⁴ F	? ½ - ½	F23, K8
Fe XII	66.047	10		3p ² - 3p ² (² P)4d	⁴ S° - ⁴ F	½ - ½	F10, B5
Fe XII	66.225			3p ² - 3p ² (¹ D)4d	² D° - ² F	½ - ½	F10
Fe XII	66.297	40		3p ² - 3p ² (² P)4d	⁴ S° - ⁴ F	½ - ½	F10, F23
Fe XII	66.43			3p ² - 3p ² (¹ D)4d	² D° - ² D	½ - ½	F10
Fe XII	66.526			3p ² - 3p ² (¹ D)4d	² D° - ² F	½ - ½	F10
Fe XII	66.960			3p ² - 3p ² (² P)4d	² D° - ² D	½ - ½	F10
Fe XII	67.164			3p ² - 3p ² (² P)4d	² D° - ² D	½ - ½	F10
Fe XII	67.291			3p ² - 3p ² (² P)4d	² D° - ² D	½ - ½	F10
Fe XII	67.702			3p ² - 3p ² (² P)4d	² D° - ² F	½ - ½	F10
Fe XII	67.78	20		3p ² - 3p ² (² P)4d	² D° - ⁴ P	? ½ - ½	F23, K8
Fe XII	67.821			3p ² - 3p ² (² P)4d	² D° - ² F	½ - ½	F10
Fe XII	67.972			3p ² - 3p ² (¹ D)4d	² P° - ² D	½ - ½	F10
Fe XII	68.382			3p ² - 3p ² (² P)4d	² P° - ² D	½ - ½	F10
Fe XII	69.60	100		3p ² - 3p ² (² P)4d	² P° - ⁴ P	? ½ - ½	F23, K6
Fe XII	70.01	60		3p ² - 3p ² (² P)4d	² P° - ⁴ P	? ½ - ½	F23, K8
Fe XII	77.58	60		3p ² - 3p ² (¹ D)4s	⁴ S° - ² D	? ½ - ½	F23, K8
Fe XII	79.488	30		3p ² - 3p ² (² P)4s	⁴ S° - ⁴ P	½ - ½	F10, B5
Fe XII	80.022	15		3p ² - 3p ² (² P)4s	⁴ S° - ⁴ F	½ - ½	F10, B5
Fe XII	80.160			3p ² - 3p ² (¹ D)4s	² D° - ² D	½ - ½	F10
Fe XII	80.23	24		3p ² - 3p ² (¹ D)4s	² D° - ² D	? ½ - ½	F23, K8
Fe XII	80.55	35		3p ² - 3p ² (² P)4s	⁴ S° - ⁴ P	½ - ½	F10, B5
Fe XII	81.651	80		3p ² - 3p ² (² P)4s	² D° - ² P	½ - ½	F10, Z1
Fe XII	81.943	93		3p ² - 3p ² (² P)4s	² D° - ² P	½ - ½	F10, Z1
Fe XII	82.226			3p ² - 3p ² (² P)4s	² D° - ² F	½ - ½	F10
Fe XII	82.744			3p ² - 3p ² (¹ D)4s	² P° - ² D	½ - ½	F10
Fe XII	82.837	35		3p ² - 3p ² (¹ D)4s	² P° - ² D	½ - ½	F10, F23
Fe XII	84.491	25		3p ² (² P)3d - 3p ² (² P)4f	⁴ F - ⁴ G°	½ - ½	F10, B5
Fe XII	84.768			3p ² (² P)3d - 3p ² (² P)4f	⁴ D - ⁴ F°	½ - ½	F10
Fe XII	85.14			3p ² (¹ D)3d - 3p ² (¹ D)4f	² G - ² H°	½ - ½	F10
Fe XII	85.477	30		3p ² (¹ D)3d - 3p ² (¹ D)4f	² G - ² H°	½ - ½	F10, B5
Fe XII	85.669			3p ² (¹ S)3d - 3p ² (¹ S)4f	² D - ² F°	½ - ½	F10
Fe XII	108.440			3p ² (² P)3d - 3p ² (² P)4p	⁴ F - ⁴ D°	½ - ½	F10
Fe XII	108.605			3p ² (² P)3d - 3p ² (² P)4p	⁴ F - ⁴ D°	½ - ½	F10
Fe XII	108.862			3p ² (² P)3d - 3p ² (² P)4p	⁴ F - ⁴ D°	½ - ½	F10
Fe XII	109.015			3p ² (² P)3d - 3p ² (² P)4p	⁴ D - ⁴ P°	½ - ½	F10
Fe XII	109.509			3p ² (¹ D)3d - 3p ² (¹ D)4p	² F - ² D°	½ - ½	F10
Fe XII	109.712			3p ² (² P)3d - 3p ² (² P)4p	⁴ L - ⁴ D°	½ - ½	F10
Fe XII	110.591			3p ² (¹ D)3d - 3p ² (¹ D)4p	² G - ² F°	½ - ½	F10
Fe XII	110.732			3p ² (¹ D)3d - 3p ² (¹ D)4p	² G - ² F°	½ - ½	F10
Fe XII	123.822			3p ² 3d - 3p ² (² P)4p	² D - ² D°	? ½ - ½	F10, K8
Fe XII	186.885	60		3p ² - 3p ² (¹ D)3d	² D° - ² F	½ - ½	F2, B5
Fe XII	188.219	70		3p ² - 3p ² (² P)3d	² P° - ² D	½ - ½	F2, B5
Fe XII	191.051	20		3p ² - 3p ² (² P)3d	² P° - ² D	½ - ½	F2, B5
Fe XII	192.402	70		3p ² - 3p ² (² P)3d	⁴ S° - ⁴ P	½ - ½	F2, B5
Fe XII	193.517	80		3p ² - 3p ² (² P)3d	⁴ S° - ⁴ P	½ - ½	F2, B5
Fe XII	195.127	90		3p ² - 3p ² (² P)3d	⁴ S° - ⁴ P	½ - ½	F2, B5
Fe XII	196.649	50		3p ² - 3p ² (¹ D)3d	² D° - ² D	½ - ½	F2, B5
Fe XII	198.58			3p ² - 3p ² (¹ D)3d	² P° - ² P	½ - ½	F2
Fe XII	201.134	70b		3p ² - 3p ² (¹ D)3d	² P° - ² P	½ - ½	F2, B5
Fe XII	201.745	30		3p ² - 3p ² (¹ D)3d	² P° - ² P	½ - ½	F2, B5
Fe XII	211.749	30		3p ² - 3p ² (² P)3d	² D° - ² P	½ - ½	F2, B5
Fe XII	214.415	20		3p ² - 3p ² (² P)3d	² D° - ⁴ P	? ½ - ½	B5, K8
Fe XII	217.283	30		3p ² - 3p ² (² P)3d	² D° - ² P	½ - ½	F2, B5
Fe XII	219.453	40		3p ² - 3p ² (² P)3d	² D° - ² P	½ - ½	F2, B5
Fe XII	283.64			3s ² 3p ² - 3s3p ⁴	² D° - ² P	½ - ½	F2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XII	290.997			$3s^2 3p^2 - 3s 3p^4$	$^3D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F2
Fe XII	335.06			$3s^2 3p^2 - 3s 3p^4$	$^3D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F2
Fe XII	338.27			$3s^2 3p^2 - 3s 3p^4$	$^3D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F2
Fe XII	346.859	20		$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F2, B5
Fe XII	352.115	30		$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F2, B5
Fe XII	364.477	4		$3s^2 3p^2 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F2, B5
Fe XII	382.83			$3s^2 3p^2 - 3s 3p^4$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F2
Fe XII	1242.15	25t		$3p^2 - 3p^2$	$g^4S^{\circ} - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	B35
Fe XII	1349.57	30f		$3p^2 - 3p^2$	$g^4S^{\circ} - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	B35

IRON XIII (Fe^{13+}), $Z = 26$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)Ionization Potential [2 903 700] cm^{-1} ; [360] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XIII?	61.659						F10
Fe XIII	61.876			$3p^2 - 3p4d$	$g^3P - ^3P^{\circ}$? 0-1	F10, K8
Fe XIII?	62.354	60					F10, F23
Fe XIII	62.387			$3p^2 - 3p4d$	$g^3P - ^3D^{\circ}$? 0-1	F10, K8
Fe XIII?	62.466						F10
Fe XIII	62.694	100		$3p^2 - 3p4d$	$g^3P - ^3D^{\circ}$	1-2	F10, F23
Fe XIII	62.975	100		$3p^2 - 3p4d$	$g^3P - ^3D^{\circ}$	2-3	F10, F23
Fe XIII	63.048	10		$3p^2 - 3p4d$	$g^3P - ^3D^{\circ}$? 2-2	B5, K8
Fe XIII	63.191	120		$3p^2 - 3p4d$	$^1D - ^1F^{\circ}$	2-3	F10, F23
Fe XIII	71.029			$3s 3p^2 - 3s^2 3p4f$	$^1D^{\circ} - ^1F$? 2-3	F10, K8
Fe XIII	74.327	92		$3p^2 - 3p4s$	$g^3P - ^3P^{\circ}$	1-2	F10, Z1
Fe XIII	74.845	250		$3p^2 - 3p4s$	$g^3P - ^3P^{\circ}$	2-2	F10, Z1
Fe XIII	75.892	93		$3p^2 - 3p4s$	$g^3P - ^3P^{\circ}$	2-1	F10, Z1
Fe XIII	76.117	20		$3p^2 - 3p4f$	$^1D - ^1P^{\circ}$	2-1	F10, B5
Fe XIII	78.462	80		$3p^2 - 3p4f$	$^3F^{\circ} - ^3G$	4-5	F10, F23
Fe XIII	78.56			$3p3d - 3p4f$	$^3F^{\circ} - ^3G$	2-3	F10
Fe XIII	78.770	20b		$3p3d - 3p4f$	$^3F^{\circ} - ^3G$	3-4	F10, B5
Fe XIII	81.161			$3p3d - 3p4f$	$^3D^{\circ} - ^3F$	3-4	F10
Fe XIII	84.275			$3p3d - 3p4f$	$^1F^{\circ} - ^1G$	3-4	F10
Fe XIII	98.128	25		$3p3d - 3p4p$	$^3F^{\circ} - ^3D$	4-3	F10, B5
Fe XIII	98.387			$3p3d - 3p4p$	$^1D^{\circ} - ^1P$	2-1	F10
Fe XIII	98.523	15		$3p3d - 3p4p$	$^3F^{\circ} - ^3D$	3-2	F10, B5
Fe XIII	98.826			$3p3d - 3p4p$	$^3F^{\circ} - ^3D$	2-1	F10
Fe XIII	107.384			$3p3d - 3p4p$	$^1F^{\circ} - ^1D$	3-2	F10
Fe XIII	191.34			$3p^2 - 3p3d$	$^1D - ^1P^{\circ}$	2-1	F2
Fe XIII	196.531	50		$3p^2 - 3p3d$	$^1D - ^1F^{\circ}$	2-3	F2, B5
Fe XIII	197.443	30		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	0-1	F2, B5
Fe XIII	200.033	60		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	1-2	F2, B5
Fe XIII	201.134	70b		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	1-1	F2, B5
Fe XIII	202.056	80		$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	0-1	F2, B5
Fe XIII	203.81	70		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	2-3	F2, B5
Fe XIII	204.26			$3p^2 - 3p3d$	$g^3P - ^1D^{\circ}$	1-2	F7
Fe XIII	204.951	50		$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	2-1	F2, B5
Fe XIII	208.690	20		$3p^2 - 3p3d$	$^1S - ^1P^{\circ}$	0-1	F2, B5
Fe XIII	209.634	40		$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	1-2	F2, B5
Fe XIII	209.927	50		$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	2-1	F2, B5
Fe XIII	213.781	40		$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	2-2	F2, B5
Fe XIII	216.88	35		$3p^2 - 3p3d$	$^1D - ^3D^{\circ}$	2-3	W7, B5
Fe XIII	221.830	40		$3p^2 - 3p3d$	$^1D - ^1D^{\circ}$	2-2	F2, B5
Fe XIII	240.713	50		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^4S^{\circ}$	0-1	F2, B5

Fe XIII

Fe XIV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XIII	246.210	50		$3s^2 3p^2 - 3s 3p^3$	$^3P - ^4S^o$	1 - 1	F2, B5
Fe XIII	251.949		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^3S^o$	2 - 1	F2, B5	
Fe XIII	256.42		$3s^2 3p^2 - 3s 3p^3$	$^1D - ^1P^o$	2 - 1	F2	
Fe XIII	288.52		$3s^2 3p^2 - 3s 3p^3$	$^1S - ^1P^o$	0 - 1	K6	
Fe XIII	318.21		$3s^2 3p^2 - 3s 3p^3$	$^1D - ^1D^o$	2 - 2	F2	
Fe XIII	320.93	40		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^3P^o$	2 - 2	F2
Fe XIII	348.20		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^3D^o$	0 - 1	W7, B5	
Fe XIII	359.63		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^3D^o$	1 - 2	F2, B5	
Fe XIII	359.85		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^3D^o$	1 - 1	W7	
Fe XIII	368.12		$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^3D^o$	2 - 3	F2	
Fe XIII	1217.2	f		$3p^2 - 3p^2$	$g^3P - ^1S$	1 - 0	S28

IRON XIV (Fe^{13+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^2P_{1/2}$ (13 electrons)
 Ionization Potential [3 153 700] cm^{-1} ; [391] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XIV	58.963	200		$3p - 4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E18
Fe XIV	59.579	300		$3p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E18
Fe XIV	67.21	60		$3s 3p^2 - 3s 3p 4s$	$^2D - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	F23, K8
Fe XIV	69.176			$3s 3p^2 - 3s 3p 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	F10
Fe XIV	69.386			$3s 3p^2 - 3s 3p 4s$	$^4P - ^4P^o$	$\frac{1}{2} - \frac{3}{2}$	F10
Fe XIV	69.667			$3s 3p^2 - 3s 3p 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	F10
Fe XIV	70.251			$3s 3p^2 - 3s 3p 4s$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{5}{2}$	F10
Fe XIV	76.533			$3p - 4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F10
Fe XIV	71.377	10		$3s 3p^2 - 3s 3p 4s$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{5}{2}$	F10, B5
Fe XIV	71.87	8		$3s 3p^2 - 3s 3p 4s$	$^2P - ^4P^o$	$\frac{1}{2} - \frac{1}{2}$	F23, K8
Fe XIV	72.796			$3s 3p 3d - 3s 3p 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{1}{2}$	F10
Fe XIV	72.95			$3s 3p 3d - 3s 3p 4f$	$^4F^o - ^4G$	$\frac{3}{2} - \frac{3}{2}$	F10
Fe XIV	73.08			$3s 3p 3d - 3s 3p 4f$	$^4F^o - ^4G$	$\frac{7}{2} - \frac{5}{2}$	F10
Fe XIV	76.022	35		$3d - 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	F10, B5
Fe XIV	76.152			$3d - 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	F10
Fe XIV	91.065	20		$3d - 4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	F10, B5
Fe XIV	91.275			$3d - 4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	F10
Fe XIV	191.20	700		$3s 3p^2 - 3s 3p 3d$	$^2D - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	E31, K8
Fe XIV	211.32	80		$3p - 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F17, B5
Fe XIV	216.95			$3s 3p^2 - 3s 3p 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F7
Fe XIV	218.21			$3s 3p^2 - 3s 3p 3d$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	F7
Fe XIV	219.13	60		$3p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F17, B5
Fe XIV	220.09	60		$3p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F17, B5
Fe XIV	241.739	60		$3s 3p^2 - 3p^2$	$^2D - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	B5, K8
Fe XIV	252.190	40		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F2, B5
Fe XIV	257.385	50		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F2, B5
Fe XIV	264.799	60		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F2, B5
Fe XIV	270.512	50		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F2, B5
Fe XIV	274.22	60		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F7, B5
Fe XIV	280.69			$3s 3p^2 - 3p^2$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	F7
Fe XIV	288.45			$3s 3p^2 - 3p^2$	$^4P - ^4S^o$	$\frac{3}{2} - \frac{3}{2}$	F7
Fe XIV	289.17			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F7
Fe XIV	334.15			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F7
Fe XIV	353.84	30		$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7, B5
Fe XIV	356.60			$3s^2 3p - 3s 3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F7

IRON XV (Fe^{14+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5$ ($1S_0$, 12 electrons)
 Ionization Potential [3 678 000] cm^{-1} ; [456] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XV	15.490	40 -A		$2p^6 3s^5 - 2p^5 3s^2 3d$	$g^1 S - ^1 P^o$	0 - 1	C9, S31
Fe XV	17.345	10 -A		$2p^6 3s 3d - 2p^5 3s^2 3d$	$^1 D - ^1 F^o$	2 - 1	C9, K8
Fe XV	38.95	3		$3s^2 - 3s 5p$	$g^1 S - ^1 P^o$	0 - 1	F14
Fe XV	41.559	10		$3s 3p - 3s 5d$	$^3 P^o - ^3 D$	0 - 1	F33
Fe XV	41.663	10		$3s 3p - 3s 5d$	$^1 P^o - ^3 D$	1 - 2	F33
Fe XV	41.903	20		$3s 3p - 3s 5d$	$^3 P^o - ^3 D$	2 - 3	F33
Fe XV	42.93			$3s 3d - 3s 6f$	$^1 D - ^1 F^o$	2 - 3	F14
Fe XV	43.39			$3s 3d - 3s 6f$	$^3 D - ^3 F^o$	3 - 4	F14
Fe XV	43.65			$3s 3p - 3s 5s$	$^1 P^o - ^3 S$	2 - 1	F14
Fe XV	49.49			$3s 3d - 3s 5f$	$^1 D - ^1 F^o$	2 - 3	F14
Fe XV	50.062	1		$3s 3d - 3s 5f$	$^3 D - ^3 F^o$	1 - 2	E18
Fe XV	50.085	10		$3s 3d - 3s 5f$	$^3 D - ^3 F^o$	2 - 3	E18
Fe XV	50.120	100		$3s 3d - 3s 5f$	$^3 D - ^3 F^o$	3 - 4	E18
Fe XV	52.911	300		$3s^2 - 3s 4p$	$g^1 S - ^1 P^o$	0 - 1	E18
Fe XV	55.635	100		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	0 - 1	E18
Fe XV	55.793	200		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	1 - 2	E18
Fe XV	55.815	10		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	1 - 1	E18
Fe XV	56.200	300		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	2 - 3	E18
Fe XV	56.236	1		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	2 - 2	E18
Fe XV	59.404	1		$3s 3p - 3s 4d$	$^1 P^o - ^1 D$	1 - 2	F10
Fe XV	62.099	60		$3p 3d - 3s 5d$	$^1 P^o - ^3 D$	1 - 2	F10, K8
Fe XV	65.370	1		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	0 - 1	F33
Fe XV	65.612	3		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	1 - 1	F33
Fe XV	66.238	3		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	2 - 1	F33
Fe XV	68.849	3		$3p 3d - 3p 4f$	$^3 F^o - ^3 G$	4 - 5	F10
Fe XV	68.883			$3p 3d - 3p 4f$	$^3 F^o - ^3 G$	2 - 3	F10
Fe XV	69.036			$3p 3d - 3p 4f$	$^3 F^o - ^3 G$	3 - 4	F10
Fe XV	69.54			$3p 3d - 3p 4f$	$^3 F^o - ^3 D$	4 - 3	F10
Fe XV	69.945	200		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	1 - 2	E18
Fe XV	69.987	300		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	2 - 3	E18
Fe XV	70.054	400		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	3 - 4	E18
Fe XV	70.22			$3p 3d - 3p 4f$	$^3 P^o - ^3 D$	0 - 1	F10
Fe XV	70.53			$3p 3d - 3p 4f$	$^3 P^o - ^3 D$	1 - 2	F10
Fe XV	70.59			$3p 3d - 3p 4f$	$^3 D - ^3 D$	3 - 3	F10
Fe XV	73.198			$3p 3d - 3p 4f$	$^1 P^o - ^1 D$	1 - 2	F10
Fe XV	73.473	30		$3p 3d - 3p 4f$	$^1 F^o - ^1 G$	3 - 4	F10, B5
Fe XV	90.503	10		$3p 3d - 3s 4d$	$^3 F^o - ^3 D$	2 - 3	B5, K8
Fe XV	155.50			$3s 4d - 3s 5f$	$^3 D - ^3 F^o$	3 - 4	H9, K8
Fe XV	171.359	40		$3p 4f - 3s 6f$	$^3 G - ^3 F^o$	5 - 4	B5, K8
Fe XV	224.745	40		$3s 3p - 3s 3d$	$^3 P^o - ^3 D$	0 - 1	F2, B5
Fe XV	227.22	20		$3s 3p - 3s 3d$	$^3 P^o - ^3 D$	1 - 2	F2, B5
Fe XV	227.70			$3s 3p - 3s 3d$	$^3 P^o - ^3 D$	1 - 1	F2
Fe XV	233.865	30		$3s 3p - 3s 3d$	$^3 P^o - ^3 D$	2 - 3	F2, B5
Fe XV	243.783	50		$3p^2 - 3p 3d$	$^3 P^o - ^3 P^o$	2 - 2	F2, B5
Fe XV	256.919	40		$3p^2 - 3p 3d$	$^3 P^o - ^3 D^o$	2 - 3	B5, K8
Fe XV	284.15	80		$3s^2 - 3s 3p$	$g^1 S - ^1 P^o$	0 - 1	F17, B5
Fe XV	292.36			$3s 3p - 3p^2$	$^3 P^o - ^3 P^o$	1 - 2	F2
Fe XV	296.226	20		$3s 4f - 3p 4f$	$^3 F^o - ^3 F$	4 - 4	B5, K8
Fe XV	302.45			$3s 3p - 3p^2$	$^3 P^o - ^3 P^o$	0 - 1	F2
Fe XV	303.40			$3s 3p - 3s 3d$	$^1 P^o - ^3 D$	1 - 2	F10
Fe XV	305.00			$3s 3p - 3p^2$	$^3 P^o - ^3 P^o$	2 - 2	F2
Fe XV	307.78			$3s 3p - 3p^2$	$^3 P^o - ^3 P^o$	1 - 1	F2
Fe XV	317.62			$3s 3p - 3p^2$	$^3 P^o - ^3 P^o$	1 - 0	F2
Fe XV	321.82			$3s 3p - 3p^2$	$^3 P^o - ^3 P^o$	2 - 1	F2
Fe XV	359.53			$3s 4f - 3p 4f$	$^3 F^o - ^3 G$	4 - 4	W7, K8
Fe XV	372.78			$3s 3d - 3p 3d$	$^3 D - ^3 F^o$	3 - 4	F2
Fe XV	387.00			$3s 3d - 3p 3d$	$^3 D - ^3 F^o$	2 - 3	F2
Fe XV	400.65			$3s 3d - 3p 3d$	$^3 D - ^3 F^o$	1 - 2	F2
Fe XV	415.41	?		$3s^2 - 3s 3p$	$g^1 S - ^3 P^o$	0 - 1	K8
Fe XV	481.52			$3s 3p - 3p^2$	$^1 P^o - ^1 D$	1 - 2	F2

IRON XVI (Fe¹⁵⁺), Z = 26
Ground State 1s²2s²2p⁶3s²S_{1,2} (11 electrons)
Ionization Potential 3 947 840 cm⁻¹; 489.5 eV

Element	Wavelength	Intensity	Multiplicity	Configuration	Term	J - J	References
Fe XVI	17.207	20	A	2p ⁶ 3s - 2p ⁶ 3s ²	g ² S - ² P°	1/2 - 1/2	C8, F27
Fe XVI	17.500	40	-A	2p ⁶ 3s - 2p ⁶ 3s ²	g ² S - ² P°	1/2 - 3/2	C9, F27
Fe XVI	27.88			3s - 9p	g ² S - ² P°	1/2 - 3/2	F14
Fe XVI	28.67			3s - 8p	g ² S - ² P°	1/2 - 3/2	F14
Fe XVI	29.93			3s - 7p	g ² S - ² P°	1/2 - 3/2	F14
Fe XVI	30.10			3p - 9d	² P° - ² D	1/2 - 3/2	F14
Fe XVI	30.33			3p - 9d	² P° - ² D	1/2 - 3/2	F14
Fe XVI	31.04	3		3p - 8d	² P° - ² D	1/2 - 3/2	F33
Fe XVI	31.242	20		3p - 8d	² P° - ² D	1/2 - 3/2	F33
Fe XVI	32.166	10		3s - 6p	² P° - ² D	1/2 - 3/2	F33
Fe XVI	32.192	6		3s - 6p	g ² S - ² P°	1/2 - 1/2	F33
Fe XVI	32.433	10		3p - 7d	² P° - ² D	1/2 - 3/2	F33
Fe XVI	32.652	35		3p - 7d	² P° - ² D	1/2 - 3/2	F33
Fe XVI	32.84			3p - 5	² P° - ² S	1/2 - 1/2	F14
Fe XVI	33.04			3p - 5	² P° - ² S	1/2 - 1/2	F14
Fe XVI	34.21			3d - 9s	² D - ² F°	3/2 - 3/2	F14
Fe XVI	34.857	20		3p - 6d	² P° - ² D	1/2 - 3/2	F33
Fe XVI	35.106	60		3p - 6d	² P° - ² D	1/2 - 3/2	F33
Fe XVI	35.333	1		3d - 8f	² D - ² F°	3/2 - 3/2	F33
Fe XVI	35.368	3		3d - 8f	² D - ² F°	3/2 - 3/2	F33
Fe XVI	35.71			3p - 6s	² P° - ² S	1/2 - 1/2	F14
Fe XVI	36.01			3p - 6s	² P° - ² S	1/2 - 1/2	F14
Fe XVI	36.749	60		3s - 5p	g ² S - ² P°	1/2 - 3/2	F33
Fe XVI	36.863	20		3s - 5p	g ² S - ² P°	1/2 - 1/2	F33
Fe XVI	37.096	6		3d - 7f	² D - ² F°	3/2 - 3/2	F33
Fe XVI	37.138	10		3d - 7f	² D - ² F°	3/2 - 3/2	F33
Fe XVI	39.827			3p - 5d	² P° - ² D	1/2 - 3/2	E16
Fe XVI	40.153			3p - 5d	² P° - ² D	1/2 - 3/2	E16
Fe XVI	40.189	10		3d - 6f	² D - ² F°	3/2 - 3/2	F33
Fe XVI	40.245	10		3d - 6f	² D - ² F°	3/2 - 3/2	F33
Fe XVI	41.17			3d - 6p	² D - ² P°	3/2 - 3/2	F14
Fe XVI	41.91			3p - 5s	² P° - ² S	1/2 - 1/2	F14
Fe XVI	42.30			3p - 5s	² P° - ² S	1/2 - 1/2	F14
Fe XVI	46.661			3d - 5f	² D - ² F°	3/2 - 5/2	E16
Fe XVI	46.718			3d - 5f	² D - ² F°	3/2 - 5/2	E16
Fe XVI	48.97			3d - 5p	² D - ² P°	3/2 - 3/2	F14
Fe XVI	50.350			3s - 4p	g ² S - ² P°	1/2 - 3/2	E16
Fe XVI	50.555			3s - 4p	g ² S - ² P°	1/2 - 1/2	E16
Fe XVI	54.142			3p - 4d	² P° - ² D	1/2 - 3/2	E16
Fe XVI	54.728			3p - 4d	² P° - ² D	1/2 - 3/2	E16
Fe XVI	54.769			3p - 4d	² P° - ² D	1/2 - 3/2	E16
Fe XVI	62.879	20		3p - 4s	² P° - ² S	1/2 - 1/2	E16, B5
Fe XVI	63.719	30		3p - 4s	² P° - ² S	1/2 - 1/2	E16, B5
Fe XVI	66.263	20		3d - 4f	² D - ² F°	3/2 - 3/2	E16, B5
Fe XVI	66.368	30		3d - 4f	² D - ² F°	3/2 - 3/2	E16, B5
Fe XVI	76.502	30b		3d - 4p	² D - ² P°	3/2 - 3/2	F10, B5
Fe XVI	76.796			3d - 4p	² D - ² P°	3/2 - 1/2	F10
Fe XVI	165.656	20		5p - 7s	² P° - ² S	3/2 - 1/2	B5, K8
Fe XVI	171.66	300		5d - 7f	² D - ² F°	3/2 - 3/2	F11, K8
Fe XVI	251.058	20		3p - 3d	² P° - ² D	1/2 - 3/2	F33
Fe XVI	262.967	60		3p - 3d	² P° - ² D	3/2 - 3/2	F33
Fe XVI	265.007	3		3p - 3d	² P° - ² D	3/2 - 3/2	F33
Fe XVI	335.407	6		3s - 3p	g ² S - ² P°	1/2 - 3/2	F33
Fe XVI	360.798	3		3s - 3p	g ² S - ² P°	1/2 - 1/2	F33

IRON XVII (Fe^{16+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
 Ionization Potential $10\ 211\ 700\ \text{cm}^{-1}$; $1266.1\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XVII	10.649	20					
Fe XVII	10.762	10		$2p^6 - 2p^5 3d$	$g^1S - ^1P^o$	0 - 1	S31
Fe XVII	11.125	20		$2p^6 - 2p^5 6d$	$g^1S - ^2D^o$	0 - 1	S31
Fe XVII	11.247	40		$2p^6 - 2p^5 5d$	$g^1S - ^1P^o$	0 - 1	S31
Fe XVII	12.122	150		$2p^6 - 2p^5 5d$	$g^1S - ^2D^o$	0 - 1	S31
				$2p^6 - 2p^5 4d$	$g^1S - ^2D^o$	0 - 1	C9, G5
Fe XVII	12.262	150		$2p^6 - 2p^5 4d$	$g^1S - ^1P^o$	0 - 1	C9, G5
Fe XVII	12.274	20		$2p^6 - 2p^5 4d$	$g^1S - ^2P^o$	0 - 1	S31, K8
Fe XVII	12.319	30		$2p^6 - 2p^5 4d$	$g^1S - ^2D^o$	0 - 1	S31
Fe XVII	12.514	29		$2p^6 - 2p^5 4s$	$g^1S - ^1P^o$	0 - 1	S31
Fe XVII	12.681	20		$2p^6 - 2p^5 4s$	$g^1S - ^2P^o$	0 - 1	S31
Fe XVII	13.823	100					
Fe XVII	13.888	100		$2s^2 2p^6 - 2s 2p^5 3p$	$^4S - ^1P^o$	0 - 1	C9, G5
Fe XVII	15.013	150		$2s^2 2p^6 - 2s 2p^5 3p$	$g^1S - ^2P^o$	0 - 1	C9, G5
Fe XVII	15.260	100		$2p^6 - 2p^5 3d$	$g^1S - ^1P^o$	0 - 1	C9, G5
Fe XVII	15.453	90		$2p^6 - 2p^5 3d$	$g^1S - ^2D^o$	0 - 1	C9, G5
				$2p^6 - 2p^5 3d$	$g^1S - ^2P^o$	0 - 1	C9, G5
Fe XVII	16.775	200		$2p^6 - 2p^5 3s$	$g^1S - ^1P^o$	0 - 1	C9, G5
Fe XVII	17.051	200		$2p^6 - 2p^5 3s$	$g^1S - ^2P^o$	0 - 1	C9, G5
Fe XVII	199.26			$2p^5 3p - 2p^5 3d$	$^3D - ^1D^o$? 1 - 2	H9, G5
Fe XVII	200.80	100		$2p^5 3p - 2p^5 3d$	$^2S - ^3D^o$? 1 - 1	F11, G5
Fe XVII	244.152	19		$2p^5 3p - 2p^5 3d$	$^3D - ^2D^o$? 1 - 2	B5, K8

IRON XVIII (Fe^{17+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
 Ionization Potential $[10\ 913\ 000]\ \text{cm}^{-1}$; $[1353]\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XVIII	11.021	20		$2p^5 - 2p^4(^1S)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	S31
Fe XVIII	11.280	20		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	S31
Fe XVIII	11.318	30		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	S31
Fe XVIII	11.440	40		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31
Fe XVIII	11.571	20		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S31
Fe XVIII?	11.637	10					
Fe XVIII	11.730	10		$2p^5 - 2p^4(^1S)4s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S31
Fe XVIII	13.934	20		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	C9, C10
Fe XVIII	14.031	10		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	S31
Fe XVIII	14.129	30		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{5}{2}$	S31
Fe XVIII	14.207	70		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31
Fe XVIII	14.260	30		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S31
Fe XVIII	14.351	40		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	C9, C10
Fe XVIII	14.373	50		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Fe XVIII	14.422	20		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	S31
Fe XVIII	14.453	10		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	C9, C10
Fe XVIII	14.481	0		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31
Fe XVIII	14.535	40		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	C9, C10
Fe XVIII	14.549	40		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	C9, C10
Fe XVIII	14.580	40		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	C9, S31
Fe XVIII	14.669	30		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{5}{2}$	C9, C10
Fe XVIII	14.703	30		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	C9, C10
Fe XVIII	14.770	10		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	C9, C10
Fe XVIII	14.80	10		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	C9, C10
Fe XVIII	15.260	100		$2p^5 - 2p^4(^1S)3s$	$g^2P^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	C9, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XVIII	15.567	10		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	C9, C10
Fe XVIII	15.624	60		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	C9, C10
Fe XVIII	15.764	20		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	C8, C10
Fe XVIII	15.828	80		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	C9, C10
Fe XVIII	15.869	80		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	C9, C10
Fe XVIII	15.979	0		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S31
Fe XVIII	16.004	80		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	C9, C10
Fe XVIII	16.024	50		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	C9, C10
Fe XVIII	16.074	50		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	C9, C10
Fe XVIII	16.164	40		$2s2p^6 - 2s2p^5(^3P^o)3s$	$^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	C9, C10
Fe XVIII	16.236	20		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$?	C9, K8
Fe XVIII	16.270	10		$2p^5 - 2p^4(^3P)3s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	C9, C10
Fe XVIII	93.94	400		$2s^22p^6 - 2s2p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{5}{2}$	B12
Fe XVIII	103.96	200		$2s^22p^6 - 2s2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{3}{2}$	B12
Fe XVIII	145.656	10		$2s^22p^4(^1S)3s - 2s2p^5(^3P^o)3s$	$^2S - ^2P^o$?	B5, K8

IRON XIX (Fe^{18+}), $Z = 26$
 Ground State $1s^22s^22p^4\ ^3P_2$ (8 electrons)
 Ionization Potential [11 703 000] cm^{-1} ; [1451] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References	
Fe XIX	12.990	20		$2s^22p^4 - 2s2p^33p$	$^1D - ^1F^o$	2-3	S31	
Fe XIX	13.307	20		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$?	2-1	C9, K8
Fe XIX	13.322	20		$2p^4 - 2p^3(^3P^o)3d$	$g^3P - ^3P^o$?	2-2	S31
Fe XIX	13.399	50		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$?	2-2	C9, K8
Fe XIX	13.464	40		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$?	2-3	C9, K8
Fe XIX	13.497	10		$2p^4 - 2p^3(^3P^o)3d$	$^1D - ^3P^o$?	2-2	C9, K8
Fe XIX	13.518	60		$2p^4 - 2p^3(^1S^o)3d$	$g^3P - ^3D^o$?	2-3	C9, K8
Fe XIX	13.547	10		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$?	0-1	C9, K8
Fe XIX	13.575	20		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3P^o$?	1-2	C9, K8
Fe XIX	13.631	10		$2p^4 - 2p^3(^3D^o)3d$	$g^3P - ^3D^o$?	1-2	C9, K8
Fe XIX	13.644	20		$2p^4 - 2p^3(^1S^o)3d$	$g^3P - ^3D^o$?	0-1	C9, K8
Fe XIX	13.667	30		$2p^4 - 2p^3(^1S^o)3d$	$^1P - ^3D^o$?	1-2	C9, K8
Fe XIX	13.695	20		$2p^4 - 2p^3(^1S^o)3d$	$^1D - ^3D^o$?	2-2	C9, K8
Fe XIX	13.733	20		$2p^4 - 2p^3(^3P^o)3d$	$^1S - ^3P^o$?	0-1	C9, K8
Fe XIX	14.927	10		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^1P^o$?	2-1	C9, K8
Fe XIX	14.971	10		$2p^4 - 2p^3(^1S^o)3s$	$g^3P - ^3S^o$?	2-1	C9, K8
Fe XIX	15.069	30		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$?	2-2	C9, K8
Fe XIX	15.083	20		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^1P^o$?	2-1	C9, K8
Fe XIX	15.110	20		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^1P^o$?	2-1	C9, K8
Fe XIX	15.132	0		$2p^4 - 2p^3(^1S^o)3s$	$g^3P - ^3S^o$?	0-1	S31, K8
Fe XIX	15.158	10		$2p^4 - 2p^3(^3P^o)3s$	$^1D - ^1P^o$?	2-1	C9, K8
Fe XIX	15.173	30		$2p^4 - 2p^3(^1S^o)3s$	$g^3P - ^3S^o$?	1-1	C9, K8
Fe XIX	15.237	30		$2p^4 - 2p^3(^3P^o)3s$	$g^3P - ^3P^o$?	0-1	C9, K8
Fe XIX	15.288	20		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^1P^o$?	1-1	C9, K8
Fe XIX	15.306	0		$2p^4 - 2p^3(^3P^o)3s$	$^1D - ^3P^o$?	2-1	S31, K8
Fe XIX	15.341	10		$2p^4 - 2p^3(^3D^o)3s$	$^1D - ^1P^o$?	2-1	C9, K8
Fe XIX	15.361	20		$2p^4 - 2p^3(^3D^o)3s$	$g^3P - ^3P^o$?	0-1	C9, K8
Fe XIX	15.413	20		$2p^4 - 2p^3(^3D^o)3s$	$^1D - ^3P^o$?	2-1	C9, K8
Fe XIX	15.453	90		$2p^4 - 2p^33s$	$^1S - ^1P^o$?	0-1	C9, K8
Fe XIX	15.598	10		$2p^4 - 2p^3(^3P^o)3s$	$^1S - ^3P^o$?	0-1	C9, K8
Fe XIX	90.0			$2s^22p^4 - 2s2p^5$	$^1D - ^1P^o$	2-1	F5	
Fe XIX	101.5			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	2-1	F5	
Fe XIX	106.3			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	1-0	F5	
Fe XIX	108.4			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	2-2	F5	
Fe XIX	109.9			$2s^22p^4 - 2s2p^5$	$g^3P - ^3P^o$	0-1	F5	

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XIX	116.5			$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 1	F5
Fe XIX	119.8			$2s^2 2p^4 - 2s 2p^5$	$g^3P - ^3P^o$	1 - 2	F.

IRON XX (Fe^{19+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential [12 704 000] cm^{-1} ; [1575] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XX?	10.571	10					S31
Fe XX	12.741	10		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^3P$? $\frac{3}{2} - \frac{3}{2}$	C9, K8
Fe XX?	12.756	10					S31
Fe XX	12.834	30		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$? $\frac{3}{2} - \frac{5}{2}$	S31, K8
Fe XX	12.924	10		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	C9, K8
Fe XX	12.980	10		$2p^3 - 2p^2(^3P)3d$	$g^4S^o - ^4P$? $\frac{3}{2} - \frac{1}{2}$	C9, K8
Fe XX	13.012	20		$2p^3 - 2p^2(^3P)3d$	$^2D^o - ^2P$? $\frac{3}{2} - \frac{3}{2}$	C9, K8
Fe XX	13.141	20		$2p^3 - 2p^2(^3P)3d$	$^2P^o - ^2P$? $\frac{3}{2} - \frac{3}{2}$	C9, K8
Fe XX	13.183	20		$2p^3 - 2p^2(^3P)3d$	$^2D^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	S31, K8
Fe XX	13.351	30		$2p^3 - 2p^2(^3P)3d$	$^2P^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	C9, K8
Fe XX	13.374	30		$2p^3 - 2p^2(^3P)3d$	$^2P^o - ^4P$? $\frac{1}{2} - \frac{1}{2}$	C9, K8
Fe XX	13.667	30		$2p^3 - 2p^2(^3P)3s$	$g^4S^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	C9, K8
Fe XX	13.720	10		$2p^3 - 2p^2(^3P)3s$	$g^4S^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	C9, K8
Fe XX	13.953	30		$2p^3 - 2p^2(^3P)3s$	$^2D^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	C9, K8
Fe XX	83.3			$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F5
Fe XX	93.8			$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F5
Fe XX	110.5			$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F5
Fe XX	112.25 ?			$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K8
Fe XX	112.99 ?			$2s^2 2p^3 - 2s 2p^4$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8
Fe XX	113.5			$2s^2 2p^3 - 2s 2p^4$	$^2D^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F5
Fe XX	137.70 ?			$2s^2 2p^3 - 2s 2p^4$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	K8

IRON XXI (Fe^{20+}), $Z = 26$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential [13 591 000] cm^{-1} ; [1685] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XXI	12.145	10		$2p^2 - 2p 3d$	$g^3P - ^1P^o$? 0 - 1	C9, K8
Fe XXI	12.233	0		$2p^2 - 2p 3d$	$g^3P - ^1P^o$? 1 - 1	C9, K8
Fe XXI	12.362 ?			$2p^2 - 2p 3d$	$^1D - ^1P^o$	2 - 1	K8
Fe XXI	12.411	20		$2p^2 - 2p 3d$	$g^3P - ^3P^o$? 0 - 1	C9, K8
Fe XXI	12.427	10		$2p^2 - 2p 3d$	$^1D - ^1P^o$? 2 - 3	C9, K8

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Fe XXI

Fe XXII

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XXI	12.438	10					
Fe XXI	12.494	10		$2p^2 - 2p3d$	$g^3P - ^3P^o$? 1-2	C9,K8
Fe XXI	12.521	20		$2p^2 - 2p3d$	$^1S - ^1P^o$? 0-1	C9,K8
Fe XXI	12.548	20		$2p^2 - 2p3d$	$g^3P - ^3D^o$? 2-3	C9,K8
Fe XXI?	12.585	20		$2p^2 - 2p3d$	$g^3P - ^1D^o$? 1-2	C9,K8 S31
Fe XXI	12.599	20		$2p^2 - 2p3d$	$g^3P - ^3D^o$? 1-2	C9,K8
Fe XXI	12.726	10		$2p^2 - 2p3d$	$^1D - ^3D^o$? 2-2	C9,K8
Fe XXI	12.808	30		$2p^2 - 2p3d$	$^1S - ^3P^o$? 0-1	C9,K8
Fe XXI	13.052	20		$2p^2 - 2p3s$	$g^3P - ^1P^o$? 1-1	S31
Fe XXI	13.084	20		$2p^2 - 2p3s$	$g^3P - ^3P^o$? 0-1	C9,K8
Fe XXI	13.158	20		$2p^2 - 2p3s$	$g^3P - ^3P^o$? 1-2	C9,K8
Fe XXI	13.249	20		$2p^2 - 2p3s$	$g^3P - ^3P^o$? 2-2	S31,K8
Fe XXI	13.265	10		$2p^2 - 2p3s$	$^1D - ^1P^o$? 2-1	C9,K8
Fe XXI	13.296	10		$2p^2 - 2p3s$	$g^3P - ^3P^o$? 2-1	C9,K8
Fe XXI	13.422	20		$2p^2 - 2p3s$	$^1S - ^1P^o$? 0-1	C9,K8
Fe XXI	13.518	60		$2p^2 - 2p3s$	$^1S - ^3P^o$? 0-1	C9,K8
Fe XXI	110.28	?		$2s^22p^2 - 2s2p^3$	$^1D - ^1P^o$? 2-1	K8
Fe XXI	120.15	?		$2s^22p^2 - 2s2p^3$	$g^3P - ^3S^o$? 2-1	K8
Fe XXI	123.22	?		$2s^22p^2 - 2s2p^3$	$^1S - ^1P^o$? 0-1	K8
Fe XXI	124.77	?		$2s^22p^2 - 2s2p^3$	$^1D - ^1D^o$? 2-2	K8
Fe XXI	147.20	?		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$? 1-2	K8
Fe XXI	158.52	?		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$? 2-2	K8
Fe XXI	161.61	?		$2s^22p^2 - 2s2p^3$	$g^3P - ^3P^o$? 2-1	F8
Fe XXI	194.38	?		$2s^22p^2 - 2s2p^3$	$g^3P - ^3D^o$? 2-3	K8

IRON XXII (Fe²¹⁺), Z = 26Ground State $1s^22s^22p^2P_{1/2}^o$ (5 electrons)Ionization Potential [14 470 000] cm⁻¹; [1794] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XXII	9.126			$2p - 4s$	$g^2P^o - ^2S$? $\frac{1}{2} - \frac{1}{2}$	S31,K8
Fe XXII	9.229	0		$2p - 4s$	$g^2P^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	S31,K8
Fe XXII	9.568	0		$2s2p^2 - 2s^24p$	$^2D - ^2P^o$? $\frac{5}{2} - \frac{3}{2}$	S31,K8
Fe XXII	9.646	0		$2s2p^2 - 2s^24p$	$^2S - ^2P^o$? $\frac{1}{2} - \frac{1}{2}$	S31,K8
Fe XXII	9.703	10		$2s2p^2 - 2s^24p$	$^2S - ^2P^o$? $\frac{1}{2} - \frac{3}{2}$	S31,K8
Fe XXII	9.793	10		$2s2p^2 - 2s^24p$	$^2P - ^2P^o$? $\frac{3}{2} - \frac{3}{2}$	S31,K8
Fe XXII	9.841	10		$2s2p^2 - 2s^24p$	$^2P - ^2P^o$? $\frac{3}{2} - \frac{1}{2}$	S31,K8
Fe XXII	10.053	10		$2p^3 - 2s^24s$	$^4S^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	S31,K8
Fe XXII	10.10	20		$2p^3 - 2s^24s$	$^2D^o - ^2D$? $\frac{5}{2} - \frac{3}{2}$	C9,K8
Fe XXII	10.127	30		$2p^3 - 2s^24d$	$^2D^o - ^2D$? $\frac{5}{2} - \frac{5}{2}$	C8,K8
Fe XXII	10.230	10		$2p^3 - 2s^24d$	$^2P^o - ^2D$? $\frac{1}{2} - \frac{3}{2}$	S31,K8
Fe XXII	10.344	10		$2p^3 - 2s^24d$	$^2P^o - ^2D$? $\frac{3}{2} - \frac{5}{2}$	S31,K8
Fe XXII	10.443	10		$2p^3 - 2s^24s$	$^2P^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	S31,K8
Fe XXII	11.742	10		$2p - 3d$	$g^2P^o - ^2D$? $\frac{1}{2} - \frac{3}{2}$	C9,K8
Fe XXII	11.865	20		$2p - 3d$	$g^2P^o - ^2D$? $\frac{3}{2} - \frac{5}{2}$	C9,K8
Fe XXII	11.956	10		$2p - 3d$	$g^2P^o - ^2D$? $\frac{3}{2} - \frac{3}{2}$	C9,K8
Fe XXII	12.385	0		$2p - 3s$	$g^2P^o - ^2S$? $\frac{1}{2} - \frac{1}{2}$	C9,K8
Fe XXII?	12.401	20		$2p - 3s$	$g^2P^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	C9,K8
Fe XXII	12.573	20		$2p - 3s$	$g^2P^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	C9,K8
Fe XXII	13.196	10		$2s2p^2 - 2s^23p$	$^2S - ^2P^o$? $\frac{1}{2} - \frac{3}{2}$	C9,K8
Fe XXII	13.416	20		$2s2p^2 - 2s^23p$	$^2P - ^2P^o$? $\frac{3}{2} - \frac{3}{2}$	S31,K8
Fe XXII	13.442	10		$2s2p^2 - 2s^23p$	$^2P - ^2P^o$? $\frac{3}{2} - \frac{1}{2}$	C9,K8
Fe XXII	13.711	10		$2p^3 - 2s^23d$	$^2D^o - ^2D$? $\frac{5}{2} - \frac{5}{2}$	S31,K8
Fe XXII	13.750	0		$2p^3 - 2s^23d$	$^2D^o - ^2D$? $\frac{5}{2} - \frac{3}{2}$	S31,K8
Fe XXII	13.770	0		$2p^3 - 2s^23d$	$^2D^o - ^2D$? $\frac{3}{2} - \frac{3}{2}$	S31,K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XXII	13.780	0		$2p^2 - 2s^2 3d$	$^2D^{\circ} - ^2D$? $\frac{3}{2} - \frac{3}{2}$	S31, K8
Fe XXII	14.053	0		$2p^3 - 2s^2 3d$	$^2P^{\circ} - ^2D$? $\frac{1}{2} - \frac{3}{2}$	S31, K8
Fe XXII	14.160	20		$2p^2 - 2s^2 3d$	$^2P^{\circ} - ^2D$? $\frac{3}{2} - \frac{3}{2}$	S31, K8
Fe XXII	14.711	0		$2p^3 - 2s^2 3s$	$^2P^{\circ} - ^2S$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Fe XXII	14.857	0		$2p^3 - 2s^2 3s$	$^2P^{\circ} - ^2S$? $\frac{3}{2} - \frac{1}{2}$	S31, K8
Fe XXII	125.47 ?			$2s^2 2p - 2s 2p^2$	$g^2F^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K8
Fe XXII	147.14 ?			$2s^2 2p - 2s 2p^2$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8

IRON XXIII (Fe^{22+}), $Z = 26$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential [15 648 00] cm^{-1} ; [1940] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XXIII	7.52 ?			$2s^2 - 2s 5p$	$g^1S - ^3P^{\circ}$	0 - 1	K8
Fe XXIII	8.307			$2s^2 - 2s 4p$	$g^1S - ^1P^{\circ}$	0 - 1	D7
Fe XXIII	8.38 ?			$2s^2 - 2s 4p$	$g^1S - ^3P^{\circ}$	0 - 1	K8
Fe XXIII	10.685			$2s^2 - 2p 3s$	$g^1S - ^1P^{\circ}$? 0 - 1	C8, K8
Fe XXIII	11.164	10		$2s^2 - 2s 3p$	$g^1S - ^3P^{\circ}$? 0 - 1	C9, K8
Fe XXIII	148.85 ?			$2s^2 - 2s 2p$	$g^1S - ^1P^{\circ}$	0 - 1	K8
Fe XXIII	284.41 ?			$2s^2 - 2s 2p$	$g^1S - ^3P^{\circ}$	0 - 1	K8

IRON XXIV (Fe^{23+}), $Z = 26$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [16 494 000] cm^{-1} ; [2045] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XXIV	1.362			$1s^2 2s - 1s 2s 2p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	D6
Fe XXIV	1.874			$1s^2 2s - 1s 2s 2p$	$g^2S - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	D6
Fe XXIV	7.233			$2s - 5p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	D6, M6
Fe XXIV	7.990			$2s - 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	D7
Fe XXIV	8.233			$2p - 4d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	D7
Fe XXIV	8.290			$2p - 4s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	D7
Fe XXIV	8.317			$2p - 4d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	D7
Fe XXIV	8.378			$2p - 4s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	D7
Fe XXIV	10.658	10		$2s - 3p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	C9, F25
Fe XXIV	11.026	40		$2p - 3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	C9, F25
Fe XXIV	11.129	40		$2p - 3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{1}{2}$	C9, F25
Fe XXIV	11.250	60		$2p - 3s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	C9, F25
Fe XXIV	11.419	30		$2p - 3s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	C9, F25
Fe XXIV	184.63 P			$2s - 2p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	K8
Fe XXIV	245.00 P			$2s - 2p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	K8

IRON XXV (Fe^{24+}), $Z = 26$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential [71 204 000] cm^{-1} ; [8828] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XXV	1.456			$1s^2 - 1s5p$	$g^1S - ^1P^o$	0 - 1	D6
Fe XXV	1.509			$1s^2 - 1s4p$	$g^1S - ^1P^o$	0 - 1	D6
Fe XXV	1.59			$1s^2 - 1s3p$	$g^1S - ^1P^o$	0 - 1	C11
Fe XXV	1.852			$1s^2 - 1s2p$	$g^1S - ^1P^o$	0 - 1	D6
Fe XXV	1.857			$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	D6
Fe XXV	1.867	:		$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	D6

IRON XXVI (Fe^{25+}), $Z = 26$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential [74 827 600] cm^{-1} ; [9277.2] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Fe XXVI	1.79			$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	C11

Co

Co

COBALT, Z = 27

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co	8.414	10					S31
Co	8.518	10					S31
Co	8.715	20					S31
Co	8.795	20					S31
Co	8.880	20					S31
Co	8.966	20					S31
Co	9.028	20					S31
Co	9.087	20					S31
Co	9.139	40					S31
Co	9.245	20					S31
Co	9.475	20					S31
Co	9.900	20					S31
Co	10.198	40					S31
Co	10.624	30					S31
Co	10.674	40					S31
Co	10.840	30					S31
Co	10.866	30					S31
Co	11.237	50					S31
Co	11.257	50					S31
Co	11.357	50					S31
Co	11.425	50					S31
Co	11.542	20					S31
Co	11.581	20					S31
Co	11.719	20					S31
Co	11.851	20					S31
Co	12.190	30					S31
Co	12.47	30					S31
Co	12.54	30					S31
Co	13.822	40					S31
Co	13.921	30					S31
Co	13.997	0					S31
Co	14.040	50					S31
Co	14.824	10					S31
Co	151.91	600					F11
Co	152.50	600					F11
Co	152.66	200					F11
Co	152.96	700					F11
Co	153.89	800					F11
Co	155.27	400					F11
Co	156.59	400					F11
Co	158.80	900					F11
Co	161.46	300					F11
Co	161.70	200					F11
Co	161.88	800					F11
Co	162.07	700					F11
Co	162.32	400					F11
Co	163.85	500					F11
Co	166.71	400					F11
Co	174.67	300					F11
Co	174.71	300					F11
Co	179.08	500					F11
Co	179.16	500					F11
Co	412.59	100					G9
Co	414.52	50					G9
Co	415.94	10					G9

COBALT I (Co⁰⁺), Z = 27
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁷4s² 4F_{9/2} (27 electrons)
 Ionization Potential 63 430 cm⁻¹; 7.86 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co I	1814.20	120	47	3d ⁷ 4s ² -	ga ⁴ F - 28°	3/2 - 7/2	R25
Co I	1820.42	120	46	3d ⁷ 4s ² -	ga ⁴ F - 26°	3/2 - 7/2	R25
Co I	1825.17	10		3d ⁷ 4s ² -	ga ⁴ F - v ⁴ F°	? 3/2 - 3/2	R25
Co I	1828.35	120	51	3d ⁷ 4s ² -	ga ⁴ F - 34°	3/2 - 3/2	R25
Co I	1832.47	150	48	3d ⁷ 4s ² -	ga ⁴ F - 29°	3/2 - 3/2	R25
Co I	1834.34	100	50	3d ⁷ 4s ² -	ga ⁴ F - 33°	3/2 - 3/2	R25
Co I	1834.99	100	45	3d ⁷ 4s ² -	ga ⁴ F - v ⁴ F°	3/2 - 7/2	R25
Co I	1837.82	80		3d ⁷ 4s ² -	ga ⁴ F - 32°	3/2 - 3/2	R25
Co I	1838.23	150	44	3d ⁷ 4s ² -	ga ⁴ F - 24°	3/2 - 7/2	R25
Co I	1840.55	100	49	3d ⁷ 4s ² -	ga ⁴ F - 31°	3/2 - 3/2	R25
Co I	1840.79	100					
Co I	1841.47	100	47	3d ⁷ 4s ² -	ga ⁴ F - 28°	3/2 - 7/2	R25
Co I	1841.88	30		3d ⁷ 4s ² -	ga ⁴ F - 34°	3/2 - 3/2	R25
Co I	1842.34	256	45	3d ⁷ 4s ² -	ga ⁴ F - v ⁴ F°	? 3/2 - 3/2	R25
Co I	1843.45	80		3d ⁷ 4s ² -	ga ⁴ F - 27°	3/2 - 3/2	R25
Co I	1846.94	40					
Co I	1847.89	300	46	3d ⁷ 4s ² -	ga ⁴ F - 26°	3/2 - 7/2	R25
Co I	1851.49	80		3d ⁷ 4s ² -	ga ⁴ F - 32°	? 3/2 - 3/2	R25, K8
Co I	1852.52	150	48	3d ⁷ 4s ² -	ga ⁴ F - 29°	3/2 - 3/2	R25
Co I	1852.71	300	45	3d ⁷ 4s ² -	ga ⁴ F - v ⁴ F°	3/2 - 3/2	R25
Co I	1854.28	80	49	3d ⁷ 4s ² -	ga ⁴ F - 31°	3/2 - 3/2	R25
Co I	1855.05	400	45	3d ⁷ 4s ² -	ga ⁴ F - v ⁴ F°	3/2 - 7/2	R25
Co I	1856.13	150	45	3d ⁷ 4s ² -	ga ⁴ F - v ⁴ F°	3/2 - 3/2	R25
Co I	1858.26	30	45	3d ⁷ 4s ² -	ga ⁴ F - v ⁴ F°	3/2 - 3/2	R25
Co I	1864.92	40					
Co I	1866.27	60		3d ⁷ 4s ² -	ga ⁴ F - 24°	3/2 - 7/2	R25
Co I	1866.45	30		3d ⁷ 4s ² -	ga ⁴ F - 29°	3/2 - 3/2	R25
Co I	1869.16	50					
Co I	1870.45	50		3d ⁷ 4s ² -	ga ⁴ F - 22°	3/2 - 7/2	R25, K8
Co I	1876.01	100					
Co I	1876.48	70					
Co I	1876.88	80					
Co I	1877.40	150					
Co I	1878.28	250					
Co I	1880.34	40					
Co I	1880.82	150					
Co I	1884.45	100	42	3d ⁷ 4s ² -	ga ⁴ F - 21°	3/2 - 3/2	R25
Co I	1884.56	100					
Co I	1887.89	120					
Co I	1889.60	60					
Co I	1889.87	100					
Co I	1893.43	30					
Co I	1894.07	30					
Co I	1897.48	100					
Co I	1897.73	80					
Co I	1901.75	200					
Co I	1902.15	100					
Co I	1904.75	50					
Co I	1905.41	60					
Co I	1905.87	200					
Co I	1906.72	50					
Co I	1924.46	100					
Co I	1925.05	120	122	3d ⁸ (a ² F)4s -	a ² F - 3/2°	3/2 - 7/2	R25
Co I	1926.30	100	39	3d ⁷ 4s ² -	ga ⁴ F - t ³ F°	3/2 - 7/2	R25
Co I	1929.34	150	35	3d ⁸ (a ² F)4s -	b ⁴ F - v ⁴ F°	3/2 - 7/2	R25
Co I	1930.90	60		3d ⁷ 4s ² -	ga ⁴ F - u ² D°	3/2 - 3/2	R25
Co I	1931.00	100					
Co I	1931.89	60					
Co I	1933.03	30					
Co I	1934.34	120	43	3d ⁷ 4s ² -	ga ⁴ F - s ² F°	3/2 - 7/2	R25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co I	1935.46	0		$3d^7 4s^3 -$	$ga^4F - u^3D^0$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1936.58	300	98	$3d^8 (a^2F) 4s -$	$b^4F - 28^\circ$? $\frac{3}{2} - \frac{3}{2}$	R25
Co I	1938.94	100					R25
Co I	1939.75	30					R25
Co I	1940.16	150	95	$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$? $\frac{7}{2} - \frac{5}{2}$	R25
Co I	1943.64	120	97	$3d^8 (a^2F) 4s -$	$b^4F - 26^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1945.09	120	104	$3d^8 (a^2F) 4s -$	$b^4F - 34^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1945.86	0		$3d^8 (a^2F) 4s -$	$b^4F - 25^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1946.79	250	100	$3d^8 (a^2F) 4s -$	$b^4F - 29^\circ$	$\frac{7}{2} - \frac{5}{2}$	R25
Co I	1947.58	50					R25
Co I	1948.09	100					R25
Co I	1949.00	150	95	$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1951.44	120	99	$3d^8 (a^2F) 4s -$	$b^4F - 29^\circ$	$\frac{7}{2} - \frac{5}{2}$	R25
Co I	1951.90	250	103	$3d^8 (a^2F) 4s -$	$b^4F - 33^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1953.71	80	38	$3d^7 4s^2 -$	$ga^4F - 15^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1954.22	300	95	$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$	$\frac{7}{2} - \frac{7}{2}$	R25
Co I	1955.17	300	105	$3d^8 (a^2F) 4s -$	$b^4F - 35^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1956.22	150	41	$3d^7 4s^2 -$	$ga^4F - 20^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1957.69	120	39	$3d^7 4s^2 -$	$ga^4F - t^3F^0$	$\frac{7}{2} - \frac{7}{2}$	R25
Co I	1958.10	80		$3d^7 4s^2 -$	$ga^4F - 18^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1958.55	250					R25
Co I	1958.94	150	101	$3d^8 (a^2F) 4s -$	$b^4F - 31^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1961.00	150	95	$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1961.26	80	39	$3d^7 4s^2 -$	$ga^4F - t^3F^0$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1961.59	250		$3d^8 (a^2F) 4s -$	$b^4F - 28^\circ$? $\frac{7}{2} - \frac{7}{2}$	R25, K8
Co I	1963.38	120	95	$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1963.55	200	122	$3d^8 (a^2F) 4s -$	$a^2F - 37^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1963.92	80		$3d^8 (a^2F) 4s -$	$b^4F - 27^\circ$	$\frac{7}{2} - \frac{5}{2}$	R25
Co I	1964.03	200	94	$3d^8 (a^2F) 4s -$	$b^4F - 24^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1966.68	90	103	$3d^8 (a^2F) 4s -$	$b^4F - 33^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1967.78	100	100	$3d^8 (a^2F) 4s -$	$b^4F - 29^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1968.69	250					R25
Co I	1968.93	250	97	$3d^8 (a^2F) 4s -$	$b^4F - 26^\circ$	$\frac{7}{2} - \frac{7}{2}$	R25
Co I	1969.68	30					R25
Co I	1970.71	500	102	$3d^8 (a^2F) 4s -$	$b^4F - 32^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1970.77	P	37	$3d^7 4s^3 - 3d^7 4s(3D) 4p$	$ga^4F - s^4D^0$	$\frac{3}{2} - \frac{7}{2}$	M23
Co I	1971.16	300	96	$3d^8 (a^2F) 4s -$	$b^4F - 25^\circ$	$\frac{7}{2} - \frac{3}{2}$	R25
Co I	1971.75	150	41	$3d^7 4s^2 -$	$ga^4F - 20^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1972.52	300	99	$3d^8 (a^2F) 4s -$	$b^4F - 29^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1972.82	0		$3d^7 4s^3 -$	$ga^4F - 19^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1973.62	50					R25
Co I	1973.85	250	101	$3d^8 (a^2F) 4s -$	$b^4F - 31^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1974.39	150	95	$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$	$\frac{7}{2} - \frac{3}{2}$	R25
Co I	1975.36	60		$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$	$\frac{3}{2} - \frac{7}{2}$	R25
Co I	1975.67	200					R25
Co I	1975.94	60		$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1976.97	300	40	$3d^7 4s^2 -$	$ga^4F - 17^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1978.36	100	95	$3d^8 (a^2F) 4s -$	$b^4F - v^4F^0$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1978.53	120					R25
Co I	1980.59	150	39	$3d^7 4s^3 -$	$ga^4F - t^3F^0$	$\frac{3}{2} - \frac{7}{2}$	R25
Co I	1980.89	400					R25
Co I	1981.97	200	37	$3d^7 4s^2 - 3d^7 4s(3D) 4p$	$ga^4F - s^4D^0$	$\frac{3}{2} - \frac{1}{2}$	R25
Co I	1982.52	200	37	$3d^7 4s^2 - 3d^7 4s(3D) 4p$	$ga^4F - s^4D^0$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1982.81	80	100	$3d^8 (a^2F) 4s -$	$b^4F - 29^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1985.25	100		$3d^8 (a^2F) 4s -$	$b^4F - 27^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1985.36	100	38	$3d^7 4s^2 -$	$ga^4F - 15^\circ$	$\frac{7}{2} - \frac{7}{2}$	R25
Co I	1985.88	40					R25
Co I	1986.31	60		$3d^7 4s^2 - 3d^7 4s(3D) 4p$	$ga^4F - w^4P^0$	$\frac{7}{2} - \frac{3}{2}$	R25
Co I	1987.03	150					R25
Co I	1987.15	120	37	$3d^7 4s^3 - 3d^7 4s(3D) 4p$	$ga^4F - s^4D^0$	$\frac{7}{2} - \frac{3}{2}$	R25, M23
Co I	1987.24	100					R25
Co I	1987.65	200	99	$3d^8 (a^2F) 4s -$	$b^4F - 29^\circ$	$\frac{3}{2} - \frac{3}{2}$	R25
Co I	1989.28	100					R25
Co I	1989.80	250	94	$3d^8 (a^2F) 4s -$	$b^4F - 24^\circ$	$\frac{7}{2} - \frac{7}{2}$	R25
Co I	1990.34	300	97	$3d^8 (a^2F) 4s -$	$b^4F - 26^\circ$	$\frac{3}{2} - \frac{7}{2}$	R25

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co I	1991.80	30		$3d^7 4s^2 - 3d^7 4s(3D)4p$	$ga^4F - w^4P^o$	$\frac{7}{2} - \frac{7}{2}$	R25
Co I	1992.79	200		$3d^7 4s^2$	$ga^4F - 17^o$	$\frac{7}{2} - \frac{7}{2}$	R25, K8
Co I	1993.25	100					R25
Co I	1994.98	150					R25
Co I	1998.49	250	37	$3d^7 4s^2 - 3d^7 4s(3D)4p$	$ga^4F - s^4D^o$	$\frac{7}{2} - \frac{7}{2}$	R25

COBALT II (Co²⁺), Z = 27
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 \ ^3F_4$ (26 electrons)
Ionization Potential $137\,572\text{ cm}^{-1}$; 17.06 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co II	1271.940	20		$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - y^4P^o$	5 - 5	V4
Co II	1275.914	0		$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - y^4F^o$	4 - 4	V4
Co II	1295.853	30					V4
Co II	1299.551	30	12	$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - x^4D^o$	5 - 4	V4
Co II	1302.378	20					V4
Co II	1306.935	50	12	$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - x^4D^o$	4 - 3	V4
Co II	1306.969	10					V4
Co II	1311.124	10d	12	$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - x^4D^o$	4 - 4	V4
Co II	1311.864	10	12	$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - x^4D^o$	3 - 2	V4
Co II	1315.393	0	12	$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - x^4D^o$	2 - 1	V4
Co II	1316.086	0	12	$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - x^4D^o$	3 - 3	V4
Co II	1318.589	0	12	$3d^7(a^4F)4s - 3d^6 4s(a^4D)4p$	$a^4F - x^4D^o$	2 - 2	V4
Co II	1429.002	20					V4
Co II	1438.710	10					V4
Co II	1445.572	0					V4
Co II	1448.037	70		$3d^6 - 3d^7(a^4D)4p$	$ga^3F - w^3D^o$	4 - 3	V4
Co II	1454.962	50					V4
Co II	1455.884	70					V4
Co II	1466.209	100		$3d^6 - 3d^7(a^4H)4p$	$ga^3F - x^3G^o$	4 - 5	V4
Co II	1468.235	20		$3d^6 - 3d^7(a^4D)4p$	$ga^3F - w^3D^o$	3 - 3	V4
Co II	1468.383	20	25	$3d^7(a^4P)4s - 3d^6 4s(a^4D)4p$	$a^4P - y^4P^o$	2 - 1	V4
Co II	1469.727	20					V4
Co II	1471.879	20	25	$3d^7(a^4P)4s - 3d^6 4s(a^4D)4p$	$a^4P - y^4P^o$	3 - 2	V4
Co II	1472.898	100		$3d^6 - 3d^7(a^4H)4p$	$ga^3F - x^3G^o$	5 - 4	V4
Co II	1475.018	20	25	$3d^7(a^4P)4s - 3d^6 4s(a^4D)4p$	$a^4P - y^4P^o$	1 - 1	M23
Co II	1475.807	70					V4
Co II	1476.661	50					V4
Co II	1480.953	50		$3d^6 - 3d^7(a^4D)4p$	$a^4P - x^4D^o$? 2 - 2	V4, K8
Co II	1484.259	20	25	$3d^7(a^4P)4s - 3d^6 4s(a^4D)4p$	$a^4P - y^4P^o$	1 - 2	V4
Co II	1486.492	70	25	$3d^7(a^4P)4s - 3d^6 4s(a^4D)4p$	$a^4P - y^4P^o$	3 - 3	V4
Co II	1489.659	10					V4
Co II	1491.701	10					V4
Co II	1492.263	20	25	$3d^7(a^4P)4s - 3d^6 4s(a^4D)4p$	$a^4P - y^4P^o$	2 - 3	V4
Co II	1494.124	0					V4
Co II	1497.675	10					V4
Co II	1500.897	20					V4
Co II	1509.240	60					V4
Co II	1509.954	30		$3d^6 - 3d^7(a^4P)4p$	$ga^3F - x^3D^o$	2 - 1	V4
Co II	1519.412	10d					V4
Co II	1525.793	10					V4
Co II	1534.834	10		$3d^6 - 3d^7(a^4G)4p$	$ga^3F - y^3G^o$	4 - 4	V4
Co II	1547.965	50					V4
Co II	1552.756	70		$3d^6 - 3d^7(a^4G)4p$	$ga^3F - z^3G^o$	4 - 4	V4
Co II	1553.762	20		$3d^6 - 3d^7(a^4G)4p$	$ga^3F - y^3F^o$	4 - 4	V4
Co II	1557.039	50					V4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co II	1557.566	60		$3d^6 - 3d^7(a^2G)4p$	$ga^2F - y^2G^o$	3 - 4	V4
Co II	1560.874	20		$3d^6 - 3d^7(a^2G)4p$	$ga^2F - y^2F^o$	3 - 2	V4
Co II	1567.592	50		$3d^6 - 3d^7(a^2G)4p$	$ga^2F - z^2H^o$	4 - 4	V4
Co II	1572.674	80	6	$3d^6 - 3d^7(a^2P)4p$	$ga^2F - y^2D^o$	4 - 3	V4
Co II	1572.915	30					V4
Co II	1574.568	100		$3d^6 - 3d^7(a^2G)4p$	$ga^2F - y^2F^o$	4 - 4	V4
Co II	1576.813	100		$3d^6 - 3d^7(a^2G)4p$	$ga^2F - y^2F^o$	2 - 2	V4
Co II	1577.058	100		$3d^6 - 3d^7(a^2G)4p$	$ga^2F - y^2F^o$	3 - 3	V4
Co II	1589.674	10					V4
Co II	1590.558	30		$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^2F - x^2D^o$? 2 - 1	V4, K8
Co II	1593.323	20		$3d^6 - 3d^7(a^2G)4p$	$ga^2F - y^2F^o$	2 - 3	V4
Co II	1595.784	50	6	$3d^6 - 3d^7(a^2P)4p$	$ga^2F - y^2D^o$	3 - 2	V4
Co II	1596.521	10		$3d^6 - 3d^7(a^2P)4p$	$ga^2F - y^2D^o$	3 - 3	V4
Co II	1598.494	30		$3d^6 - 3d^7(a^2G)4p$	$ga^2F - y^2F^o$	3 - 4	V4
Co II	1599.314	30	24	$3d^7(a^2P)4s - 3d^6 4s(a^2F)4p$	$a^2P - x^2D^o$	3 - 4	V4
Co II	1599.716	10	24	$3d^7(a^2P)4s - 3d^6 4s(a^2D)4p$	$a^2P - x^2D^o$	2 - 3	V4
Co II	1601.282	5	24	$3d^7(a^2P)4s - 3d^6 4s(a^2D)4p$	$a^2P - x^2D^o$	1 - 2	M23
Co I'	1605.987	30	6	$3d^6 - 3d^7(a^2P)4p$	$ga^2F - y^2D^o$	2 - 1	V4
Co II	1622.661	0					V4
Co II	1627.506	10		$3d^7(a^2P)4s - 3d^6 4s(a^2D)4p$	$b^2P - y^2P^o$	1 - 2	V4
Co II	1632.347	10					V4
Co II	1633.370	0					V4
Co II	1637.302	10					V4
Co II	1638.815	20					V4
Co II	1639.276	40					V4
Co II	1640.127	20		$3d^7(a^2P)4s - 3d^6 4s(a^2D)4p$	$b^2P - y^2P^o$? - 3	V4
Co II	1642.485	30					V4
Co II	1647.758	20					V4
Co II	1649.303	100					V4
Co II	1655.089	20					V4
Co II	1656.669	30					V4
Co II	1656.948	60		$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^2F - z^2P^o$? 3 - 2	V4, K8
Co II	1657.028	80		$3d^7(a^2G)4s - 3d^6 4s(a^2D)4p$	$a^2G - y^2F^o$? 5 - 5	V4, K8
Co II	1657.400	20		$3d^7(a^2G)4s - 3d^6 4s(a^2D)4p$	$a^2G - y^2F^o$	4 - 4	V4
Co II	1657.933	30					V4
Co II	1658.145	40		$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^2F - y^2P^o$? 1 - 0	V4, K8
Co II	1658.377	20					V4
Co II	1659.062	30		$3d^7(a^2P)4s - 3d^6 4s(a^2D)4p$	$c^2P - y^2P^o$? 0 - 1	V4, K8
Co II	1661.281	50					V4
Co II	1664.824	10		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^2F - y^2F^o$	2 - 2	V4
Co II	1666.316	40					V4
Co II	1666.406	40					V4
Co II	1667.534	10h					V4
Co II	1668.655	60		$3d^7(a^2G)4s - 3d^6 4s(a^2D)4p$	$a^2G - y^2F^o$? 3 - 4	V4, K8
Co II	1669.915	20		$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^2F - x^2F^o$	4 - 3	V4
Co II	1673.199	10		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^2F - z^2H^o$? 4 - 4	V4, K8
Co II	1673.956	20					V4
Co II	1674.953	30					V4
Co II	1679.423	40					V4
Co II	1680.187	20					V4
Co II	1682.124	20					V4
Co II	1682.355	100					V4
Co II	1683.518	70					V4
Co II	1683.765	60		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^2F - z^2H^o$	5 - 6	V4
Co II	1685.882	20		$3d^7(a^4F)4s - 3d^7(a^2P)4p$	$a^2F - z^2P^o$	4 - 3	V4
Co II	1686.934	70		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^2F - z^2H^o$? 4 - 5	V4, K8
Co II	1687.069	60					V4
Co II	1687.868	10		$3d^7(a^4F)4s - 3d^7(a^2D)4p$	$b^2F - w^2D^o$	4 - 3	V4
Co II	1688.338	20		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$a^2F - z^2H^o$? 3 - 4	V4, K8
Co II	1691.339	30					V4
Co II	1693.786	20					V4
Co II	1693.846	20					V4
Co II	1706.088	20					V4
Co II	1706.823	80					V4
Co II	1706.937	20					V4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - ?	References
Co II	1707.602	80					V4
Co II	1707.822	50		$3d^7(a^4F)4s - 3d^8 4s(a^8D)4p$	$b^3P - y^3F^{\circ}$? 2-3	V4, K8
Co II	1711.127	10					V4
Co II	1715.114	0					V4
Co II	1720.182	0		$3d^7(a^4F)4s - 3d^7(a^2H)4p$	$b^3F - x^2G^{\circ}$? 3-4	V4, K8
Co II	1723.048	30		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^{\circ}$	5-4	V4
Co II	1725.258	20					V4
Co II	1727.823	20					V4
Co II	1732.807	0					V4
Co II	1734.156	40					V4
Co II	1738.870	60					V4
Co II	1740.598	0					V4
Co II	1743.021	0h					V4
Co II	1743.439	0		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^{\circ}$	4-4	V4
Co II	1746.215	10					V4
Co II	1747.897	40		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^{\circ}$	4-3	V4
Co II	1748.350	10		$3d^7(a^2G)4s - 3d^8 4s(a^8D)4p$	$b^1G - y^3F^{\circ}$? 4-4	V4, K8
Co II	1748.772	0					V4
Co II	1754.228	20					V4
Co II	1757.779	0					V4
Co II	1758.648	20					V4
Co II	1761.67	0					V4
Co II	1763.673	20		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^{\circ}$	3-2	V4
Co II	1764.289	0		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^{\circ}$	3-3	V4
Co II	1773.042	10		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^{\circ}$	2-1	V4
Co II	1775.878	0		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$a^3F - y^3D^{\circ}$	2-2	V4
Co II	1778.321	10					V4
Co II	1804.954	60					V4
Co II	1818.584	10					V4
Co II	1824.060	10					V4
Co II	1839.367	100		$3d^8 - 3d^7(a^2G)4p$	$a^1D - z^1F^{\circ}$	2-3	V4
Co II	1840.220	30					V4
Co II	1845.910	200					V4
Co II	1848.466	10					V4
Co II	1851.639	10		$3d^8 - 3d^7(a^4P)4p$	$a^1D - y^3F^{\circ}$	2-1	V4
Co II	1852.564	0		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - z^3H^{\circ}$	4-4	V4
Co II	1853.726	10					V4
Co II	1859.622	0		$3d^7(a^4F)4s - 3d^7(a^4P)4p$	$b^3F - y^3D^{\circ}$	4-3	V4
Co II	1860.214	40		$3d^8 - 3d^7(a^4P)4p$	$a^1D - y^3D^{\circ}$	2-2	V4
Co II	1862.313	250		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^{\circ}$	4-4	V4
Co II	1862.360	10		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^{\circ}$	2-2	V4
Co II	1863.86	40		$3d^7(a^4F)4s - 3d^7(a^2G)4p$	$b^3F - y^3F^{\circ}$	3-3	V4
Co II	1867.028	50					V4
Co II	1895.478	40		$3d^8 - 3d^7(a^2G)4p$	$a^3P - z^1F^{\circ}$	2-3	V4
Co II	1907.95	0					V4
Co II	1908.517	30		$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^{\circ}$	2-1	V4
Co II	1917.621	60		$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^{\circ}$	2-2	V4
Co II	1920.713	20		$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^{\circ}$	0-1	V4
Co II	1922.925	30		$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3P^{\circ}$	1-2	V4
Co II	1937.070	30		$3d^8 - 3d^7(a^2F)4p$	$a^3P - z^3P^{\circ}$	1-1	V4
Co II	1941.231	800	5	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^{\circ}$	4-3	V4
Co II	1944.181	20		$3d^8 - 3d^7(a^2P)4p$	$a^3P - z^3P^{\circ}$	0-1	V4
Co II	1950.097	500	5	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^{\circ}$	3-2	V4
Co II	1957.418	150	5	$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^{\circ}$	2-1	V4
Co II	1968.918	30		$3d^8 - 3d^7(a^4P)4p$	$a^1D - z^3S^{\circ}$	2-1	V4
Co II	1975.002	20		$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3D^{\circ}$	2-2	V4
Co II	1983.162	100h					V4
Co II	1983.947	20		$3d^8 - 3d^7(a^4P)4p$	$a^3P - z^3P^{\circ}$	2-1	V4
Co II	1984.827	10		$3d^8 - 3d^7(a^4F)4p$	$ga^3F - z^3F^{\circ}$	4-3	V4
Co II	1991.574	0		$3d^8 - 3d^7(a^4P)4p$	$a^3P - y^3D^{\circ}$	1-2	V4
Co II	1997.095	10		$3d^8 - 3d^7(a^4P)4p$	$a^3P - z^3P^{\circ}$	0-1	V4

COBALT III (Co²⁺), Z = 27
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁷ 4F_{9/2} (25 electrons)
 Ionization Potential 270 200 cm⁻¹; 33.50 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	649.342	1		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - v ⁴ P°	½ - ½	S8
Co III	682.084	5		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - v ⁴ P°	½ - ½	S8
Co III	683.140	3		3d ⁷ - 3d ⁶ (³ P)4p	a ⁴ P - w ⁴ P°	½ - ½	S8
Co III	708.767	15		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - w ⁴ P°	½ - ½	S8
Co III	709.912	10		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - w ⁴ P°	½ - ½	S8
Co III	709.996	15		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - w ⁴ P°	½ - ½	S8
Co III	710.592	0		3d ⁷ - 3d ⁶ (¹ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	711.002	0		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - y ⁴ S°	½ - ½	S8
Co III	711.741	5		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - y ⁴ S°	½ - ½	S8
Co III	712.193	0		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - y ⁴ S°	½ - ½	S8
Co III	712.890	2		3d ⁷ - 3d ⁶ (b ² P)4p	a ⁴ P - y ⁴ S°	½ - ½	S8
Co III	714.836	0		3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - w ⁴ D°	½ - ½	S8, K8
Co III	715.125	0		3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - w ⁴ D°	½ - ½	S8
Co III	716.055	2		3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - w ⁴ D°	½ - ½	S8
Co III	717.490	1		3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - w ⁴ D°	½ - ½	S8
Co III	735.720	0					S8
Co III	738.066	2					S8
Co III	741.032	1					S8
Co III	745.762	0					S8
Co III	745.939	0					S8
Co III	748.019	1					S8
Co III	752.485	0					S8
Co III	752.759	3					S8
Co III	754.795	2h					S8
Co III	755.253	5					S8
Co III	755.512	0					S8
Co III	755.972	1		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	756.064	1		3d ⁷ - 3d ⁶ (³ F)4p	ga ⁴ F - y ⁴ D°	½ - ½	S8
Co III	756.338	5		3d ⁷ - 3d ⁶ (³ F)4p	ga ⁴ F - y ⁴ D°	½ - ½	S8
Co III	758.212	20	7	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	759.592	3		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	759.644	3		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	759.970	0		3d ⁷ - 3d ⁶ (³ H)4p	ga ⁴ F - z ⁴ H°	½ - ½	S8
Co III	760.211	1		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	760.825	30	7	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	761.202	1		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	762.038	1		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	762.529	3		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	762.694	0		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	762.775	50	6	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	763.013	0		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	763.131	25	7	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	764.229	0		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	764.363	2		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	764.418	2		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	764.866	10	6	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	764.959	20	7	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	765.104	3h		3d ⁷ - 3d ⁶ (³ H)4p	ga ⁴ F - z ⁴ H°	½ - ½	S8
Co III	765.561	3		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	SC
Co III	766.667	10h	6	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	767.703	20	6	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	767.770	15		3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ F°	½ - ½	S8
Co III	768.458	20	6	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - x ⁴ G°	½ - ½	S8
Co III	769.128	10	6	3d ⁷ - 3d ⁶ (³ G)4p	ga ⁴ F - y ⁴ G°	½ - ½	S8
Co III	769.459	3		3d ⁷ - 3d ⁶ (³ F)4p	ga ⁴ F - y ⁴ G°	½ - ½	S8
Co III	770.192	1		3d ⁷ - 3d ⁶ (¹ D)4p	a ² G - v ² F°	½ - ½	S8
Co III	770.723	2		3d ⁷ - 3d ⁶ (³ F)4p	ga ⁴ F - y ⁴ G°	½ - ½	S8
Co III	770.967	0		3d ⁷ - 3d ⁶ (³ F)4p	ga ⁴ F - y ⁴ G°	½ - ½	S8
Co III	771.638	10		3d ⁷ - 3d ⁶ (³ F)4p	ga ⁴ F - y ⁴ G°	½ - ½	S8
Co III	771.868	30	5	3d ⁷ - 3d ⁶ (³ F)4p	ga ⁴ F - y ⁴ G°	½ - ½	S8

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	773.125	1		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - z ² F ^o	½ - ½	S8
Co III	773.446	2		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - z ² F ^o	½ - ½	S8
Co III	775.592	10		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² G ^o	½ - ½	S8
Co III	776.688	20	5	3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² G ^o	½ - ½	S8
Co III	776.794	5		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - z ² F ^o	½ - ½	S8
Co III	779.436	3		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² G ^o	½ - ½	S8
Co III	779.683	20	5	3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² G ^o	½ - ½	S8
Co III	781.130	20		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - x ² D ^o	½ - ½	S8
Co III	781.250	3					S8
Co III	781.983	15	5	3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² G ^o	½ - ½	S8
Co III	783.179	10		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - x ² D ^o	½ - ½	S8
Co III	785.207	10		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - x ² D ^o	½ - ½	S8
Co III	785.426	1		3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	785.677	1					S8
Co III	785.883	15	4	3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - y ² D ^o	½ - ½	S8
Co III	786.958	8		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - x ² D ^o	½ - ½	S8
Co III	787.406	5		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² F ^o	½ - ½	S8
Co III	787.562	8	4	3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - y ² D ^o	½ - ½	S8
Co III	788.057	8		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² F ^o	½ - ½	S8
Co III	788.693	2					S8
Co III	789.447	30	4	3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - y ² D ^o	½ - ½	S8
Co III	789.662	2		3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - y ² D ^o	½ - ½	S8
Co III	790.197	50	4	3d ⁷ 3u - P)4p	g ⁴ F - y ² D ^o	½ - ½	S8
Co III	790.268	3					S8
Co III	790.688	25		3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	791.440	3					S8
Co III	792.661	5		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² F ^o	½ - ½	S8
Co III	792.833	5					S8
Co III	793.600	2		3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - z ² D ^o	½ - ½	S8
Co III	794.493	1		3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	795.475	5		3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - y ² D ^o	½ - ½	S8
Co III	797.166	2		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² F ^o	½ - ½	S8
Co III	797.312	2		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² F ^o	½ - ½	S8
Co III	799.034	0		3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - z ² D ^o	½ - ½	S8
Co III	799.237	2		3d ⁷ - 3d ⁶ (² F)4p	g ⁴ F - y ² F ^o	½ - ½	S8
Co III	799.361	0		3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - y ² D ^o	½ - ½	S8
Co III	799.919	10h		3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	800.445	2		3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - y ² P ^o	½ - ½	S8
Co III	801.493	30	3	3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	802.434	1h		3d ⁷ - 3d ⁶ (² D)4p	a ⁴ P - w ⁴ D ^o	½ - ½	S8
Co III	802.943	3		3d ⁷ - 3d ⁶ (² D)4p	a ⁴ P - w ⁴ D ^o	½ - ½	S8
Co III	803.942	5		3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	804.495	1h		3d ⁷ - 3d ⁶ (² D)4p	a ⁴ P - w ⁴ D ^o	½ - ½	S8
Co III	805.345	20	3	3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	805.379	3		3d ⁷ - 3d ⁶ (² P)4p	g ⁴ F - y ² P ^o	½ - ½	S8
Co III	806.562	3h		3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	807.156	1		3d ⁷ - 3d ⁶ (¹ D)4p	a ² D - x ² D ^o	½ - ½	S8, K8
Co III	807.910	15	3	3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	808.035	3		3d ⁷ - 3d ⁶ (¹ D)4p	a ² D - v - v ^o	½ - ½	S8
Co III	808.612	5	13	3d ⁷ - 3d ⁶ (¹ G)4p	a ² G - x ² F	½ - ½	S8
Co III	809.221	15		3d ⁷ - 3d ⁶ (² D)4p	a ⁴ P - x ⁴ P ^o	½ - ½	S8
Co III	809.609	10		3d ⁷ - 3d ⁶ (² D)4p	a ² G - w ⁴ F ^o	½ - ½	S8
Co III	809.706	15	3	3d ⁷ - 3d ⁶ (² H)4p	g ⁴ F - z ² G ^o	½ - ½	S8
Co III	809.844	2					S8
Co III	810.502	15	12	3d ⁷ - 3d ⁶ (¹ G)4p	a ² G - w ² G ^o	½ - ½	S8
Co III	810.716	10		3d ⁷ - 3d ⁶ (² D)4p	a ⁴ P - x ⁴ P ^o	½ - ½	S8
Co III	811.951	10		3d ⁷ - 3d ⁶ (² D)4p	a ⁴ P - x ⁴ P ^o	½ - ½	S8
Co III	812.869	10	13	3d ⁷ - 3d ⁶ (¹ G)4p	a ² G - x ² F ^o	½ - ½	S8
Co III	814.066	1		3d ⁷ - 3d ⁶ (² D)4p	a ² G - w ⁴ D ^o	½ - ½	S8
Co III	814.649	2h					S8
Co III	815.555	25		3d ⁷ - 3d ⁶ (¹ G)4p	a ² G - w ² G ^o	½ - ½	S8
Co III	816.617	10		3d ⁷ - 3d ⁶ (¹ D)4p	a ² G - w ⁴ F ^o	½ - ½	S8
Co III	816.864	1					S8
Co III	817.937	1					S8
Co III	818.600	20	11	3d ⁷ - 3d ⁶ (¹ F)4p	a ² G - x ² H ^o	½ - ½	S8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	820.066	3		3d ⁷ - 3d ⁶ (1D)4p	a ² G - x ² H°	½ - ½	S8
Co III	825.403	15		3d ⁷ - 3d ⁶ (1D)4p	a ² G - x ² I°	½ - ½	S8
Co III	828.608	1		3d ⁷ - 3d ⁶ (³ G)4p	a ² G - x ² G°	½ - ½	S8
Co III	829.072	10		3d ⁷ - 3d ⁶ (³ D)4p	a ² D - w ² F°	½ - ½	S8
Co III	832.050	5					S8
Co III	837.330	1		3d ⁷ - 3d ⁶ (³ D)4p	a ² P - w ² D°	½ - ½	S8, K8
Co III	838.133	25	10	3d ⁷ - 3d ⁶ (³ G)4p	a ² G - y ² F°	½ - ½	S8
Co III	839.284	36	19	3d ⁷ - 3d ⁶ (1D)4p	a ² H - y ² I°	½ - ½	S8
Co III	844.097	20	18	3d ⁷ - 3d ⁶ (1G)4p	a ² H - w ² H°	½ - ½	S8
Co III	844.310	8	19	3d ⁷ - 3d ⁶ (1D)4p	a ² H - y ² I°	½ - ½	S8
Co III	844.411	1		3d ⁷ - 3d ⁶ (³ G)4p	a ² G - y ² H°	½ - ½	S8
Co III	844.866	10	10	3d ⁷ - 3d ⁶ (³ C)4p	a ² G - y ² F°	½ - ½	S8
Co III	848.088	30	18	3d ⁷ - 3d ⁶ (1G)4p	a ² H - w ² I°	½ - ½	S8
Co III	849.210	0		3d ⁷ - 3d ⁶ (³ G)4p	a ² H - w ² H°	½ - ½	S8
Co III	849.485	5		3d ⁷ - 3d ⁶ (³ G)4p	a ² G - y ² H°	½ - ½	S8
Co III	850.067	3		3d ⁷ - 3d ⁶ (³ G)4p	a ² G - y ² H°	½ - ½	S8
Co III	850.424	3		3d ⁷ - 3d ⁶ (1G)4p	a ² D - w ² F°	½ - ½	S8
Co III	858.665	1					S8
Co III	858.975	15	17	3d ⁷ - 3d ⁶ (1D)4p	a ² H - x ² H°	½ - ½	S8
Co III	865.567	0		3d ⁷ - 3d ⁶ (³ G)4p	a ² G - y ² H°	½ - ½	S8
Co III	865.898	0	17	3d ⁷ - 3d ⁶ (1D)4p	a ² H - x ² H°	½ - ½	S8
Co III	870.007	15	16	3d ⁷ - 3d ⁶ (³ G)4p	a ² H - x ² G°	½ - ½	S8
Co III	874.294	10	16	3d ⁷ - 3d ⁶ (³ G)4p	a ² H - x ² G°	½ - ½	S8
Co III	876.594	5		3d ⁷ - 3d ⁶ (³ H)4p	a ² G - z ² H°	½ - ½	S8
Co III	878.080	0		3d ⁷ - 3d ⁶ (³ F)4p	a ² P - y ² D°	½ - ½	S8
Co III	878.543	10	9	3d ⁷ - 3d ⁶ (³ F)4p	a ² G - y ² G°	½ - ½	S8
Co III	878.963	5		3d ⁷ - 3d ⁶ (³ H)4p	a ² G - z ² H°	½ - ½	S8
Co III	880.950	10	9	3d ⁷ - 3d ⁶ (³ F)4p	a ² G - y ² G°	½ - ½	S8
Co III	882.025	0		3d ⁷ - 3d ⁶ (³ F)4p	a ⁴ P - x ⁴ D°	½ - ½	S8
Co III	883.154	5		3d ⁷ - 3d ⁶ (³ G)4p	a ² D - y ² F°	½ - ½	S8
Co III	883.345	1		3d ⁷ - 3d ⁶ (³ F)4p	a ² G - z ² F°	½ - ½	S8
Co III	883.703	2		3d ⁷ - 3d ⁶ (³ F)4p	a ² P - y ² D°	½ - ½	S8
Co III	883.960	0		3d ⁷ - 3d ⁶ (³ F)4p	a ⁴ P - x ⁴ D°	½ - ½	S8
Co III	884.192	2		3d ⁷ - 3d ⁶ (³ F)4p	a ⁴ P - x ⁴ D°	½ - ½	S8
Co III	885.011	0		3d ⁷ - 3d ⁶ (³ F)4p	a ⁴ P - x ⁴ D°	½ - ½	S8
Co III	886.378	5		3d ⁷ - 3d ⁶ (³ F)4p	a ⁴ P - x ⁴ D°	½ - ½	S8
Co III	887.777	0		3d ⁷ - 3d ⁶ (³ F)4p	a ² G - z ² F°	½ - ½	S8
Co III	887.988	0		3d ⁷ - 3d ⁶ (³ F)4p	a ² G - y ² G°	½ - ½	S8
Co III	891.902	5		3d ⁷ - 3d ⁶ (³ P)4p	a ² P - z ² S°	½ - ½	S8
Co III	893.045	15	15	3d ⁷ - 3d ⁶ (³ G)4p	a ² H - y ² H°	½ - ½	S8
Co III	893.095	8	15	3d ⁷ - 3d ⁶ (³ G)4p	a ² H - y ² H°	½ - ½	S8
Co III	893.713	8		3d ⁷ - 3d ⁶ (³ G)4p	a ² D - y ² F°	½ - ½	S8
Co III	897.686	1		3d ⁷ - 3d ⁶ (³ P)4p	a ² P - z ² S°	½ - ½	S8
Co III	899.025	1					S8
Co III	903.730	5		3d ⁷ - 3d ⁶ (³ L)4p	a ² D - y ² D°	½ - ½	S8
Co III	908.491	5		3d ⁷ - 3d ⁶ (³ H)4p	a ² G - z ² G°	½ - ½	S8
Co III	910.415	0		3d ⁷ - 3d ⁶ (³ F)4p	a ² D - y ² D°	½ - ½	S8
Co III	910.721	0		3d ⁷ - 3d ⁶ (³ P)4p	a ⁴ P - y ⁴ P°	½ - ½	S8
Co III	912.817	2		3d ⁷ - 3d ⁶ (³ H)4p	a ² G - z ² G°	½ - ½	S8
Co III	913.239	2		3d ⁷ - 3d ⁶ (1D)4p	a ² F - v ² I	½ - ½	S8
Co III	918.233	1					S8
Co III	920.371	2		3d ⁷ - 3d ⁶ (³ G)4p	a ² H - x ² G°	½ - ½	S8
Co III	923.075	10	14	3d ⁷ - 3d ⁶ (³ H)4p	a ² H - z ² H°	½ - ½	S8
Co III	925.045	8	14	3d ⁷ - 3d ⁶ (³ H)4p	a ² H - z ² H°	½ - ½	S8
Co III	925.230	0		3d ⁷ - 3d ⁶ (³ F)4p	a ² H - y ² G°	½ - ½	S8
Co III	926.591	0		3d ⁷ - 3d ⁶ (³ F)4p	a ⁴ P - z ⁴ S°	½ - ½	S8
Co III	927.224	5		3d ⁷ - 3d ⁶ (³ P)4p	a ² D - z ² P°	½ - ½	S8
Co III	929.970	5		3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - z ⁴ F°	½ - ½	S8
Co III	932.733	3		3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - z ⁴ F°	½ - ½	S8
Co III	935.003	3		3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - z ⁴ F°	½ - ½	S8
Co III	936.635	20	2	3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - z ⁴ F°	½ - ½	S8
Co III	937.310	20	2	3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - z ⁴ F°	½ - ½	S8
Co III	938.077	10	2	3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - z ⁴ F°	½ - ½	S8
Co III	938.647	5	2	3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - z ⁴ F°	½ - ½	S8
Co III	939.060	30	1	3d ⁷ - 3d ⁶ (³ D)4p	ga ⁴ F - z ⁴ D°	½ - ½	S8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	941.756	0		3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ F°	½ - ½	S8
Co III	942.388	20	1	3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ D°	½ - ½	S8
Co III	942.696	1		3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ F°	½ - ½	S8
Co III	944.084	1		3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ F°	½ - ½	S8
Co III	944.768	20	1	3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ D°	½ - ½	S8
Co III	945.198	0		3d ⁷ - 3d ⁶ (⁶ P)4p	z ² P - z ² D°	½ - ½	S8
Co III	946.526	10		3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ D°	½ - ½	S8
Co III	946.594	20	1	3d ⁷ - 3u ⁶ (⁶ D)4p	g ⁴ F - z ⁴ D°	½ - ½	S8
Co III	947.838	10		3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ D°	½ - ½	S8
Co III	948.501	5		3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ D°	½ - ½	S8
Co III	951.264	0		3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ P°	½ - ½	S8
Co III	952.279	2		3d ⁷ - 3d ⁶ (⁶ D)4p	g ⁴ F - z ⁴ P°	½ - ½	S8
Co III	952.812	2		3d ⁷ - 3d ⁶ (⁶ H)4p	a ² H - z ² I°	½ - ½	S8
Co III	953.977	2		3d ⁷ - 3d ⁶ (⁶ H)4p	a ² H - z ² I°	½ - ½	S8
Co III	989.169	1					S8
Co III	992.145	5		3d ⁷ - 3d ⁶ (⁶ G)4p	a ² F - x ² G°	½ - ½	S8
Co III	996.558	6					S8
Co III	1008.997	2		3d ⁷ - 3d ⁶ (⁶ G)4p	a ² F - y ² F°	½ - ½	S8
Co III	1030.280	0					S8
Co III	1037.174	0					S8
Co III	1043.243	15		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P°	½ - ½	S8
Co III	1044.261	20		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P°	½ - ½	S8
Co III	1046.720	3		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P°	½ - ½	S8
Co III	1047.471	2		3d ⁷ - 3d ⁶ (⁶ G)4p	a ² F - x ² F°	½ - ½	S8
Co III	1048.879	3					S8
Co III	1050.762	20		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P°	½ - ½	S8
Co III	1050.977	10		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P°	½ - ½	S8
Co III	1053.257	10		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P°	½ - ½	S8
Co III	1077.530	2					S8
Co III	1078.127	2					S8
Co III	1079.098	2					S8
Co III	1088.486	1		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D°	½ - ½	S8
Co III	1089.899	1		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D°	½ - ½	S8
Co III	1090.554	0		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D°	½ - ½	S8
Co III	1092.581	10	8	3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D°	½ - ½	S8
Co III	1093.066	5	8	3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D°	½ - ½	S8
Co III	1095.443	15	8	3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D°	½ - ½	S8
Co III	1114.405	1					S8
Co III	1270.646	1					S8
Co III	1272.416	2					S8
Co III	1286.626	1					S8
Co III	1371.419	1		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1371.779	2		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1376.576	0		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1378.208	1		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1378.665	5		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1380.775	2		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1383.971	10		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1384.187	25		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1389.079	5		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)5s	z ⁶ D° - f ⁶ D	½ - ½	S8
Co III	1396.210	1		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ P	½ - ½	S8
Co III	1402.415	5		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1403.755	3		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1404.009	5		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1405.032	3		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1405.451	0		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1408.308	3		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1409.340	25		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1412.012	3		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ P)4p	a ⁴ D - y ⁴ D°	½ - ½	S8
Co III	1412.974	5		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1413.884	5		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ D	½ - ½	S8
Co III	1425.229	0		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ F	½ - ½	S8
Co III	1425.550	2		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ F	½ - ½	S8
Co III	1427.308	1		3d ⁶ (⁶ D)4p - 3d ⁶ (⁶ D)4d	z ⁶ D° - e ⁶ F	½ - ½	S8
Co III	1428.331	1		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ P)4p	a ⁴ D - y ⁴ P°	½ - ½	S8, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	1429.236	0		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1429.524	0		$3d^6(^6D)4s - 3d^6(^6H)4p$	$a^4D - z^6H^{\circ}$? $\frac{7}{2} - \frac{5}{2}$	S8
Co III	1430.177	15		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1430.530	15		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1431.323	15		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1431.800	5		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1432.065	5		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1434.259	100		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1434.642	0		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1435.426	50		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1435.840	3		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1436.236	10		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6D^{\circ} - e^6F$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1445.427	1					S8
Co III	1463.936	1					S8
Co III	1464.773	1					S8
Co III	1464.932	1					S8
Co III	1465.101	1					S8
Co III	1465.558	2		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$? $\frac{5}{2} - \frac{3}{2}$	S8, K8
Co III	1466.579	3		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^6P^{\circ} - f^6D$? $\frac{7}{2} - \frac{5}{2}$	S8, K8
Co III	1466.919	2		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1467.394	5h		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^6F^{\circ} - f^6D$	$\frac{5}{2} - \frac{3}{2}$	S8
Co III	1467.663	5		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1468.992	5		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1471.140	1					S8
Co III	1471.328	1		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^6F^{\circ} - f^6D$	$\frac{7}{2} - \frac{5}{2}$	S8
Co III	1471.575	0		$3d^6(^6H)4s - 3d^6(^6D)4p$	$a^4H - w^4F^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	S8
Co III	1472.019	10		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1472.756	2					S8
Co III	1473.303	1		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^6F^{\circ} - f^6D$	$\frac{5}{2} - \frac{3}{2}$	S8
Co III	1475.266	0		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1475.635	10		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1476.366	3		$3d^6(^6H)4s - 3d^6(^6D)4p$	$a^4H - w^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1477.260	1		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^6F^{\circ} - f^6D$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1478.367	25		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1479.393	2					S8
Co III	1479.880	1		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^6P^{\circ} - f^6D$? $\frac{7}{2} - \frac{1}{2}$	S8, K8
Co III	1481.905	50		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6G$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1483.363	5					S8
Co III	1483.800	10					S8
Co III	1484.565	0		$3d^6(^6F)4s - 3d^6(^6G)4p$	$b^4F - x^2F^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1485.170	8					S8
Co III	1487.962	1h		$3d^6(^6F)4s - 3d^6(^6D)4p$	$b^4F - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1488.174	3					S8
Co III	1488.753	1		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6P^{\circ} - e^6F$? $\frac{3}{2} - \frac{1}{2}$	S8, K8
Co III	1489.243	0		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^6F^{\circ} - f^6D$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1489.899	10					S8
Co III	1491.273	5		$3d^6(^6H)4s - 3d^6(^6I)4p$	$a^4H - x^2H^{\circ}$? $\frac{3}{2} - \frac{1}{2}$	S8, K8
Co III	1492.528	3					S8
Co III	1493.152	10		$3d^6(^6P)4s - 3d^6(^6D)4p$	$b^4P - x^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1493.595	2h		$3d^6(^6F)4s - 3d^6(^6D)4p$	$b^4F - w^4F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S8
Co III	1498.144	1		$3d^6(^6D)4s - 3d^6(^6P)4p$	$a^4D - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1499.124	25		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^4D^{\circ} - f^4D$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1499.877	3		$3d^6(^6F)4s - 3d^6(^6D)4p$	$b^4F - w^4F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S8
Co III	1500.269	10		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^4D^{\circ} - f^4D$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1502.531	3		$3d^6(^6D)4p - 3d^6(^6D)5s$	$z^4D^{\circ} - f^4D$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1504.362	2		$3d^6(^6F)4s - 3d^6(^6D)4p$	$b^4F - w^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1505.249	5		$3d^6(^6P)4s - 3d^6(^6D)4p$	$b^4P - x^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1508.683	0		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6D$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1510.489	1		$3d^6(^6F)4s - 3d^6(^6D)4p$	$b^4F - w^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S8
Co III	1511.404	3					S8
Co III	1511.730	2					S8
Co III	1511.920	3		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6D$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1512.997	3		$3d^6(^6D)4p - 3d^6(^6D)4d$	$z^6F^{\circ} - e^6D$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1513.706	3					S8
Co III	1515.027	25					S8

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Co III	1515.633	1					S8
Co III	1515.711	1					S8
Co III	1515.992	2					S8
Co III	1517.670	1					S8
Co III	1517.153	1					S8
Co III	1517.482	8		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)5s	z ⁴ D° - f ⁴ D	½ - ½	S8
Co III	1517.724	5		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ D° - e ⁴ F	½ - ½	S8
Co III	1518.636	0		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ D° - e ⁴ F	½ - ½	S8
Co III	1519.326	8		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)5s	z ⁴ F° - f ⁴ D	½ - ½	S8
Co III	1522.149	2					S8
Co III	1522.885	10		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)5s	z ⁴ F° - f ⁴ D	½ - ½	S8
Co III	1524.113	8		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1524.472	2					S8
Co III	1524.942	1h		3d ⁶ (² H)4s - 3d ⁶ (² G)4p	a ⁴ H - x ² G°	? ½ - ½	S8
Co III	1525.163	1h					S8
Co III	1525.407	8		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)5s	z ⁴ F° - f ⁴ D	½ - ½	S8
Co III	1526.734	15		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)5s	z ⁴ P° - f ⁴ D	? ½ - ½	S8, K8
Co III	1527.780	10		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ D° - e ⁴ F	½ - ½	S8
Co III	1527.948	2		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)5s	z ⁴ F° - f ⁴ D	½ - ½	S8
Co III	1530.906	5h		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1531.068	8h					S8
Co III	1532.032	5		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1534.268	100		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1536.554	3		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1536.955	3		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1539.255	1		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1539.458	10					S8
Co III	1542.094	50		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1542.616	5		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1543.981	15		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1544.129	2		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ P° - e ⁴ D	½ - ½	S8
Co III	1544.411	15		3d ⁶ (² F)4s - 3d ⁶ (² D)4p	a ² F - w ² F°	½ - ½	S8
Co III	1544.880	20		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	½ - ½	S8
Co III	1547.309	3		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ F° - e ⁴ F	? ½ - ½	S8, K8
Co III	1548.413	10		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ P° - e ⁴ P	½ - ½	S8
Co III	1549.940	10		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ P° - e ⁴ D	½ - ½	S8
Co III	1551.536	3		3d ⁶ (² G)4s - 3d ⁶ (¹ D)4p	b ² G - v ² F°	½ - ½	S8
Co III	1553.015	3		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ P° - e ⁴ P	½ - ½	S8
Co III	1557.328	3		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ P° - e ⁴ P	½ - ½	S8
Co III	1561.746	1		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ P° - e ⁴ D	½ - ½	S8
Co III	1563.158	3		3d ⁶ (² G)4s - 3d ⁶ (² D)4p	a ⁴ G - w ⁴ F°	½ - ½	S8
Co III	1564.090	1		3d ⁶ (² H)4s - 3d ⁶ (¹ G)4p	b ² H - w ² H°	½ - ½	S8
Co III	1567.173	2					S8
Co III	1567.917	0		3d ⁶ (² H)4s - 3d ⁶ (¹ G)4p	b ² H - w ² H°	½ - ½	S8
Co III	1568.308	1		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ P° - e ⁴ P	½ - ½	S8
Co III	1569.264	1		3d ⁶ (² H)4s - 3d ⁶ (¹ G)4p	b ² H - w ² H°	½ - ½	S8
Co III	1572.266	1		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)4d	z ⁴ P° - e ⁴ D	½ - ½	S8
Co III	1573.921	5h					S8
Co III	1576.025	1					S8
Co III	1578.093	0		3d ⁶ (⁴ D)4s - 3d ⁶ (⁴ D)4p	a ⁴ D - z ⁴ P°	½ - ½	S8
Co III	1580.735	0		3d ⁶ (² G)4s - 3d ⁶ (¹ G)4p	a ⁴ G - w ⁴ G°	½ - ½	S8
Co III	1581.502	3					S8
Co III	1582.044	2					S8
Co III	1584.663	1		3d ⁶ (² G)4s - 3d ⁶ (² D)4p	a ⁴ G - w ⁴ F°	½ - ½	S8
Co III	1586.180	8					S8
Co III	1587.186	5		3d ⁶ (² F)4s - 3d ⁶ (² G)4p	b ⁴ F - y ² F°	½ - ½	S8
Co III	1588.642	5	59	3d ⁶ (² H)4s - 3d ⁶ (¹ G)4p	b ² H - w ² G°	½ - ½	S8
Co III	1593.446	5	59	3d ⁶ (² H)4s - 3d ⁶ (¹ G)4p	b ² H - w ² G°	? ½ - ½	S8, K8
Co III	1594.182	0		3d ⁶ (² G)4s - 3d ⁶ (² D)4p	a ⁴ G - w ⁴ F°	½ - ½	S8
Co III	1594.953	5		3d ⁶ (² G)4s - 3d ⁶ (² D)4p	a ⁴ G - w ⁴ D°	½ - ½	S8
Co III	1603.563	8		3d ⁶ (² G)4s - 3d ⁶ (² D)4p	a ⁴ G - w ⁴ D°	½ - ½	S8
Co III	1607.410	3		3d ⁶ (⁴ D)4p - 3d ⁶ (⁴ D)5s	z ⁴ P° - f ⁴ D	½ - ½	S8
Co III	1608.777	3					S8
Co III	1608.864	3		3d ⁶ (² G)4s - 3d ⁶ (² D)4p	a ⁴ G - w ⁴ D°	½ - ½	S8
Co III	1608.950	3					S8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	1620.051	1		3d ⁶ (³ H)4s - 3d ⁶ (¹ I)4p	b ² H - x ² H°	1/2 - 1/2	S8
Co III	1620.254	1		3d ⁶ (³ F)4s - 3d ⁶ (¹ G)4p	a ² F - x ² F°	1/2 - 1/2	S8
Co III	1629.666	1		3d ⁶ (³ F)4s - 3d ⁶ (¹ G)4p	a ² F - x ² F°	1/2 - 1/2	S8
Co III	1635.521	1		3d ⁶ (³ G)4s - 3d ⁶ (³ G)4p	a ⁴ G - x ² G°	1/2 - 1/2	S8
Co III	1645.986	6	36	3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	a ⁴ H - y ⁴ H°	1/2 - 1/2	S8
Co III	1647.100	0	36	3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	a ⁴ H - y ⁴ H°	1/2 - 1/2	S8
Co III	1649.153	1		3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ F°	1/2 - 1/2	S8
Co III	1649.265	40d	36	3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	a ⁴ H - y ⁴ H°	1/2 - 1/2	S8
Co III	1651.783	0	36	3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	a ⁴ H - y ⁴ H°	1/2 - 1/2	S8
Co III	1652.024	1		3d ⁶ (¹ G)4s - 3d ⁶ (¹ D)4p	c ² G - v ² F°	1/2 - 1/2	S8
Co III	1652.182	1		3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ F°	1/2 - 1/2	S8
Co III	1652.791	2	36	3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	a ⁴ H - y ⁴ H°	1/2 - 1/2	S8
Co III	1659.757	2	58	3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	b ² H - x ² G°	1/2 - 1/2	S8
Co III	1661.422	2	58	3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	b ² H - x ² G°	1/2 - 1/2	S8
Co III	1663.500	1		3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ F°	1/2 - 1/2	S8
Co III	1665.269	10	23	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ D°	1/2 - 1/2	S8
Co III	1668.032	1	23	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ F°	1/2 - 1/2	S8
Co III	1672.133	0		3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	a ⁴ H - x ⁴ G°	1/2 - 1/2	S8
Co III	1673.325	2		3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ F°	1/2 - 1/2	S8
Co III	1673.679	4		3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	a ⁴ H - x ⁴ G°	1/2 - 1/2	S8
Co III	1677.901	3	23	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ D°	1/2 - 1/2	S8
Co III	1679.481	1		3d ⁶ (³ F)4s - 3d ⁶ (³ G)4p	b ⁴ F - x ⁴ G°	1/2 - 1/2	S8
Co III	1679.578	4	23	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ D°	1/2 - 1/2	S8
Co III	1680.734	0		3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	a ⁴ H - x ⁴ G°	1/2 - 1/2	S8
Co III	1681.074	2	23	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ⁴ D°	1/2 - 1/2	S8
Co III	1689.283	1		3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - y ² G°	1/2 - 1/2	S8
Co III	1689.858	20	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1696.008	200	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1696.980	1		3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - y ² G°	1/2 - 1/2	S8
Co III	1697.988	160	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1699.880	0		3d ⁶ (³ G)4s - 3d ⁶ (¹ G)4p	b ² G - w ² H°	1/2 - 1/2	S8
Co III	1701.770	0		3d ⁶ (³ F)4s - 3d ⁶ (³ G)4p	b ⁴ F - x ⁴ F°	1/2 - 1/2	S8
Co III	1702.506	1		3d ⁶ (³ F)4s - 3d ⁶ (³ G)4p	b ⁴ F - x ⁴ F°	1/2 - 1/2	S8
Co III	1702.790	100	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1704.817	1		3d ⁶ (³ G)4s - 3d ⁶ (³ G)4p	a ⁴ G - y ² F°	1/2 - 1/2	S8
Co III	1707.348	200	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1707.951	100	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1709.395	1					S8
Co III	1711.531	1		3d ⁶ (³ G)4s - 3d ⁶ (¹ G)4p	b ² G - w ² H°	1/2 - 1/2	S8
Co III	1715.768	0		3d ⁶ (³ G)4s - 3d ⁶ (¹ G)4p	b ² G - x ² F°	1/2 - 1/2	S8
Co III	1716.251	40	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1718.887	0		3d ⁶ (³ G)4s - 3d ⁶ (³ G)4p	a ⁴ G - y ² H°	1/2 - 1/2	S8
Co III	1719.383	1					S8
Co III	1720.068	4		3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - z ² F°	1/2 - 1/2	S8
Co III	1721.151	2		3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - z ² F°	1/2 - 1/2	S8
Co III	1721.678	1		3d ⁶ (³ F)4s - 3d ⁶ (³ G)4p	b ⁴ F - x ⁴ G°	1/2 - 1/2	S8, K8
Co III	1722.911	0		3d ⁶ (³ F)4s - 3d ⁶ (³ G)4p	b ⁴ F - x ⁴ F°	1/2 - 1/2	S8
Co III	1723.536	0		3d ⁶ (³ G)4s - 3d ⁶ (³ G)4p	a ⁴ G - y ² H°	1/2 - 1/2	S8
Co III	1723.970	100	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1726.134	20	35	3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - y ⁴ G°	1/2 - 1/2	S8
Co III	1726.726	3		3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - z ² F°	1/2 - 1/2	S8
Co III	1728.091	1		3d ⁶ (³ G)4s - 3d ⁶ (¹ G)4p	b ² G - x ² F°	1/2 - 1/2	S8
Co III	1729.724	1		3d ⁶ (³ F)4s - 3d ⁶ (³ G)4p	b ⁴ F - x ⁴ F°	1/2 - 1/2	S8
Co III	1730.669	50	57	3d ⁶ (³ H)4s - 3d ⁶ (³ G)4p	b ² H - y ² H°	1/2 - 1/2	S8
Co III	1732.358	0		3d ⁶ (³ G)4s - 3d ⁶ (¹ G)4p	b ² G - x ² F°	1/2 - 1/2	S8
Co III	1732.545	40	35	3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - y ⁴ G°	1/2 - 1/2	S8
Co III	1733.635	2		3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - y ⁴ G°	1/2 - 1/2	S8
Co III	1735.460	10	35	3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - y ⁴ G°	1/2 - 1/2	S8
Co III	1736.312	50	22	3d ⁶ (³ D)4s - 3d ⁶ (³ D)4p	a ³ D - z ³ P°	1/2 - 1/2	S8
Co III	1736.856	1		3d ⁶ (³ G)4s - 3d ⁶ (³ G)4p	a ⁴ G - y ² H°	1/2 - 1/2	S8
Co III	1737.523	1		3d ⁶ (³ F)4s - 3d ⁶ (³ F)4p	b ⁴ F - y ² G°	1/2 - 1/2	S8
Co III	1738.653	0		3d ⁶ (³ F)4s - 3d ⁶ (³ F)4p	b ⁴ F - y ² G°	1/2 - 1/2	S8
Co III	1739.833	6	35	3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - y ⁴ G°	1/2 - 1/2	S8
Co III	1741.057	1	35	3d ⁶ (³ H)4s - 3d ⁶ (³ F)4p	a ⁴ H - y ⁴ G°	1/2 - 1/2	S8
Co III	1742.372	0		3d ⁶ (¹ G)4s - 3d ⁶ (³ D)4p	c ² G - w ² F°	1/2 - 1/2	S8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	1743.311	6	63	$3d^6(^3F)4s - 3d^6(^3G)4p$	$a^3F - y^3F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1744.529	0		$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1745.674	80	57	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^2H - y^2H^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1746.369	4		$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1746.853	1					S8
Co III	1749.728	5	28	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1751.037	20					S8
Co III	1751.854	40	29	$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^4P - x^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1754.761	0		$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1755.979	100	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1756.851	6		$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^2P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1757.531	3		$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1758.454	0		$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1759.144	1		$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1760.354	1000	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1761.367	2	69	$3d^6(^3G)4s - 3d^6(^1I)4p$	$b^2G - x^2H^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1763.465	20		$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1763.533	3	63	$3d^6(^3F)4s - 3d^6(^3G)4p$	$a^3F - y^3F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1765.414	0		$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1767.084	6	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1767.308	10		$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1768.003	1h					S8
Co III	1768.238	40		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1768.471	20		$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1769.495	2					S8
Co III	1769.957	100	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1770.500	2					S8
Co III	1771.259	20		$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1771.854	40		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1772.233	60		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1772.438	40		$3d^6(^3D)4s - 3d^6(^1G)4p$	$b^4D - w^2G^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1772.549	10					S8
Co III	1772.671	20		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1773.215	100	73	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - y^2I^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1773.568	1000	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1774.418	100	73	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - y^2I^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1774.577	2	73	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - y^2I^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1776.630	0		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1777.145	200	43	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1778.091	20	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1779.536	4	28	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1779.896	1		$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^4P - x^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1780.046	400	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1782.966	600	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1784.055	100	43	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1784.796	6					S8
Co III	1785.116	4		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1785.705	1	69	$3d^6(^3G)4s - 3d^6(^1I)4p$	$b^2G - x^2H^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1785.965	10	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1786.342	40	43	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1786.679	10		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1787.082	200	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1787.502	10		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1787.575	6		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1789.070	200	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1789.373	20	43	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - y^4G^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1789.549	20		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1790.258	100	49	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1790.389	10		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1790.892	5		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - w^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1791.153	60	72	$3d^6(^1I)4s - 3d^6(^1G)4p$	$a^2I - w^2H^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1791.277	100	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1792.144	20	34	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^2I^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1792.410	60	21	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^6D - z^6F^o$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1793.924	40	28	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	1734.804	20	72	$3d^6(^1I)4s - 3d^6(^1G)4p$	$a^1I - w^3H^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	S8
Co III	1795.426	0		$3d^6(^3P)4s - 3d^6(^3G)4p$	$b^3P - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1796.200	2	72	$3d^6(^1I)4s - 3d^6(^1G)4p$	$a^1I - w^3H^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	S8
Co III	1796.664	1					S8
Co III	1797.095	2		$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^3P - y^3D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1798.064	100	28	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1798.876	1		$3d^6(^3P)4s - 3d^6(^3F)4p$	$b^4P - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1800.469	10		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1800.974	5		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1801.030	5		$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^3P - z^3S^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1802.917	0		$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1805.535	100	49	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1806.096	2	48	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1806.350	2					S8
Co III	1808.384	60	68	$3d^6(^3G)4s - 3d^6(^3G)4p$	$b^3G - x^3G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1809.233	6					S8
Co III	1809.904	1					S8
Co III	1810.464	3		$3d^6(^1D)4s - 3d^6(^1D)4p$	$b^3D - x^3D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1811.317	20	28	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^4P - y^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1811.466	80	49	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1811.694	1		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1812.336	1		$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1812.550	10		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1813.044	10	48	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1813.186	60	49	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - y^4H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1814.084	2		$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1814.219	20	48	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1814.683	20	48	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1814.865	20		$3d^6(^1D)4s - 3d^6(^1D)4p$	$b^3D - v^3F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1815.063	4	56	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^3H - y^4I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1815.596	40	42	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1815.686	40	42	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1816.084	1		$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^3H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1816.250	2		$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^3P - z^3D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1816.617	4	33	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1817.518	20	78	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^3H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1817.626	20	48	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1818.684	40	42	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1819.009	0		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1819.070	0		$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1819.261	6	33	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1819.330	40	56	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^3H - y^4H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1820.064	20	42	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1821.004	0		$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1821.262	80	78	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^3H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1821.688	80	48	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1821.766	80	68	$3d^6(^3G)4s - 3d^6(^3G)4p$	$b^3G - x^3G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1822.046	20	56	$3d^6(^3H)4s - 3d^6(^3G)4p$	$b^3H - y^4H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1822.215	0		$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1822.079	200		$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1823.414	20		$3d^6(^1I)4s - 3d^6(^1G)4p$	$a^1I - w^3G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1823.622	30		$3d^6(^3D)4s - 3d^6(^3D)4p$	$b^4D - x^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1824.874	20	42	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1825.365	80		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^2F - y^3D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1825.464	60	33	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1825.947	150	48	$3d^6(^3G)4s - 3d^6(^3G)4p$	$a^4G - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1827.094	60	42	$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1829.392	1		$3d^6(^3F)4s - 3d^6(^3F)4p$	$b^4F - x^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1829.674	40	55	$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^2F - y^3D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1830.093	400	26	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^4D - z^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1830.581	60	32	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1830.780	4		$3d^6(^3H)4s - 3d^6(^3F)4p$	$a^4H - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1830.870	30					S8
Co III	1831.439	400	32	$3d^6(^3H)4s - 3d^6(^3H)4p$	$a^4H - z^4I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1831.916	150	26	$3d^6(^5D)4s - 3d^6(^5D)4p$	$a^4D - z^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8

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Co III	1832.201	80	47	$3d^6(^2G)4s - 3d^6(^2G)4p$	$a^4G - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1832.784	0		$3d^6(^2F)4s - 3d^6(^2P)4p$	$b^4F - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1833.876	10		$3d^6(^2P)4s - 3d^6(^2F)4p$	$b^4P - y^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1834.840	15	47	$3d^6(^2G)4s - 3d^6(^2G)4p$	$a^4G - x^4G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1835.000	1000	32	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4I^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1835.255	20	26	$3d^6(^2D)4s - 3d^6(^2D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1835.617	30	42	$3d^6(^2F)4s - 3d^6(^2F)4p$	$b^4F - x^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1835.687	4	55	$3d^6(^2H)4s - 3d^6(^2G)4p$	$b^2H - x^4G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1836.200	60		$3d^6(^2G)4s - 3d^6(^2G)4p$	$a^4G - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1837.630	200	32	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4I^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1837.840	20	47	$3d^6(^2G)4s - 3d^6(^2G)4p$	$a^4G - x^4G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1839.535	10	77	$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - x^2F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1839.636	4	39	$3d^6(^2F)4s - 3d^6(^2P)4p$	$b^4F - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1841.924	3		$3d^6(^2F)4s - 3d^6(^2F)4p$	$b^4F - x^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1842.109	0		$3d^6(^2F)4s - 3d^6(^2F)4p$	$a^2F - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1843.332	0		$3d^6(^2G)4s - 3d^6(^2G)4p$	$a^4G - x^4G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1843.443	40	26	$3d^6(^2D)4s - 3d^6(^2D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1843.532	40		$3d^6(^2P)4s - 3d^6(^2P)4p$	$b^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1843.960	15					S8
Co III	1844.684	6					S8
Co III	1844.726	10					S8
Co III	1845.074	20	47	$3d^6(^1G)4s - 3d^6(^2D)4p$	$c^2G - w^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1846.050	4		$3d^6(^2G)4s - 3d^6(^2G)4p$	$a^4G - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1846.157	100	26	$3d^6(^2D)4s - 3d^6(^2D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1846.514	10d	32	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4I^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1847.825	25					S8
Co III	1849.299	30	76	$3d^6(^2P)4s - 3d^6(^2P)4p$	$b^2P - z^2P^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1849.464	60		$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^2G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1849.932	40	76	$3d^6(^2P)4s - 3d^6(^2P)4p$	$b^2P - y^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1850.503	60		$3d^6(^1G)4s - 3d^6(^1G)4p$	$c^2G - w^2G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1850.780	2		$3d^6(^2P)4s - 3d^6(^2P)4p$	$b^2P - y^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1851.509	10	41	$3d^6(^2F)4s - 3d^6(^2H)4p$	$b^4F - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1851.937	40	26	$3d^6(^2P)4s - 3d^6(^2P)4p$	$b^4P - y^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1852.645	4	32	$3d^6(^2D)4s - 3d^6(^2D)4p$	$a^4D - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1852.919	100		$3d^6(^2G)4s - 3d^6(^2G)4p$	$a^4G - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1853.266	2		$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4I^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1853.841	2	55	$3d^6(^2H)4s - 3d^6(^2G)4p$	$b^2H - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1854.194	25		$3d^6(^1G)4s - 3d^6(^2D)4p$	$c^2G - w^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1854.393	80	67	$3d^6(^2G)4s - 3d^6(^2H)4p$	$a^4G - z^2H^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1854.763	80	53	$3d^6(^2G)4s - 3d^6(^2G)4p$	$b^2G - y^2F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1855.331	5		$3d^6(^2H)4s - 3d^6(^2H)4p$	$b^2H - z^2H^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1855.954	10		$3d^6(^1G)4s - 3d^6(^2D)4p$	$c^2G - w^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1857.657	10		$3d^6(^2P)4s - 3d^6(^2P)4p$	$b^2P - z^2S^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1858.487	10					S8
Co III	1859.510	10	41	$3d^6(^2G)4s - 3d^6(^2F)4p$	$a^4G - y^2G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1861.775	200	40	$3d^6(^2F)4s - 3d^6(^2H)4p$	$b^4F - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1862.660	20	55	$3d^6(^2F)4s - 3d^6(^2F)4p$	$b^4F - y^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1863.134	1	31	$3d^6(^2H)4s - 3d^6(^2G)4p$	$b^2H - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1863.467	40	71	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4H^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1863.615	4		$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - x^2H^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1863.826	460	31	$3d^6(^2F)4s - 3d^6(^2G)4p$	$a^2F - y^4H^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1864.187	80	53	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4H^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1865.424	20	31	$3d^6(^2H)4s - 3d^6(^2H)4p$	$b^2H - z^2H^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1865.456	20	40	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4H^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1866.497	4	26	$3d^6(^2F)4s - 3d^6(^2F)4p$	$b^4F - y^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1866.615	20		$3d^6(^2D)4s - 3d^6(^2D)4p$	$a^4D - z^4I^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1867.490	10					S8
Co III	1867.930	6	31	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4H^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1868.796	6	41	$3d^6(^1G)4s - 3d^6(^2D)4p$	$c^2G - w^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1870.012	6	55	$3d^6(^2F)4s - 3d^6(^2H)4p$	$b^4F - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1870.012	6		$3d^6(^2I)4s - 3d^6(^2G)4p$	$b^2H - x^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1870.634	15	40	$3d^6(^2F)4s - 3d^6(^2F)4p$	$b^4F - y^4F^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1871.870	100	31	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4H^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1871.952	60	31	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4H^o$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1872.532	40	71	$3d^6(^1I)4s - 3d^6(^1I)4p$	$a^2I - x^2H^o$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1872.575	60	31	$3d^6(^2H)4s - 3d^6(^2H)4p$	$a^4H - z^4H^o$	$\frac{1}{2} - \frac{3}{2}$	S8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	1873.014	0	52	3d ⁶ (³ H)4s - 3d ⁶ (² F)4p	b ² H - y ² G°	1/2 - 3/2	S8
Co III	1874.355	20	40	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	b ⁴ F - y ⁴ F°	3/2 - 5/2	S8
Co III	1874.822	60	31	3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ H°	3/2 - 5/2	S8
Co III	1875.094	40	40	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	b ⁴ F - y ⁴ F°	3/2 - 5/2	S8
Co III	1877.464	10	39	3d ⁶ (² F)4s - 3d ⁶ (² P)4p	b ⁴ F - y ⁴ D°	3/2 - 5/2	S8
Co III	1877.544	10	40	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	b ⁴ F - y ⁴ F°	3/2 - 5/2	S8
Co III	1879.170	2		3d ⁶ (² F)4s - 3d ⁶ (² H)4p	b ⁴ F - z ⁴ I°	3/2 - 5/2	S8
Co III	1879.244	60	31	3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ H°	3/2 - 5/2	S8
Co III	1879.385	20	6	3d ⁶ (² G)4s - 3d ⁶ (² G)4p	b ² G - y ² F°	3/2 - 5/2	S8
Co III	1879.753	10		3d ⁶ (² F)4s - 3d ⁶ (² G)4p	a ² F - y ² H°	3/2 - 5/2	S8
Co III	1880.449	6	52	3d ⁶ (² H)4s - 3d ⁶ (² F)4p	b ² H - y ² G°	3/2 - 5/2	S8
Co III	1880.912	10	40	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	b ⁴ F - y ⁴ F°	3/2 - 5/2	S8
Co III	1881.080	30					S8
Co III	1881.427	30	31	3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ H°	3/2 - 5/2	S8
Co III	1881.702	200b	40	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	b ⁴ F - y ⁴ F°	3/2 - 5/2	S8
Co III	1881.702	200b	30	3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ G°	3/2 - 5/2	S8
Co III	1881.867	60	30	3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ G°	1/2 - 3/2	S8
Co III	1882.323	30	40	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	b ⁴ F - y ⁴ F°	3/2 - 5/2	S8
Co III	1883.286	40	30	3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ G°	3/2 - 5/2	S8
Co III	1884.532	1		3d ⁶ (² F)4s - 3d ⁶ (² G)4p	a ² F - x ² F°	3/2 - 5/2	S8
Co III	1885.476	3h		3d ⁶ (² G)4s - 3d ⁶ (² F)4p	a ² G - y ² G°	1/2 - 3/2	S8
Co III	1886.469	10	40	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	b ⁴ F - y ⁴ F°	3/2 - 5/2	S8
Co III	1886.742	40					S8
Co III	1888.345	2		3d ⁶ (² F)4s - 3d ⁶ (² G)4p	a ² F - x ² G°	3/2 - 5/2	S8
Co III	1888.452	2		3d ⁶ (² F)4s - 3d ⁶ (² H)4p	b ⁴ F - z ⁴ I°	3/2 - 5/2	S8
Co III	1889.090	2		3d ⁶ (² G)4s - 3d ⁶ (² F)4p	a ² G - z ² F°	3/2 - 5/2	S8
Co III	1889.321	4		3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ G°	3/2 - 5/2	S8
Co III	1890.642	0		3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ G°	1/2 - 3/2	S8
Co III	1892.011	30	75	3d ⁶ (¹ G)4s - 3d ⁶ (¹ I)4p	c ² G - x ² H°	3/2 - 5/2	S8
Co III	1893.095	4		3d ⁶ (² F)4s - 3d ⁶ (² P)4p	b ⁴ F - y ⁴ D°	3/2 - 5/2	S8
Co III	1893.912	1		3d ⁶ (² G)4s - 3d ⁶ (² F)4p	a ² G - z ² F°	3/2 - 5/2	S8
Co III	1895.368	100		3d ⁶ (¹ I)4s - 3d ⁶ (¹ I)4p	a ² I - z ² K°	1/2 - 3/2	S8
Co III	1896.031	0		3d ⁶ (² H)4s - 3d ⁶ (² H)4p	a ⁴ H - z ⁴ G°	3/2 - 5/2	S8
Co III	1897.562	1		3d ⁶ (² F)4s - 3d ⁶ (² H)4p	b ⁴ F - z ⁴ I°	3/2 - 5/2	S8
Co III	1899.183	1		3d ⁶ (² F)4s - 3d ⁶ (² G)4p	a ² F - x ² F°	3/2 - 5/2	S8
Co III	1899.795	10	75	3d ⁶ (¹ G)4s - 3d ⁶ (¹ I)4p	c ² G - x ² H°	3/2 - 5/2	S8
Co III	1900.763	10	62	3d ⁶ (² F)4s - 3d ⁶ (² H)4p	a ² F - z ² H°	3/2 - 5/2	S8
Co III	1901.357	60	75	3d ⁶ (¹ G)4s - 3d ⁶ (¹ I)4p	c ² G - x ² H°	3/2 - 5/2	S8
Co III	1905.354	60	66	3d ⁶ (² G)4s - 3d ⁶ (² G)4p	b ² G - y ² H°	3/2 - 5/2	S8
Co III	1905.674	4		3d ⁶ (² P)4s - 3d ⁶ (² P)4p	b ² P - z ² P°	1/2 - 3/2	S8
Co III	1905.810	1		3d ⁶ (² G)4s - 3d ⁶ (² F)4p	a ² G - y ² G°	3/2 - 5/2	S8
Co III	1906.265	6		3d ⁶ (² F)4s - 3d ⁶ (² G)4p	a ² F - x ² G°	3/2 - 5/2	S8
Co III	1907.458	6					S8
Co III	1909.666	30		3d ⁶ (² P)4s - 3d ⁶ (² P)4p	b ² P - z ² P°	1/2 - 3/2	S8
Co III	1910.151	0		3d ⁶ (² F)4s - 3d ⁶ (² F)4p	a ² F - y ² G°	3/2 - 5/2	S8
Co III	1910.840	60	66	3d ⁶ (² G)4s - 3d ⁶ (² G)4p	b ² G - y ² H°	3/2 - 5/2	S8
Co III	1911.174	4		3d ⁶ (² G)4s - 3d ⁶ (² F)4p	a ² G - y ² G°	3/2 - 5/2	S8
Co III	1912.952	6		3d ⁶ (² G)4s - 3d ⁶ (² F)4p	a ² G - y ² G°	3/2 - 5/2	S8
Co III	1916.112	10		3d ⁶ (² P)4s - 3d ⁶ (² P)4p	b ² P - z ² S°	3/2 - 5/2	S8
Co III	1917.321	4		3d ⁶ (² F)4s - 3d ⁶ (² G)4p	a ² F - x ² F°	3/2 - 5/2	S8
Co III	1919.120	100	20	3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ D°	3/2 - 5/2	S8
Co III	1919.980	1		3d ⁶ (² H)4s - 3d ⁶ (² F)4p	b ² H - y ² G°	3/2 - 5/2	S8
Co III	1922.000	0		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F°	3/2 - 5/2	S8
Co III	1924.529	10		3d ⁶ (¹ D)4s - 3d ⁶ (² D)4p	b ² D - w ² F°	3/2 - 5/2	S8
Co III	1925.260	4h	38	3d ⁶ (² F)4s - 3d ⁶ (² H)4p	b ⁴ F - z ⁴ G°	3/2 - 5/2	S8
Co III	1925.563	3		3d ⁶ (² H)4s - 3d ⁶ (² F)4p	b ² H - y ² G°	3/2 - 5/2	S8
Co III	1927.198	1		3d ⁶ (¹ I)4s - 3d ⁶ (¹ I)4p	a ² I - z ² K°	1/2 - 3/2	S8
Co III	1927.740	40	61	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	a ² F - y ² G°	3/2 - 5/2	S8
Co III	1928.490	20	61	3d ⁶ (² F)4s - 3d ⁶ (² F)4p	a ² F - y ² G°	3/2 - 5/2	S8
Co III	1928.570	100	20	3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ D°	3/2 - 5/2	S8
Co III	1928.802	40		3d ⁶ (¹ I)4s - 3d ⁶ (¹ I)4p	a ² I - z ² K°	1/2 - 3/2	S8
Co III	1929.756	60	20	3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ D°	3/2 - 5/2	S8
Co III	1930.479	10	25	3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F°	3/2 - 5/2	S8
Co III	1932.442	1h					S8
Co III	1932.766	0		3d ⁶ (² G)4s - 3d ⁶ (² H)4p	a ² G - z ² I°	1/2 - 3/2	S8

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co III	1935.250	10	38	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1934.274	10					S8
Co III	1934.734	10	38	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1935.023	20	25	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1936.392	4	38	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1936.764	!					S8
Co III	1936.933	60	20	$3d^6(^3D)4s - 3d^6(^3L)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1937.661	20	25	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1940.147	100	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1941.460	10	38	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1941.730	20	38	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1942.369	40	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1942.497	20	38	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1942.796	20	38	$3d^6(^3F)4s - 3d^6(^3H)4p$	$b^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1945.234	40	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1946.792	60	25	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1947.626	1	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1948.655	20	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1949.533	6	6	$3d^6(^3P)4s - 3d^6(^3P)4p$	$b^2P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1949.805	40	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1950.911	80	25	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1950.961	10	60	$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^2F - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1952.158	40	24	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S8
Co III	1953.942	100	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1954.791	60	25	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S8
Co III	1954.876	20	46	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2I^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1955.505	6	46	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2I^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1955.793	40	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1956.011	40	20	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1959.414	100	25	$3d^6(^3D)4s - 3d^6(^3F)4p$	$a^4I - z^4F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S8
Co III	1961.450	10	60	$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^2F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1963.243	1					S8
Co III	1963.743	20	24	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4I^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1964.765	1					S8
Co III	1966.680	1					S8
Co III	1969.312	4					S8
Co III	1970.054	60	24	$3d^6(^3L)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S8
Co III	1971.889	20	24	$3d^6(^3D)4s - 3d^6(^3L)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1973.667	1					S8
Co III	1973.767	2					S8
Co III	1974.883	40	51	$3d^6(^3H)4s - 3d^6(^3H)4p$	$b^2H - z^2I^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S8
Co III	1977.031	40	24	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1978.948	10	45	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2J^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1980.113	40	24	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1981.000	0					S8
Co III	1981.345	20	24	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1984.324	6					S8
Co III	1986.704	1					S8
Co III	1987.197	6					S8
Co III	1987.952	2					S8
Co III	1989.598	80	51	$3d^6(^3H)4s - 3d^6(^3H)4p$	$b^2H - z^2I^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S8
Co III	1989.645	20	24	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S8
Co III	1990.841	2					S8
Co III	1992.158	2	45	$3d^6(^3G)4s - 3d^6(^3H)4p$	$a^4G - z^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S8
Co III	1993.625	20	24	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S8
Co III	1995.397	10	24	$3d^6(^3D)4s - 3d^6(^3D)4p$	$a^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S8
Co III	1999.913	1					S8

COBALI IV (Co³⁺) Z = 27
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁶ ⁵D₄ (24 electrons)
 Ionization Potential [444 000] cm⁻¹; [58] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co IV	1349.61	30		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁷ S - ⁵ P°	? 3 - 3	M26
Co IV	1502.11	300		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁷ S - ⁷ P°	? 3 - 4	M26
Co IV	1521.61	250		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁷ S - ⁷ P°	? 3 - 3	M26
Co IV	1533.93	150		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁷ S - ⁷ P°	? 3 - 2	M26
Co IV	1594.53	80		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁵ S - ⁵ P°	? 2 - 1	M26
Co IV	1601.22	150		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁵ S - ⁵ P°	? 2 - 2	M26
Co IV	1612.16	200		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁵ S - ⁵ P°	? 2 - 3	M26
Co IV	1863.80	100		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁵ S - ⁷ P°	? 2 - 3	M26
Co IV	1882.28	50		3d ⁵ (⁶ S)4s - 3d ⁵ (⁶ S)4p	⁵ S - ⁷ P°	? 2 - 2	M26

COBALI V (Co⁴⁺) Z = 27
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁵ ⁶S_{5/2} (23 electrons)
 Ionization Potential [653 000] cm⁻¹; [81] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co V	355.52	1000		3d ⁵ - 3d ⁴ 4p	⁶ S - ⁶ P°	5/2 - 7/2	K21
Co V	355.88	900		3d ⁵ - 3d ⁴ 4p	⁶ S - ⁶ P°	5/2 - 5/2	K21
Co V	356.06	600		3d ⁵ - 3d ⁴ 4p	⁶ S - ⁶ P°	5/2 - 3/2	K21

COBALI VI (Co⁵⁺) Z = 27
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁴ ⁵D₀ (22 electrons)
 Ionization Potential [847 000] cm⁻¹; [105] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co VI	266.114	100		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	2 - 3	B26
Co VI	266.498	600		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	3 - 3	B26
Co VI	266.634	400		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	1 - 2	B26
Co VI	266.905	400		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	2 - 2	B26
Co VI	266.973	800		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	4 - 3	B26
Co VI	267.131	500		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	1 - 1	B26
Co VI	267.297	600		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	3 - 2	B26
Co VI	267.402	500		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ³ D - z ³ P°	2 - 1	B26
Co VI	271.595	500		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	4 - 3	B26
Co VI	271.711	50		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	4 - 4	B26
Co VI	272.622	600		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	5 - 4	B26
Co VI	272.149	50		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	5 - 5	B26
Co VI	272.481	700		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G°	6 - 5	B26
Co VI	274.534	100		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ³ D - z ³ G°	4 - 5	B26
Co VI	275.818	500		3d ⁴ - 3d ³ (a ² F)4p	a ³ G - x ³ G°	3 - 3	B26

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co VI	275.944	300		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^{\circ}$	3 - 4	B26
Co VI	276.167	200		$3d^4 - 3d^3(z^2H)4p$	$a^2G - x^2G^{\circ}$	4 - 3	B26
Co VI	276.285	700		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^{\circ}$	4 - 4	B26
Co VI	276.424	50		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^{\circ}$	4 - 5	B26
Co VI	276.570	400		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^{\circ}$	5 - 4	B26
Co VI	276.721	700		$3d^4 - 3d^3(a^2H)4p$	$a^2G - x^2G^{\circ}$	5 - 5	B26
Co VI	277.079	500		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	2 - 3	B26
Co VI	277.579	400		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	1 - 2	B26
Co VI	277.853	200		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	0 - 1	B26
Co VI	278.013	200		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	1 - 1	B26
Co VI	278.113	300		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	3 - 1	B26
Co VI	278.184	700		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	4 - 5	B26
Co VI	278.298	200		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	3 - 2	B26
Co VI	278.360	100		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	2 - 3	B26
Co VI	278.632	700		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	4 - 4	B26
Co VI	278.685	500		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	1 - 2	B26
Co VI	278.790	600		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	3 - 3	B26
Co VI	278.981	500		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	2 - 2	B26
Co VI	279.040	200		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	0 - 1	B26
Co VI	279.210	400		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	1 - 1	B26
Co VI	279.301			$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	1 - 3	P17, P 26
Co VI	279.400	500		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	3 - 2	B26
Co VI	279.508	700		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	2 - 1	B26
Co VI	279.780	500		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	2 - 3	B26
Co VI	280.003	700		$3d^4 - 3d^3(a^4F)4p$	$ga^2D - z^2D^{\circ}$	4 - 4	B26
Co VI	280.060	600		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - z^2D^{\circ}$	1 - 2	B26
Co VI	280.199	600		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - z^2D^{\circ}$	3 - 3	B26
Co VI	280.309	400		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - z^2D^{\circ}$	0 - 1	B26
Co VI	280.350	200		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - z^2D^{\circ}$	2 - 2	B26
Co VI	280.464	400		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - z^2D^{\circ}$	1 - 1	B26
Co VI	280.706	300		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - z^2D^{\circ}$	4 - 3	B26
Co VI	280.775	300		$3d^4 - 3d^3(a^2F)4p$	$ga^2D - z^2D^{\circ}$	3 - 2	B26
Co VI	283.089	800		$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^2G^{\circ}$	6 - 5	B26
Co VI	283.405	500		$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^2G^{\circ}$	5 - 4	B26
Co VI	283.883	300		$3d^4 - 3d^3(a^2G)4p$	$a^2H - y^2G^{\circ}$	4 - 3	B26
Co VI	284.366	500		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^{\circ}$	4 - 5	B26
Co VI	284.885	400		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^{\circ}$	3 - 4	B26
Co VI	285.034	300		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^{\circ}$	4 - 4	B26
Co VI	285.645	300		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^{\circ}$	2 - 3	B26
Co VI	285.713	200		$3d^4 - 3d^3(a^2G)4p$	$a^2F - y^2G^{\circ}$	3 - 3	B26
Co VI	287.666	400		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^2G^{\circ}$	5 - 5	B26
Co VI	288.031	400		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^2G^{\circ}$	4 - 4	B26
Co VI	288.509	300		$3d^4 - 3d^3(a^2G)4p$	$a^2G - y^2G^{\circ}$	3 - 3	B26
Co VI	295.268	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	3 - 4	B26
Co VI	295.419	400		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	4 - 4	B26
Co VI	295.976	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	2 - 3	B26
Co VI	296.050	300		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	3 - 3	B26
Co VI	296.206	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	4 - 3	B26
Co VI	296.719	400		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	2 - 2	B26
Co VI	296.923	700		$3d^4 - 3d^3(a^4F)4p$	$a^2H - z^2G^{\circ}$	6 - 5	B26
Co VI	297.372	700		$3d^4 - 3d^3(a^4F)4p$	$a^2H - z^2G^{\circ}$	5 - 4	B26
Co VI	297.651	600		$3d^4 - 3d^3(a^4F)4p$	$a^2H - z^2G^{\circ}$	4 - 3	B26
Co VI	298.318	300		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^{\circ}$	4 - 5	B26
Co VI	298.649	300		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2F^{\circ}$	4 - 4	B26
Co VI	298.989	500		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2F^{\circ}$	5 - 4	B26
Co VI	299.051	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^{\circ}$	3 - 4	B26
Co VI	299.157	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^{\circ}$	4 - 4	B26
Co VI	299.456	500		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2F^{\circ}$	4 - 3	B26
Co VI	299.586	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^{\circ}$	2 - 3	B26
Co VI	299.659	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2G^{\circ}$	3 - 3	B26
Co VI	299.822	500		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2F^{\circ}$	3 - 2	B26
Co VI	300.537	500		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	0 - 1	B26
Co VI	301.203	400		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	1 - 2	B26
Co VI	301.604	50		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2G^{\circ}$	4 - 5	B26
Co VI	301.713	100		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	1 - 1	B26

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co VI	301.955	500		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2G^{\circ}$	5 - 5	B26
Co VI	302.061	50		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2G^{\circ}$	3 - 4	B26
Co VI	302.123	400		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	2 - 3	B26
Co VI	302.157	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2D^{\circ}$	2 - 3	B26
Co VI	302.261	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2D^{\circ}$	3 - 3	B26
Co VI	302.408	400		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2D^{\circ}$	4 - 3	B26
Co VI	302.471	400		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2G^{\circ}$	4 - 4	B26
Co VI	302.736	300		$3d^4 - 3d^3(a^4F)4p$	$a^2G - z^2G^{\circ}$	3 - 3	B26
Co VI	303.071	100		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	2 - 2	B26
Co VI	303.191	300		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2D^{\circ}$	3 - 2	B26
Co VI	303.410	200		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	0 - 1	B26
Co VI	303.565	100		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	2 - 1	B26
Co VI	303.619	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2D^{\circ}$	2 - 1	B26
Co VI	303.685	300		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	2 - 3	B26
Co VI	303.943	200		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	4 - 3	B26
Co VI	304.116	200		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	1 - 2	B26
Co VI	304.374	50		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	2 - 2	B26
Co VI	304.531	50		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	3 - 2	B26
Co VI	304.607	100		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	1 - 1	B26
Co VI	305.037	400		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2F^{\circ}$	2 - 1	B26
Co VI	305.322	100		$3d^4 - 3d^3(a^4F)4p$	$a^2P - z^2D^{\circ}$	2 - 3	B26
Co VI	305.612	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2D^{\circ}$	4 - 3	B26
Co VI	306.145	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2D^{\circ}$	3 - 2	B26
Co VI	306.567	100		$3d^4 - 3d^3(a^4F)4p$	$a^2F - z^2D^{\circ}$	2 - 1	B26

COBALT VII (Co⁶⁺), Z = 27Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 \ ^4F_{3/2}$ (21 electrons)Ionization Potential [1 073 000] cm⁻¹; [131] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co VII	206.23	150		$3d^3 - 3d^2(a^4G)4p$	$ga^4F - z^2H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	A4
Co VII	206.60	10		$3d^3 - 3d^2(a^4G)4p$	$ga^4F - z^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	209.815	10		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - z^4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	A4
Co VII	210.37	40		$3d^3 - 3d^2(a^4G)4p$	$ga^4F - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	210.68	10		$3d^3 - 3d^2(a^4G)4p$	$ga^4F - y^2G^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	A4
Co VII	210.71	10		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - z^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	A4
Co VII	210.77	80		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - z^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	211.25	10		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	211.65	40		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	212.15	100		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	A4
Co VII	212.23	80		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	212.61	250		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	212.64	1000		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	212.91	900		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	213.06	20d		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - y^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	A4
Co VII	215.26	80 ^s		$3d^3 - 3d^2(a^2P)4p$	$ga^4F - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	216.205	20		$3d^3 - 3d^2(a^4G)4p$	$a^2G - z^2H^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	A4
Co VII	216.70	250		$3d^3 - 3d^2(a^4G)4p$	$a^2G - z^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	217.13	20		$3d^3 - 3d^2(a^4G)4p$	$a^2G - z^2H^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	217.88	20		$3d^3 - 3d^2(a^4F)4p$	$ga^4F - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	218.11	20		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	218.42	40		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	218.56	10		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	219.09	10		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	219.64	40		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co VII	220.07	400					
Co VII	220.10	16		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.23	10		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.34	150		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.37	150		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.405	150		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.515	150		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.62	1000		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.77	40		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.81	20d		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.89	20		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.96	40		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	220.98	150		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.02	750		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.06	150		$3d^3 - 3d^2(a^2P)4p$	$a^2G - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.15	20		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.24	80		$3d^3 - 3d^2(a^1G)4p$	$a^2G - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.30	80		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.37	10		$3d^3 - 3d^2(a^2P)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.45	1000		$3d^3 - 3d^2(a^1G)4p$	$a^2H - z^2H^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.52	1000		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.62	250		$3d^3 - 3d^2(a^1G)4p$	$a^2G - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.75	1000		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	221.96	900		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	222.37	10		$3d^3 - 3d^2(a^2P)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	222.53	10		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	222.57	1000		$3d^3 - 3d^2(a^2P)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	222.67	750		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	222.72	10		$3d^3 - 3d^2(a^2P)4p$	$a^2G - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	222.84	80		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.08	1000		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.19	900		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.30	1000		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.37	750		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.54	1000		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.73	1000		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.86	750		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.91	550		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	223.99	250		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	224.08	50		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	224.335	550		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	224.36	10		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	224.60	10		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	224.71	1000		$3d^3 - 3d^2(a^2P)4p$	$a^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	224.93	10		$3d^3 - 3d^2(a^2P)4p$	$a^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	225.12	80		$3d^3 - 3d^2(a^2F)4p$	$ga^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	225.23	150		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	225.43	40		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	225.68	80		$3d^3 - 3d^2(a^2P)4p$	$a^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	225.71	40		$3d^3 - 3d^2(a^2P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	225.83	750		$3d^3 - 3d^2(a^1G)4p$	$a^2H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	225.87	10		$3d^3 - 3d^2(a^1G)4p$	$a^2H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	226.03	1000		$3d^3 - 3d^2(a^2P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	226.83	20		$3d^3 - 3d^2(a^1G)4p$	$a^2H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	226.98	150d		$3d^3 - 3d^2(a^2P)4p$	$a^2H - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	227.11	20		$3d^3 - 3d^2(a^2P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	227.88	20		$3d^3 - 3d^2(a^2P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	228.425	40		$3d^3 - 3d^2(a^2P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	229.13	20		$3d^3 - 3d^2(a^2F)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	229.61	1000		$3d^3 - 3d^2(a^2F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	229.87	1000		$3d^3 - 3d^2(a^2F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	230.36	40		$3d^3 - 3d^2(a^2F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	230.45	20		$3d^3 - 3d^2(a^2P)4p$	$a^2D - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	231.32	40		$3d^3 - 3d^2(a^2F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	231.48	20		$3d^3 - 3d^2(a^2F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co VII	231.68	40		$3d^2 - 3d^2(a^2F)4p$	$a^4P - z^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	231.79	20		$3d^2 - 3d^2(a^2F)4p$	$a^4P - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	A4
Co VII	232.35	150		$3d^2 - 3d^2(a^2F)4p$	$a^4P - z^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	232.425	40		$3d^2 - 3d^2(a^2F)4p$	$a^4P - z^2D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	A4
Co VII	232.51	250		$3d^2 - 3d^2(a^2F)4p$	$a^4P - z^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	A4
Co VII	232.56	500		$3d^2 - 3d^2(a^2F)4p$	$a^2G - z^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	232.65	900		$3d^2 - 3d^2(a^2F)4p$	$a^4P - z^2F^{\circ}$	$\frac{1}{2} - \frac{7}{2}$	A4
Co VII	232.80	20		$3d^2 - 3d^2(a^2F)4p$	$z^4P - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	233.06	20		$3d^2 - 3d^2(a^2F)4p$	$a^2G - z^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	233.425	20		$3d^2 - 3d^2(a^2F)4p$	$a^2G - z^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	233.75	250		$3d^2 - 3d^2(a^2F)4p$	$a^2D - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	234.01	40		$3d^2 - 3d^2(a^2F)4p$	$a^2H - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	234.05	10		$3d^2 - 3d^2(a^2F)4p$	$a^4P - z^4F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	A4
Co VII	234.27	20		$3d^2 - 3d^2(a^2F)4p$	$a^2G - z^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	A4
Co VII	234.34	1000		$3d^2 - 3d^2(a^2F)4p$	$a^2H - z^2G^{\circ}$	$\frac{1}{2} - \frac{9}{2}$	A4
Co VII	234.79	1000		$3d^2 - 3d^2(a^2F)4p$	$a^2H - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	235.13	10		$3d^2 - 3d^2(a^2F)4p$	$a^2G - z^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	236.09	250		$3d^2 - 3d^2(a^2F)4p$	$a^4P - z^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	A4
Co VII	236.45	80		$3d^2 - 3d^2(a^2F)4p$	$a^2D - z^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	236.51	150		$3d^2 - 3d^2(a^2F)4p$	$a^2D - z^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	236.82	10		$3d^2 - 3d^2(a^2F)4p$	$a^2G - z^4G^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	A4
Co VII	237.575	10		$3d^2 - 3d^2(a^2F)4p$	$a^2H - z^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	A4
Co VII	237.73	10		$3d^2 - 3d^2(a^2F)4p$	$a^2D - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	238.11	40		$3d^2 - 3d^2(a^2F)4p$	$a^2D - z^4D^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	A4
Co VII	238.17	20		$3d^2 - 3d^2(a^2F)4p$	$a^2D - z^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	A4
Co VII	238.27	80		$3d^2 - 3d^2(a^2F)4p$	$a^2D - z^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	A4
Co VII	238.37	900		$3d^2 - 3d^2(a^2F)4p$	$a^2D - z^2F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	A4
Co VII	239.37	10		$3d^2 - 3d^2(a^2F)4p$	$a^2H - z^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	A4
Co VII	240.745	10		$3d^2 - 3d^2(a^2F)4p$	$z^2D - z^4F^{\circ}$? $\frac{7}{2} - \frac{7}{2}$	A4

COBALT VIII (Co^{7+}), $Z = 27$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^3F_2$ (20 electrons)
 Ionization Potential [1 282 000] cm^{-1} ; [159] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co VIII	122.27	50		$3d^2 - 3d4f$	$g^2F - ^2G^{\circ}$	2-3	A3
Co VIII	122.32	50		$3d^2 - 3d4f$	$g^2F - ^2G^{\circ}$	3-4	A3
Co VIII	122.47	70		$3d^2 - 3d4f$	$g^2F - ^2G^{\circ}$	4-5	A3
Co VIII	122.49	20		$3d^2 - 3d4f$	$g^2F - ^2G^{\circ}$	3-3	A3
Co VIII	122.58	40		$3d^2 - 3d4f$	$g^2F - ^2G^{\circ}$	4-4	A3
Co VIII	122.96	30		$3d^2 - 3d4f$	$g^2F - ^2F^{\circ}$	2-3	A3
Co VIII	123.02	40		$3d^2 - 3d4f$	$g^2F - ^2F^{\circ}$	2-2	A3
Co VIII	123.05	20		$3d^2 - 3d4f$	$g^2F - ^2F^{\circ}$	3-4	A3
Co VIII	123.17	50		$3d^2 - 3d4f$	$g^2F - ^2F^{\circ}$	3-3	A3
Co VIII	123.24	10		$3d^2 - 3d4f$	$g^2F - ^2F^{\circ}$	3-2	A3
Co VIII	123.31	50		$3d^2 - 3d4f$	$g^2F - ^2F^{\circ}$	4-4	A3
Co VIII	123.44	10		$3d^2 - 3d4f$	$g^2F - ^2F^{\circ}$	4-3	A3
Co VIII	124.65	50		$3d^2 - 3d4f$	$^1D - ^3D^{\circ}$	2-3	A3
Co VIII	124.88	80		$3d^2 - 3d4f$	$^1D - ^1F^{\circ}$	2-3	A3
Co VIII	125.16	80		$3d^2 - 3d4f$	$^1D - ^1D^{\circ}$	2-2	A3
Co VIII	125.27	60		$3d^2 - 3d4f$	$^1D - ^2G^{\circ}$	2-3	A3
Co VIII	125.34	100		$3d^2 - 3d4f$	$^3P - ^2D^{\circ}$	2-3	A3
Co VIII	125.35	100		$3d^2 - 3d4f$	$^1P - ^2D^{\circ}$	1-2	A3
Co VIII	125.57	30		$3d^2 - 3d4f$	$^3P - ^2D^{\circ}$	2-2	A3

COBALT IX (Co⁸⁺), Z = 27
 Ground State 1s²2s²2p⁶3s²3p⁶3d²D_{3/2} (19 electrons)
 Ionization Potential 1 501 300 cm⁻¹; 186.13 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co IX	70.92	0		3d - 10f	g ² D - ² F ^o	3/2 - 5/2	A1
Co IX	71.05	10		3d - 10f	g ² D - ² F ^o	5/2 - 7/2	A1
Co IX	72.04	10		3d - 9f	g ² D - ² F ^o	5/2 - 5/2	A1
Co IX	72.17	20		3d - 9f	g ² D - ² F ^o	3/2 - 7/2	A1
Co IX	73.66	20		3d - 8f	g ² D - ² F ^o	3/2 - 5/2	A1
Co IX	73.79	30		3d - 8f	g ² D - ² F ^o	5/2 - 7/2	A1
Co IX	76.16	30		3d - 7f	g ² D - ² F ^o	3/2 - 5/2	A1
Co IX	76.30	40		3d - 7f	g ² D - ² F ^o	5/2 - 7/2	A1
Co IX	80.38	50		3d - 6f	g ² D - ² F ^o	3/2 - 5/2	A1
Co IX	80.54	60		3d - 6f	g ² D - ² F ^o	5/2 - 7/2	A1
Co IX	88.44	70		3d - 5f	g ² D - ² F ^o	3/2 - 5/2	A1
Co IX	88.63	80		3d - 5f	g ² D - ² F ^o	5/2 - 7/2	A1
Co IX	95.852	2		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	3/2 - 5/2	H8
Co IX	96.076	40		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	5/2 - 7/2	H8
Co IX	96.305	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	5/2 - 3/2	H8
Co IX	96.541	10		3p ⁶ 3d - 3p ⁵ 3d(¹ F ^o)4s	g ² D - ² F ^o	5/2 - 7/2	H8
Co IX	97.355	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	5/2 - 5/2	H8
Co IX	97.587	15		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	5/2 - 7/2	H8
Co IX	97.854	15		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	5/2 - 7/2	H8
Co IX	99.042	40		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ² F ^o	5/2 - 5/2	H8
Co IX	99.284	1		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ² F ^o	5/2 - 5/2	H8
Co IX	99.921	90		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ² F ^o	5/2 - 7/2	H8
Co IX	100.210	15		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ⁴ F ^o	3/2 - 5/2	H8
Co IX	100.636	2		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ⁴ F ^o	5/2 - 7/2	H8
Co IX	100.856	1		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² P ^o	3/2 - 3/2	H8
Co IX	101.107	2		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² F ^o	5/2 - 3/2	H8
Co IX	101.410	2		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² P ^o	5/2 - 1/2	H8
Co IX	108.39	90		3d - 4f	g ² D - ² F ^o	3/2 - 5/2	A1
Co IX	108.66	100		3d - 4f	g ² D - ² F ^o	5/2 - 7/2	A1
Co IX	152.71	5		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² P ^o	3/2 - 3/2	G12
Co IX	153.29	150		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	5/2 - 3/2	G12
Co IX	153.78	60		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² P ^o	3/2 - 1/2	G12
Co IX	154.92	150		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	3/2 - 3/2	G12
Co IX	155.06	25		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	3/2 - 5/2	G12
Co IX	155.51	25		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	5/2 - 5/2	G12
Co IX	155.65	150		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	5/2 - 5/2	G12
Co IX	158.94	15		3d - 4p	g ² D - ² P ^o	3/2 - 3/2	G12
Co IX	159.56	150		3d - 4p	g ² D - ² P ^o	5/2 - 7/2	G12
Co IX	170.70	500		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	5/2 - 7/2	G12
Co IX	172.19	150		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	3/2 - 5/2	G12
Co IX	172.91	1		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	5/2 - 5/2	G12

COBALT X (Co⁹⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p⁶ 1S₀ (18 electrons)
Ionization Potential 2 232 000 cm⁻¹; 276.7 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co X	71.48	30		3p ⁶ - 3p ⁵ (² P°)4d	g ⁴ S - (½, ½) ^o	0 - 1	A1
Co X	72.45	40		3p ⁶ - 3p ⁵ (² P°)4d	g ⁴ S - (¾, ¾) ^o	0 - 1	A1
Co X	88.99	90		3p ⁶ - 3p ⁵ (² P°)4s	g ⁴ S - ½ [½] ^o	0 - 1	A1
Co X	90.47	80		3p ⁶ - 3p ⁵ (² P°)3s	g ⁴ S - ¾ [¾] ^o	0 - 1	A1
Co X	158.88			3p ⁶ - 3p ⁵ 3d	g ⁴ S - 1P ^o	0 - 1	G12

COBALT XI (Co¹⁰⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p⁵ 2P_{3/2}^o (17 electrons)
Ionization Potential 2 462 000 cm⁻¹; 305 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XI	81.507	300		3p ⁵ - 3p ⁴ (¹ D)4s	g ² P ^o - ² D	¾ - ½	E20
Co XI	82.527	70		3p ⁵ - 3p ⁴ (³ P)4s	g ² P ^o - ² P	¾ - ½	E20
Co XI	82.759	200		3p ⁵ - 3p ⁴ (¹ D)4s	g ² P ^o - ² D	½ - ¾	E20
Co XI	83.190	300		3p ⁵ - 3p ⁴ (³ P)4s	g ² P ^o - ² P	¾ - ¾	E20
Co XI	83.861	100		3p ⁵ - 3p ⁴ (³ P)4s	g ² P ^o - ² P	½ - ½	E20
Co XI	84.039	200		3p ⁵ - 3p ⁴ (³ P)4s	g ² P ^o - ⁴ P	¾ - ¾	E20
Co XI	158.27	1		3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² D	¾ - ¾	G12
Co XI	162.56	500		3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² D	¾ - ¾	G12
Co XI	162.99	1		3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² P	¾ - ½	G12
Co XI	163.32	150		3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² D	½ - ¾	G12
Co XI	164.91	120		3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² P	¾ - ¾	G12
Co XI	168.327	90		3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² P	½ - ½	G12
Co XI	170.33	2		3p ⁵ - 3p ⁴ (³ P)3d	g ² P ^o - ² P	½ - ¾	G12
Co XI	171.66	2		3p ⁵ - 3p ⁴ (¹ D)3d	g ² P ^o - ² S	¾ - ½	G12
Co XI	177.58	1		3p ⁵ - 3p ⁴ (¹ D)3d	g ² P ^o - ² S	½ - ½	G12
Co XI	318.85			3s ² 3p ⁵ - 3s3p ⁶	g ² P ^o - ² S	¾ - ½	F19

COBALT XII (Co¹¹⁺), Z = 27
Ground State 1s²2s²2p⁶3s²3p⁴ 3P₂ (16 electrons)
Ionization Potential [2 702 000] cm⁻¹; [335] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XII	165.86			3p ⁴ - 3p ³ (⁴ S°)3d	g ² P - ³ D°	2 - 2	F19
Co XII	168.34			3p ⁴ - 3p ³ (⁴ S°)3d	g ² P - ³ D°	2 - 3	F19
Co XII	168.68			3p ⁴ - 3p ³ (⁴ S°)3d	g ² P - ³ D°	1 - 1	F19
Co XII	169.04			3p ⁴ - 3p ³ (⁴ S°)3d	g ² P - ³ D°	0 - 1	F19
Co XII	169.91			3p ⁴ - 3p ³ (² D°)3d	¹ D - ¹ F°	2 - 3	F19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XII	170.33			$3p^4 - 3p^2(^4S^{\circ})3d$	$g^3P^{\circ} - ^3D^{\circ}$	1 - 2	F19
Co XII	172.33			$3p^4 - 3p^2(^2D^{\circ})3d$	$^1S^{\circ} - ^1P^{\circ}$	0 - 1	F19
Co XII	172.41			$3p^4 - 3p^2(^2D^{\circ})3d$	$^1D^{\circ} - ^1D^{\circ}$	2 - 2	F19
Co XII	175.44			$3p^4 - 3p^2(^2D^{\circ})3d$	$g^3P^{\circ} - ^3P^{\circ}$	2 - 2	F19
Co XII	190.45			$3p^4 - 3p^2(^2D^{\circ})3d$	$g^3P^{\circ} - ^3P^{\circ}$	1 - 2	F19
Co XII	286.64			$3s^2 3p^4 - 3s 3p^4$	$^1D - ^1P^{\circ}$	2 - 1	F19
Co XII	326.17			$3s^2 3p^4 - 3s 3p^4$	$g^3P - ^3P^{\circ}$	2 - 2	F19
Co XII	343.93			$3s^2 3p^4 - 3s 3p^4$	$g^3P - ^3P^{\circ}$	1 - 2	F19
Co XII	1359.4	f		$3p^4 - 3p^4$	$g^3P - ^1S$	1 - 0	S28

COBALT XIII (Co^{12+}), $Z = 27$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 ^4S_{3/2}$ (15 electrons)Ionization Potential [3 025 000] cm^{-1} ; [375] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XIII	174.82			$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2F$	$\frac{5}{2} - \frac{7}{2}$	F19
Co XIII	175.77			$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F19
Co XIII	178.98			$3p^3 - 3p^2(^2P)3d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F19
Co XIII	179.59			$3p^3 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	F19
Co XIII	180.87			$3p^3 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{5}{2} - \frac{3}{2}$	F19
Co XIII	182.09			$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F19
Co XIII	182.52			$3p^3 - 3p^2(^2P)3d$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	F19
Co XIII	183.65			$3p^3 - 3p^2(^1D)3d$	$^2D^{\circ} - ^2D$	$\frac{5}{2} - \frac{5}{2}$	F19
Co XIII	185.39			$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F19
Co XIII	188.42			$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F19
Co XIII	188.89			$3p^3 - 3p^2(^1D)3d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F19
Co XIII	205.38			$3p^3 - 3p^2(^2P)3d$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F19
Co XIII	263.41			$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F19
Co XIII	271.16			$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2P$	$\frac{5}{2} - \frac{3}{2}$	F19
Co XIII	313.95			$3s^2 3p^3 - 3s 3p^4$	$^2D^{\circ} - ^2D$	$\frac{5}{2} - \frac{5}{2}$	F19
Co XIII	325.70			$3s^2 3p^3 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	F19
Co XIII	338.82			$3s^2 3p^3 - 3s 3p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	F19
Co XIII	1134.3	f		$3p^3 - 3p^3$	$g^4S^{\circ} - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S28

COBALT XIV (Co^{13+}), $Z = 27$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 ^3P_0$ (14 electrons)Ionization Potential [3 298 900] cm^{-1} ; [409] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XIV	184.41			$3p^2 - 3p3d$	$^1D - ^1P^{\circ}$	2 - 1	F19
Co XIV	186.79			$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	1 - 2	F19
Co XIV	187.89			$3p^2 - 3p3d$	$g^2P - ^3D^{\circ}$	1 - 1	F19
Co XIV	188.60			$3p^2 - 3p3d$	$g^3P - ^3P^{\circ}$	0 - 1	F19
Co XIV	190.65			$3p^2 - 3p3d$	$g^3P - ^3D^{\circ}$	2 - 2	F19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XIV	190.82			$3p^2 - 3p3d$	$g^2P - ^2D^o$	2 - 3	F19
Co XIV	191.76			$3p^2 - 3p3d$	$g^2P - ^2D^o$	2 - 1	F19
Co XIV	195.66			$3p^2 - 3p3d$	$^1S - ^1P^o$	0 - 1	F19
Co XIV	196.45			$3p^2 - 3p3d$	$g^2P - ^2P^o$	1 - 2	F19
Co XIV	197.01			$3p^2 - 3p^2$	$g^2P - ^2P^o$	2 - 1	F19
Co XIV	200.75			$3p^2 - 3p3d$	$g^2P - ^2P^o$	2 - 2	F19
Co XIV	207.85			$3p^2 - 3p3d$	$^1D - ^1D^o$	2 - 2	F19
Co XIV	224.13			$3s^23p^2 - 3s3p^2$	$g^2P - ^2S^o$	0 - 1	F19
Co XIV	230.34			$3s^23p^2 - 3s3p^2$	$g^2P - ^2S^o$	1 - 1	F19
Co XIV	236.11			$3s^23p^2 - 3s3p^2$	$g^2P - ^2S^o$	2 - 1	F19
Co XIV	239.33			$3s^23p^2 - 3s3p^2$	$^1D - ^1P^o$	2 - 1	F19
Co XIV	296.68			$3s^23p^2 - 3s3p^2$	$^1D - ^1D^o$	2 - 2	F19
Co XIV	298.38			$3s^23p^2 - 3s3p^2$	$g^2P - ^2P^o$	2 - 2	F19
Co XIV	334.22			$3s^23p^2 - 3s3p^2$	$g^2P - ^2D^o$	1 - 2	F19
Co XIV	342.25			$3s^23p^2 - 3s3p^2$	$g^2P - ^2D^o$	2 - 3	F19
Co XIV	1121.6	f		$3p^2 - 3p^2$	$g^2P - ^1S$	1 - 0	S28

COBALT XV (Co^{1+}), $Z = 27$
 Ground State $1s^22s^22p^63s^23p^2P_{1/2}^o$ (13 electrons)
 Ionization Potential [3 565 100] cm^{-1} ; [442] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XV	52.583	100		$3p - 4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E18
Co XV	53.173	200		$3p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	E18
Co XV	197.54			$3p - 3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F19
Co XV	205.85			$3p - 3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F19
Co XV	206.94			$3p - 3d$	$g^2P^o - ^2D$	$\frac{5}{2} - \frac{7}{2}$	F19
Co XV	234.41			$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F19
Co XV	239.42			$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F19
Co XV	247.76			$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{5}{2}$	F19
Co XV	253.34			$3s^23p - 3s3p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F19
Co XV	255.88			$3s^23p - 3s3p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F19
Co XV	270.43			$3s^23p - 3s3p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F19
Co XV	310.69			$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F19
Co XV	330.25			$3s^23p - 3s3p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F19

COBALT XVI (Co¹⁵⁺), Z = 27
 Ground State 1s²2s²2p⁶3s² ¹S₀ (12 electrons)
 Ionization Potential [4 130 000] cm⁻¹; [512] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XVI	14.080	30		2p ⁶ 3s ² - 2p ⁴ 3s ² 3d	g ¹ S - ¹ P°	0 - 1	S31
Co XVI	37.070	3		3s3p - 3s5d	² P° - ² D	0 - 1	F33
Co XVI	37.165	6		3s3p - 3s5d	² P° - ² D	1 - 2	F33
Co XVI	37.401	10		3s3p - 3s5d	² P° - ² D	2 - 3	F33
Co XVI	47.483	100		3s ² - 3s4p	g ¹ S - ¹ P°	0 - 1	E18
Co XVI	49.808	100		3s3p - 3s4d	² P° - ² D	0 - 1	E18
Co XVI	49.958	100		3s3p - 3s4d	² P° - ² D	1 - 2	E18
Co XVI	49.979	20		3s3p - 3s4d	² P° - ² D	1 - 1	E18
Co XVI	50.357	200		3s3p - 3s4d	² P° - ² D	2 - 3	E18
Co XVI	50.393	20		3s3p - 3s4d	² P° - ² D	2 - 2	E18
Co XVI	58.95	P		3s3p - 3s4s	² P° - ² S	2 - 1	K8
Co XVI	61.875	100		3s3d - 3s4f	² D - ² F°	1 - 2	E18
Co XVI	61.916	200		3s3d - 3s4f	² D - ² F°	2 - 3	E18
Co XVI	61.982	200		3s3d - 3s4f	² D - ² F°	3 - 4	E18
Co XVI	210.23			3s3p - 3s3d	² P° - ² D	6 - 1	F19
Co XVI	212.78			3s3p - 3s3d	² P° - ² D	1 - 2	F19
Co XVI	219.94			3s3p - 3s3d	² P° - ² D	2 - 3	F19
Co XVI	229.07			3p ² - 3p3d	² P - ² P°	2 - 2	F19
Co XVI	265.74			3s ² - 3s3p	g ¹ S - ¹ P°	0 - 1	F19
Co XVI	271.38			3s3p - 3p ²	² P° - ² P	1 - 2	F19
Co XVI	281.88			3s3p - 3p ²	² P° - ² P	0 - 1	F19
Co XVI	284.42			3s3p - 3p ²	² P° - ² P	2 - 2	F19
Co XVI	302.69			3s3p - 3p ²	² P° - ² P	2 - 1	F19
Co XVI	389.17	P		3s ² - 3s3p	g ¹ S - ² P°	0 - 1	K8

COBALT XVII (Co¹⁶⁺), Z = 27
 Ground State 1s²2s²2p⁶3s ²S_{1/2} (11 electrons)
 Ionization Potential 4 410 480 cm⁻¹; 546.8 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XVII	15.551	-A		2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P°	1/2 - 1/2	F27
Co XVII	15.828	-A		2p ⁶ 3s - 2p ⁵ 3s ²	g ² S - ² P°	1/2 - 3/2	F27
Co XVII	27.902	3		3p - 8d	² P° - ² D	3/2 - 3/2	F33
Co XVII	28.85			3s - 6p	g ² S - ² P°	1/2 - 3/2	F33
Co XVII	28.874	6		3s - 6p	g ² S - ² P°	1/2 - 1/2	F33
Co XVII	28.960	6		3p - 7d	² P° - ² D	1/2 - 3/2	F33
Co XVII	29.171	10		3p - 7d	² P° - ² D	3/2 - 3/2	F33
Co XVII	31.142	20		3p - 6d	² P° - ² D	1/2 - 3/2	F33
Co XVII	31.386	35		3p - 6d	² P° - ² D	3/2 - 3/2	F33
Co XVII	32.919	6		3d - 7f	² D - ² F°	3/2 - 3/2	F33
Co XVII	32.951	6		3d - 7f	² D - ² F°	3/2 - 7/2	F33
Co XVII	32.995	35		3s - 5p	g ² S - ² P°	1/2 - 3/2	F33
Co XVII	33.046	20		3s - 5p	g ² S - ² P°	1/2 - 1/2	F33
Co XVII	35.617	6		3p - 5d	² P° - ² D	1/2 - 3/2	F33
Co XVII	35.660	10		3d - 6f	² D - ² F°	3/2 - 3/2	F33
Co XVII	35.707	20		3d - 6f	² D - ² F°	3/2 - 7/2	F33
Co XVII	35.932	20		3p - 5d	² P° - ² D	3/2 - 3/2	F33
Co XVII	41.404	10		3d - 5f	² D - ² F°	3/2 - 3/2	F33
Co XVII	41.462	10		3d - 5f	² D - ² F°	3/2 - 7/2	F33
Co XVII	45.319			3s - 4p	g ² S - ² P°	1/2 - 3/2	E16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XVII	45.527			3s - 4p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	E16
Co XVII	48.564			3p - 4d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	E16
Co XVII	49.133			3p - 4d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F33
Co XVII	49.171			3p - 4d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	E16
Co XVII	56.021			3p - 4s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	E16
Co XVII	56.833			3p - 4s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	E16
Co XVII	58.842			3d - 4f	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	E16
Co XVII	58.948			3d - 4f	$^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$	E16
Co XVII	234.91	P		3p - 3d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F33
Co XVII	247.62	P		3p - 3d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F33
Co XVII	249.85	P		3p - 3d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F33
Co XVII	312.57	P		3s - 3p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	F33
Co XVII	339.58	P		3s - 3p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	F33

COBALT XVIII (Co¹⁷⁺), Z = 27
 Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
 Ionization Potential 11 316 400 cm⁻¹; 1403.0 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XVIII	9.611	20		$2p^6 - 2p^5 6d$	$g^1S - ^1P^o$	0 - 1	S31
Co XVIII	9.743	20		$2p^6 - 2p^5 6d$	$g^1S - ^3D^o$	0 - 1	S31
Co XVIII	10.060	40		$2p^6 - 2p^5 5d$	$g^1S - ^1P^o$	0 - 1	S31
Co XVIII	10.178	40		$2p^6 - 2p^5 5d$	$g^1S - ^3D^o$	0 - 1	S31
Co XVIII	10.37	50		$2p^6 - 2p^5 4d$	$g^1S - ^1P^o$	0 - 1	S31, F24
Co XVIII	11.103	70		$2p^6 - 2p^5 4d$	$g^1S - ^3D^o$	0 - 1	S31, F24
Co XVIII	11.324	50		$2p^6 - 2p^5 4s$	$g^1S - ^1P^o$	0 - 1	S31
Co XVIII	11.453	70		$2p^6 - 2p^5 4s$	$g^1S - ^3P^o$	0 - 1	S31
Co XVIII	12.593	70		$2s^2 2p^1 - 2s 2p^6 3p$	$g^1S - ^1P^o$	0 - 1	S31
Co XVIII	12.656	60		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1S - ^3P^o$	0 - 1	S31
Co XVIII	13.862	90		$2p^6 - 2p^5 3d$	$g^1S - ^1P^o$	0 - 1	S31, T14
Co XVIII	15.169	40		$2p^6 - 2p^5 3s$	$g^1S - ^1P^o$	0 - 1	S31, T14
Co XVIII	15.432	70		$2p^6 - 2p^5 3s$	$g^1S - ^3P^o$	0 - 1	S31, T14

COBALT XIX (Co¹⁸⁺), Z = 27
 Ground State $1s^2 2s^2 2p^5 \ ^2P^o_{3/2}$ (9 electrons)
 Ionization Potential [12 042 000] cm⁻¹; [1493] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XIX	10.023	30		$2p^5 - 2p^4(^1S)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	10.130	30		$2p^5 - 2p^4(^1S)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S31, K8
Co XIX	10.230	20		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	10.287	40		$2p^5 - 2p^4(^3P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	10.367	20		$2p^5 - 2p^4(^1D)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S31, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XIX	10.392	40		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	10.477	40		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	10.507	40		$2p^5 - 2p^4(^2P)4d$	$g^2P^o - ^2D$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	10.583	30		$2p^5 - 2p^4(^1S)4s$	$g^2P^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	S31, K8
Co XIX?	10.644	30					S31
Co XIX	10.704	40		$2p^2 - 2p^4(^1S)4s$	$g^2P^o - ^2S$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	12.689	40		$2p^2 - 2p^4(^1S)3d$	$g^2P^o - ^2D$? $\frac{3}{2} - \frac{3}{2}$	S31, K8
Co XIX	12.781	30		$2p^5 - 2p^4(^3S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	12.864	40		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{1}{2}$	S31
Co XIX	12.922	70		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	12.973	40		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{1}{2}$	S31
Co XIX	13.078	50		$2p^2 - 2p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	13.114	30		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2D$? $\frac{3}{2} - \frac{3}{2}$	S31, K8
Co XIX	13.183	40		$2p^2 - 2p^4(^1D)3d$	$g^2P^o - ^2P$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	13.238	40		$2p^2 - 2p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	13.272	30		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	13.417	30		$2p^2 - 2p^4(^2P)3d$	$g^2P^o - ^2D$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	13.500	20		$2p^5 - 2p^4(^2P)3d$	$g^2P^o - ^4D$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	13.862	90		$2p^5 - 2p^4(^1S)3s$	$g^2P^o - ^2S$? $\frac{3}{2} - \frac{1}{2}$	S31, K8
Co XIX	14.178	30		$2p^5 - 2p^4(^1D)3s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	14.355	20		$2p^2 - 2p^4(^1D)3s$	$g^2P^o - ^2D$? $\frac{3}{2} - \frac{3}{2}$	S31, K8
Co XIX	14.425	20		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	14.476	10		$2p^2 - 2p^4(^1D)3s$	$g^2P^o - ^2D$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	14.513	10		$2p^2 - 2p^4(^2P)3s$	$g^2P^o - ^4P$? $\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	14.539	20		$2p^2 - 2p^4(^2P)3s$	$g^2P^o - ^2P$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	14.599	10		$2p^2 - 2p^4(^2P)3s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XIX	14.664	10		$2p^5 - 2p^4(^2P)3s$	$g^2P^o - ^2P$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	14.761	10		$2p^2 - 2p^4(^2P)3s$	$g^2P^o - ^4P$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Co XIX	88.81	P		$2s^2 2p^2 - 2s 2p^5$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8
Co XIX	99.30	P		$2s^2 2p^5 - 2s 2p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K8

COBALT XX (Co¹⁹⁺), Z = 27
 Ground State $1s^2 2s^2 2p^4 ^3P_2$ (8 electrons)
 Ionization Potential [12 873 000] cm⁻¹; [1596] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XX?	9.830	20					S31
Co XX	11.886	20		$2s^2 2p^4 - 2s 2p^3 3d$	$^1D - ^1F^o$	2 - 3	S31
Co XX?	12.144	40					S31
Co XX	12.338	20		$2p^4 - 2p^2 3d$			S31
Co XX	12.42	30		$2p^4 - 2p^3(^2P^o)3d$	$g^3P - ^2P^o$	2 - 2	S31
Co XX	12.50	30		$2p^4 - 2p^2(^2D^o)3d$	$g^2P - ^1P^o$	2 - 2	S31
Co XX	13.628	100		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^3S^o$	2 - 1	S31
Co XX	13.705	20		$2p^4 - 2p^3(^4S^o)3s$	$g^3P - ^2S^o$	1 - 1	S31
Co XX	13.769	40		$2p^4 - 2p^2(^4S^o)3s$	$g^2P - ^3S^o$	0 - 1	S31

COBALT XXI (Co^{20+}), $Z = 27$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential [13 913 000] cm^{-1} ; [1725] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XXI?	11.612	20					S31
Co XXI	11.801	30		$2p^2 - 2p^2 3d$	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31
Co XXI	12.234	30		$2p^2 - 2p^2 3d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31

COBALT XXII (Co^{21+}), $Z = 27$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential [14 849 000] cm^{-1} ; [1841] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XXII?	11.672	20					S31
Co XXII?	11.742	30					S31
Co XXII	11.936	30		$2p^2 - 2p 3s$	$g^3P - ^1P^\circ$	1 - 1	S31
Co XXII?	11.995	30					S31
Co XXII	12.067	30		$2p^2 - 2p 3s$	$^1D - ^2P^\circ$	2 - 2	S31
Co XXII	12.285	30		$2p^2 - 2p 3s$	$^1S - ^1P^\circ$	0 - 1	S31

COBALT XXIII (Co^{22+}), $Z = 27$
 Ground State $1s^2 2s^2 2p \ ^2P_{1/2}^\circ$ (5 electrons)
 Ionization Potential [15 768 000] cm^{-1} ; [1955] eV

COBALT XXIV (Co^{23+}), $Z = 27$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential [16 986 000] cm^{-1} ; [2106] eV

COBALT XXV (Co^{24+}), $Z = 27$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [17 882 000] cm^{-1} ; [2218] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XXV	170.5 P			$2s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K8
Co XXV	232.9 P			$2s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	K8

COBALT XXVI (Co^{25+}), $Z = 27$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential [76 979 000] cm^{-1} ; [9544] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XXVI	1.47			$1s^2 - 1s3p$	$g^1S - ^3P^o$	0 - 1	C11
Co XXVI	1.72			$1s^2 - 1s2p$	$g^1S - ^3P^o$	0 - 1	C11
Co XXVI	1.75 ?	f		$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	K8

COBALT XXVII (Co^{26+}), $Z = 27$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential [80 746 000] cm^{-1} ; [10011] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Co XXVII	1.66 P			$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K8

NICKEL, Z = 28

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni	8.516	0					S31
Ni	8.549	30					S31
Ni	8.605	30					S31
Ni	8.649	20					S31
Ni	8.694	20					S31
Ni	9.291	10					S31
Ni	9.755	10					S31
Ni	9.883	0					S31
Ni	10.195	20					S31
Ni	10.215	20					S31
Ni	10.261	10					S31
Ni	10.354	20					S31
Ni	10.450	20					S31
Ni	10.49	10					S31
Ni	10.500	10					S31
Ni	10.530	10					S31
Ni	10.580	10					S31
Ni	10.724	10					S31
Ni	10.841	20					S31
Ni	12.693	30					S31
Ni	12.759	20					S31
Ni	13.658	10					S31
Ni	139.55	20					F11
Ni	140.52	20					F11
Ni	140.83	30					F11
Ni	141.06	50					F11
Ni	141.35	66					F11
Ni	141.70	30					F11
Ni	141.87	66					F11
Ni	142.22	40					F11
Ni	142.42	50					F11
Ni	143.80	50					F11
Ni	147.00	70					F11
Ni	148.62	50					F11
Ni	148.83	40					F11
Ni	149.21	30					F11
Ni	149.47	50					F11
Ni	149.97	40					F11
Ni	150.56	40					F11
Ni	151.70	30					F11
Ni	151.85	30					F11
Ni	156.30	30					F11
Ni	156.68	40					F11
Ni	157.24	40					F11
Ni	158.00	40					F11
Ni	158.54	50					F11
Ni	160.38	30					F11
Ni	161.94	30					F11
Ni	162.16	40					F11
Ni	162.90	50					F11
Ni	165.43	70					F11
Ni	165.69	30					F11
Ni	165.81	40					F11
Ni	166.08	50					F11
Ni	166.29	50					F11
Ni	166.46	50					F11

NICKEL I (Ni⁰), Z = 28
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁸4s² ³F₄ (28 electrons)
 Ionization Potential 61 79 cm⁻¹; 7.635 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni I	1963.85	50	47	3d ⁸ (a ² D)4s - 3d ⁸ 4s(a ² G)4p	a ² D - u ² F ^o	3 - 3	R24
Ni I	1968.90	50	23	3d ⁸ 4s ² - 3d ⁸ 4s(a ² G)4p	ga ² F - u ² F ^o	4 - 4	R24
Ni I	1976.87	150	47	3d ⁸ (a ² D)4s - 3d ⁸ 4s(a ² G)4p	a ² D - u ² F ^o	3 - 4	R24
Ni I	1981.61	100	47	3d ⁸ (a ² D)4s - 3d ⁸ 4s(a ² G)4p	a ² D - u ² F ^o	2 - 2	R24
Ni I	1990.25	200	47	3d ⁸ (a ² D)4s - 3d ⁸ 4s(a ² G)4p	a ² D - u ² F ^o	2 - 3	R24
Ni I	1994.29	100	20	3d ⁸ 4s ² - 3d ⁸ (a ² D)5p	ga ² F - w ¹ F ^o	4 - 3	R24
Ni I	1999.53	6	23	3d ⁸ 4s ² - 3d ⁸ 4s(a ² G)4p	ga ² F - u ² F ^o	3 - 2	R24

NICKEL II (Ni¹⁺), Z = 28
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁸ ²D_{5/2} (27 electrons)
 Ionization Potential 146 541.56 cm⁻¹; 18.168 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	727.100	2		3d ⁸ - 3d ⁸ (² F)7f	g ² D - ⁴ F ^o	5/2 - 7/2	S11
Ni II	737.300	5		3d ⁸ - 3d ⁸ (² F)6f	g ² D - ² F ^o	5/2 - 7/2	S11
Ni II	738.261	2		3d ⁸ - 3d ⁸ (² P)4f	g ² D - ² G ^o	5/2 - 7/2	S11
Ni II	738.548	1		3d ⁸ - 3d ⁸ (² P)4f	g ² D - ³ F ^o	5/2 - 7/2	S11
Ni II	744.636	2		3d ⁸ - 3d ⁸ (² F)6f	g ² D - ⁴ D ^o	5/2 - 5/2	S11
Ni II	744.867	5		3d ⁸ - 3d ⁸ (² F)6f	g ² D - ⁴ F ^o	5/2 - 7/2	S11
Ni II	745.640	1		3d ⁸ - 3d ⁸ (² F)6f	g ² D - ⁴ D ^o	5/2 - 5/2	S11
Ni II	746.241	5		3d ⁸ - 3d ⁸ (² P)4f	g ² D - ² D ^o	5/2 - 5/2	S11
Ni II	746.525	0		3d ⁸ - 3d ⁸ (² P)4f	g ² D - ⁴ F ^o	5/2 - 5/2	S11
Ni II	752.403	0		3d ⁸ - 3d ⁸ (¹ D)4f	g ² D - ² D ^o	5/2 - 5/2	S11
Ni II	752.626	4		3d ⁸ - 3d ⁸ (¹ D)4f	g ² D - ² F ^o	5/2 - 7/2	S11
Ni II	767.893	1		3d ⁸ - 3d ⁸ (² F)5f	g ² D - ² F ^o	5/2 - 7/2	S11
Ni II	771.626	1		3d ⁸ - 3d ⁸ (² F)5f	g ² D - ⁴ G ^o	5/2 - 7/2	S11
Ni II	776.000	3		3d ⁸ - 3d ⁸ (² F)5f	g ² D - ⁴ F ^o	5/2 - 7/2	S11
Ni II	776.078	5		3d ⁸ - 3d ⁸ (² F)5f	g ² D - ⁴ D ^o	5/2 - 5/2	S11
Ni II	795.506	10					S11
Ni II	797.074	200		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ F ^o	5/2 - 5/2	S11
Ni II	797.088	150		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - s ⁴ D ^o	5/2 - 7/2	S11
Ni II	798.518	30		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ G ^o	5/2 - 11/2	S11
Ni II	799.145	2		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ F ^o	5/2 - 7/2	S11
Ni II	802.292	100		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - s ⁴ D ^o	7/2 - 5/2	S11
Ni II	803.964	15		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ F ^o	7/2 - 7/2	S11
Ni II	805.168	150		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ F ^o	5/2 - 7/2	S11
Ni II	806.188	30		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - s ⁴ D ^o	5/2 - 5/2	S11
Ni II	807.391	0		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - s ⁴ D ^o	5/2 - 5/2	S11
Ni II	808.933	5		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - s ⁴ D ^o	5/2 - 1/2	S11
Ni II	809.772	0		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - s ⁴ D ^o	5/2 - 5/2	S11
Ni II	810.292	20		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ F ^o	5/2 - 7/2	S11
Ni II	812.388	100		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ F ^o	5/2 - 5/2	S11
Ni II	814.056	5		3d ⁸ (² F)4s - 3d ⁸ (¹ D)6p	² F - ² F ^o	7/2 - 7/2	S11
Ni II	815.570	5		3d ⁸ (² F)4s - 3d ⁸ (¹ D)6f	⁴ F - ² F ^o	5/2 - 5/2	S11
Ni II	816.024	8		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ F ^o	5/2 - 5/2	S11
Ni II	816.150	30		3d ⁸ (² F)4s - 3d ⁷ 4s4p	⁴ F - v ⁴ F ^o	5/2 - 5/2	S11
Ni II	816.156	150		3d ⁸ (² F)4s - 3d ⁷ 4s4p	² F - v ² G ^o	7/2 - 5/2	S11
Ni II	817.884	1		3d ⁸ (² F)4s - 3d ⁸ (² F)7p	⁴ F - ⁴ G ^o	5/2 - 11/2	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	819.090	5		$3d^8(^3F)4s - 3d^8(^3F)7p$	$^4F - ^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	821.612	1		$3d^8(^3F)4s - 3d^8(^3F)8p$	$^3F - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	821.634	20		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - ^3D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	823.277	3		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - v^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	824.856	2		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - w^3D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	828.152	10		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - v^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	828.786	1		$3d^8(^3F)4s - 3d^7 4s 4p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	830.677	2		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - w^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	831.475	2		$3d^8 - 3d^8(^3F)4f$	$g^3D - ^3F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	834.059	100		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - w^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	835.739	0		$3d^8 - 3d^8(^3F)4f$	$g^3D - ^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	835.983	75		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - w^3F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	836.954	1		$3d^8(^3F)4s - 3d^8(^1D)4f$	$^3F - ^3H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	837.624	50		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - w^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	838.224	10		$3d^8(^3F)4s - 3d^8(^3F)6f$	$^3F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	838.524	1		$3d^8(^3F)4s - 3d^8(^3F)6f$	$^3F - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	838.834	50		$3d^8(^3F)4s - 3d^7 4s 4p$	$^3F - w^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	840.878	5		$3d^8 - 3d^8(^3F)4f$	$g^3D - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	841.056	10		$3d^8 - 3d^8(^3F)4f$	$g^3D - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	841.205	0		$3d^8 - 3d^8(^3F)4f$	$g^3D - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	844.748	2		$3d^8 - 3d^8(^1D)5p$	$g^2D - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	849.398	5		$3d^8(^3F)4s - 3d^8(^1D)4f$	$^3F - ^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	855.282	5		$3d^8(^3F)4s - 3d^8(^3F)7p$	$^3F - ^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	876.829	0		$3d^8(^3F)4s - 3d^8(^3F)6p$	$^4F - ^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	881.608	2		$3d^8(^3F)4s - 3d^8(^3F)6p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	888.818	5		$3d^8(^3F)4s - 3d^8(^3P)5p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	894.004	2		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - w^3D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	895.093	1		$3d^8(^3F)4s - 3d^8(^3P)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	895.458	15		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - w^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	896.168	5		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - w^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	898.716	2		$3d^8(^3F)4s - 3d^8(^3P)5p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	898.821	5		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - w^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	900.510	0		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - s^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	901.007	10		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - w^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	901.737	2		$3d^8(^3F)4s - 3d^8(^3P)5p$	$^4F - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	901.999	50		$3d^8(^1F)4s - 3d^7 4s 4p$	$^3D - s^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	902.687	1		$3d^8(^3P)4s - 3d^8(^3F)6f$	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$	S11
Ni II	902.996	75		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - s^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	904.205	2		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - w^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	904.986	1		$3d^8(^3F)4s - 3d^8(^3F)4f$	$^4F - ^4H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	905.634	100		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - v^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	905.696	3		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - w^3F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	906.123	15		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - s^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	906.237	2		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - w^3P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	906.906	1		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - w^3P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	907.630	50		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - s^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	907.692	10		$3d^8(^3F)4s - 3d^8(^1D)5p$	$^4F - ^3F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	908.258	40		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - v^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	908.584	20		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - w^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	909.683	10		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	911.187	15		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - w^3D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	913.187	2		$3d^8(^3P)4s - 3d^8(^3F)6f$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	913.279	3		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	913.678	75		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	913.909	15		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - w^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	914.343	50		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	914.743	40		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	915.471	1		$3d^8(^3F)4s - 3d^8(^1D)5p$	$^4F - ^3F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	915.877	75		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	915.920	30		$3d^8(^3F)4s - 3d^7 4s 4p$	$^4F - w^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	916.449	1		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - v^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	917.017	10		$3d^8(^3F)4s - 3d^8(^1D)5p$	$^4F - ^3F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	917.962	15		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	918.022	3		$3d^8(^1D)4s - 3d^8(^1D)4f$	$^3D - ^2F^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	918.994	150		$3d^8(^3P)4s - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	920.451	10		$3d^8(^3F)4s - 3d^7 4s 4p$	$^4F - w^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	921.299	1		$3d^8(^3F)4s - 3d^8(^1D)5p$	$^4F - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	921.730	75		$3d^8(^2P)4s - 3d^7 4s 4p$	$^4P - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	922.331	15		$3d^8(^2P)4s - 3d^7 4s 4p$	$^4P - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	924.710	1		$3d^8(^2F)4s - 3d^7 4s 4p$	$^2F - x^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	924.783	10		$3d^8(^2P)4s - 3d^7 4s 4p$	$^4P - w^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	924.912	20		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	925.100	2		$3d^8(^2P)4s - 3d^8(^1D)4f$	$^4P - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	925.578	1		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - v^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	927.820	5		$3d^8(^2F)4s - 3d^8(^1D)5p$	$^4F - ^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	928.953	3		$3d^8(^2P)4s - 3d^8(^1D)5p$	$^4F - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	929.586	1		$3d^8(^2F)4s - 3d^8(^2P)5p$	$^2F - ^4I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	929.681	3		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	929.831	5		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	930.707	3		$3d^8(^2P)4s - 3d^8(^2F)6f$	$^2P - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	931.191	1		$3d^8(^2P)4s - 3d^7 4s 4p$	$^4P - v^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	931.501	2		$3d^8(^2F)4s - 3d^8(^2P)5p$	$^2F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	933.339	2		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	933.866	1		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	935.085	2		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	935.200	1		$3d^8(^2P)4s - 3d^8(^2F)6f$	$^2P - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	936.188	1		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	939.276	30		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	940.886	20		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	941.972	10		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	941.996	4		$3d^8(^2P)4s - 3d^8(^2P)4f$	$^2P - ^2I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	942.587	5		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	944.343	1		$3d^8(^2P)4s - 3d^7 4s 4p$	$^2P - w^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	944.634	30		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	944.842	10		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	945.965	75		$3d^8(^2P)4s - 3d^7 4s 4p$	$^2P - w^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	946.657	15		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	946.769	3		$3d^8(^1G)4s - 3d^8(^2F)9p$	$^2G - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	947.195	2		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	949.024	0		$3d^8(^2P)4s - 3d^7 4s 4p$	$^2P - w^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	949.137	1		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	952.027	1		$3d^8(^1G)4s - 3d^8(^2F)8p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	952.266	8		$3d^8(^2F)4s - 3d^8(^1D)5p$	$^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	952.340	1		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	953.033	10		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	953.937	2		$3d^8(^2F)4s - 3d^8(^1D)5p$	$^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	954.911	1		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	955.601	10		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	956.912	3		$3d^8 - 3d^8(^2F)5p$	$g^2D - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	959.931	5		$3d^8(^1G)4s - 3d^8(^2F)8p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	960.261	5		$3d^8(^2P)4s - 3d^7 4s 4p$	$^2P - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	961.516	1		$3d^8(^1G)4s - 3d^8(^2F)6f$	$^2G - ^4I^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	962.526	1		$3d^8(^1G)4s - 3d^8(^1D)6p$	$^2G - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	962.750	1		$3d^8(^1G)4s - 3d^8(^1D)6p$	$^2G - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	963.855	15					S11
Ni II	965.470	20		$3d^8(^1G)4s - 3d^7 4s 4p$	$^2G - v^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	968.784	20		$3d^8(^1G)4s - 3d^7 4s 4p$	$^2G - v^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	971.415	50		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - x^4S^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	973.121	1		$3d^8(^1G)4s - 3d^8(^2F)8p$	$^2G - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	977.276	10					S11
Ni II	978.103	25					S11
Ni II	981.768	50		$3d^8(^1G)4s - 3d^7 4s 4p$	$^2G - w^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	983.004	3		$3d^8(^1G)4s - 3d^8(^2F)6f$	$^2G - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	983.431	1		$3d^8(^1G)4s - 3d^7 4s 4p$	$^2G - w^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	983.592	2		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	985.918	10					S11
Ni II	987.339	4		$3d^8(^2F)4s - 3d^7 4s 4p$	$^2F - w^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	988.338	10					S11
Ni II	990.626	100		$3d^8(^1G)4s - 3d^7 4s 4p$	$^2G - w^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	992.516	20		$3d^8(^2F)4s - 3d^7 4s 4p$	$^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	993.128	15		$3d^8(^3F)4s - 3d^74s4p$	$^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	993.341	1		$3d^8(^1G)4s - 3d^74s4p$	$^2G - w^2I^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	994.867	10		$3d^8(^3F)4s - 3d^74s4p$	$^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	995.256	30					S11
Ni II	995.445	4		$3d^8(^3F)4s - 3d^74s4p$	$^4F - y^4F^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	S11
Ni II	995.453	3		$3d^8(^3F)4s - 3d^74s4p$	$^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	997.974	1		$3d^8(^3F)4s - 3d^74s4p$	$^2F - x^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1008.218	10					S11
Ni II	1016.622	20					S11
Ni II	1021.060	5		$3d^8(^1D)4s - 3d^8(^3P)5p$	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1023.961	3		$3d^8(^1D)4s - 3d^8(^3P)5p$	$^2D - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1023.999	15					S11
Ni II	1024.720	50		$3d^8(^3F)4s - 3d^74s4p$	$^4F - y^4F^{\circ}$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1023.208	20		$3d^8(^1D)4s - 3d^8(^3P)5p$	$^2D - ^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1031.306	1		$3d^8(^3P)4s - 3d^8(^3P)5p$	$^4P - ^3D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1032.749	2		$3d^8(^3P)4s - 3d^74s4p$	$^4P - x^2G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1033.443	10		$3d^8(^3P)4s - 3d^8(^3P)5p$	$^4P - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1034.155	15					S11
Ni II	1034.249	10		$3d^8(^1D)4s - 3d^8(^3P)5p$	$^2D - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1036.182	2		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1038.866	5		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1042.704	2		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1044.349	30		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4G^{\circ}$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1044.871	2		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4F^{\circ}$	$\frac{3}{2} - \frac{11}{2}$	S11
Ni II	1045.073	15		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1045.813	5		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1046.537	8		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1048.400	6		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4I - ^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1048.936	1		$3d^8(^1D)4s - 3d^8(^1D)5p$	$^2D - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1048.982	3		$3d^8(^3P)4s - 3d^8(^3P)5p$	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1049.051	1		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1049.137	8		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1049.755	100		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1050.718	3		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1052.534	10		$3d^8(^3P)4s - 3d^8(^3P)5p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1052.983	2		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1053.729	15					S11
Ni II	1055.246	15		$3d^8(^1D)4s - 3d^8(^1D)5p$	$^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1055.291	30		$3d^8(^3P)4s - 3d^8(^3P)5p$	$^4P - ^4P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1062.965	1		$3d^8(^1D)4s - 3d^8(^1D)5p$	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1070.590	10		$3d^8(^3P)4s - 3d^8(^1D)5p$	$^4P - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1075.551	3		$3d^8(^3P)4s - 3d^8(^1D)5p$	$^4P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1076.006	2		$3d^8(^3P)4s - 3d^74s4p$	$^4P - w^4F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1077.163	4		$3d^8(^3P)4s - 3d^8(^1D)5p$	$^4P - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1081.035	200		$3d^8(^1G)4s - 3d^74s4p$	$^2G - y^2H^{\circ}$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1085.441	150		$3d^8(^1G)4s - 3d^74s4p$	$^2G - y^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1086.503	4		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^2F - ^2G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1091.407	4		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^2F - ^2G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1099.471	1		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^2F - ^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1101.956	5		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^2F - ^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1104.602	1		$3d^8(^3F)4s - 3d^8(^3F)5p$	$^2F - ^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1108.729	30					S11
Ni II	1116.557	40		$3d^8(^3P)4s - 3d^8(^1D)5p$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1118.404	20					S11
Ni II	1118.547	25					S11
Ni II	1118.921	10		$3d^8(^3P)4s - 3d^8(^1D)5p$	$^2P - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1119.330	75		$3d^8(^1G)4s - 3d^74s4p$	$^2G - x^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1121.162	125		$3d^8(^1G)4s - 3d^74s4p$	$^2G - x^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1123.113	2		$3d^8(^3P)4s - 3d^8(^1D)5p$	$^2P - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1127.486	5		$3d^8(^3P)4s - 3d^8(^1D)5p$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1135.730	75		$3d^8(^3F)4s - 3d^74s4p$	$^2F - z^2D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1134.533	150		$3d^8(^3F)4s - 3d^74s4p$	$^4F - z^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1137.091	100		$3d^8(^3F)4s - 3d^74s4p$	$^4F - z^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1138.547	10					S11
Ni II	1139.009	3		$3d^74s^2 - 3d^8(^3P)6p$	$^4F - ^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1139.638	75		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	³ F - z ² D°	½ - ½	S11
Ni II	1140.459	75		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ D°	½ - ½	S11
Ni II	1143.397	50		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ D°	½ - ½	S11
Ni II	1147.633	1		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ D°	½ - ½	S11
Ni II	1154.416	150		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	½ - ½	S11
Ni II	1157.132	1		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ D°	½ - ½	S11
Ni II	1158.830	100		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	³ F - z ² G°	½ - ½	S11
Ni II	1159.510	150		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	½ - ½	S11
Ni II	1160.776	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8d	⁴ D° - ⁴ D	½ - ½	S11
Ni II	1161.297	15					S11
Ni II	1161.927	1		3d ⁸ (¹ G)4s - 3d ⁸ (¹ D)5p	² G - ² F°	½ - ½	S11
Ni II	1162.748	150		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	½ - ½	S11
Ni II	1163.645	50		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	½ - ½	S11
Ni II	1163.729	8		3d ⁸ (¹ D)4s - 3d ⁷ 4s4p	² D - z ² P°	½ - ½	S11
Ni II	1164.279	150		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ F°	½ - ½	S11
Ni II	1164.574	100		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	³ F - z ² F°	½ - ½	S11
Ni II	1165.798	12		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ F°	½ - ½	S11
Ni II	1167.030	25		2d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	½ - ½	S11
Ni II	1167.803	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1168.040	75		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	³ F - z ² F°	½ - ½	S11
Ni II	1170.169	20		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	½ - ½	S11
Ni II	1171.117	15		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	½ - ½	S11
Ni II	1171.291	100		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ F°	½ - ½	S11
Ni II	1173.121	1		3d ⁸ (¹ D)4s - 3d ⁷ 4s4p	² D - z ² P°	½ - ½	S11
Ni II	1173.256	50		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ F°	½ - ½	S11
Ni II	1173.477	75		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ F°	½ - ½	S11
Ni II	1177.006	1		3d ⁸ (³ F)4p - 3d ⁸ (³ P)5d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1177.109	50		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ F°	½ - ½	S11
Ni II	1178.271	30		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	³ F - z ² G°	½ - ½	S11
Ni II	1180.271	150		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	³ F - z ² G°	½ - ½	S11
Ni II	1181.075	30		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ F°	½ - ½	S11
Ni II	1181.620	15		3d ⁸ (¹ D)4s - 3d ⁷ 4s4p	² D - z ² S°	½ - ½	S11
Ni II	1182.169	75		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ F°	½ - ½	S11
Ni II	1184.512	20		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	³ F - z ² F°	½ - ½	S11
Ni II	1184.980	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8d	⁴ G° - ⁴ G	½ - ½	S11
Ni II	1185.146	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8d	⁴ G° - ⁴ H	½ - ½	S11
Ni II	1186.347	1		3d ⁷ 4s ² - 3d ⁸ (³ F)8p	⁴ F - ⁴ G°	½ - ½	S11
Ni II	1186.933	8		3d ⁸ (³ P)4s - 3d ⁷ 4s4p	⁴ P - z ² P°	½ - ½	S11
Ni II	1186.993	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8d	⁴ G° - ⁴ H	½ - ½	S11
Ni II	1187.102	20		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8d	⁴ G° - ⁴ H	½ - ½	S11
Ni II	1187.608	15		3d ⁸ (³ P)4s - 3d ⁷ 4s4p	⁴ P - z ² P°	½ - ½	S11
Ni II	1190.442	1		3d ⁸ (³ P)4s - 3d ⁷ 4s4p	⁴ P - z ² P°	½ - ½	S11
Ni II	1192.306	5		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ G° - ⁴ F	½ - ½	S11
Ni II	1192.596	0		3d ⁸ (³ F)4p - 3d ⁸ (³ P)5d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1192.983	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ G° - ⁴ F	½ - ½	S11
Ni II	1193.267	5		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8d	² G° - ² H	½ - ½	S11
Ni II	1194.857	15		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ G° - ⁴ F	½ - ½	S11
Ni II	1200.307	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ D° - ² F	½ - ½	S11
Ni II	1201.002	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	² G° - ² F	½ - ½	S11
Ni II	1201.119	8		3d ⁷ 4s ² - 3d ⁸ (³ P)4f	⁴ F - ⁴ F°	½ - ½	S11
Ni II	1201.838	5		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ D° - ² F	½ - ½	S11
Ni II	1201.957	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8d	⁴ F - ⁴ G	½ - ½	S11
Ni II	1202.452	8		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1202.511	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ F° - ⁴ F	½ - ½	S11
Ni II	1202.911	3		3d ⁸ (³ F)4p - 3d ⁸ (³ P)5d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1204.102	30		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1205.088	15		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ D° - ⁴ P	½ - ½	S11
Ni II	1205.201	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ G° - ⁴ F	½ - ½	S11
Ni II	1205.266	20		2d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ D° - ⁴ D	½ - ½	S11
Ni II	1205.552	10		3d ⁸ (³ P)4s - 3d ⁷ 4s4p	⁴ P - z ⁴ S°	½ - ½	S11
Ni II	1206.246	7		3d ⁸ (³ P)4s - 3d ⁷ 4s4p	⁴ P - z ⁴ S°	½ - ½	S11
Ni II	1207.567	0		3d ⁷ 4s ² - 3d ⁸ (³ P)4f	⁴ F - ⁴ D°	½ - ½	S11
Ni II	1207.620	4		3d ⁷ 4s ² - 3d ⁷ 4s4p	⁴ F - v ⁴ F°	½ - ½	S11
Ni II	1207.654	3		3d ⁷ 4s ² - 3d ⁷ 4s4p	⁴ F - s ⁴ D°	½ - ½	S11
Ni II	1208.433	1		3d ⁸ (¹ D)4s - 3d ⁸ (³ F)5p	² D - ² D°	½ - ½	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1209.170	7		3d ⁸ (³ P)4s - 3d ⁷ 4s4p	⁴ P - z ⁴ S°	½ - ¾	S11
Ni II	1209.492	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ F° - ⁴ F	¾ - ¾	S11
Ni II	1210.192	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ F° - ⁴ F	¾ - ¾	S11
Ni II	1210.729	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ H	¾ - ¾	S11
Ni II	1210.790	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ³ H	¾ - 1½	S11
Ni II	1211.403	1		3d ⁸ (³ F)4p - 3d ⁸ (³ P)5d	⁴ D° - ⁴ P	½ - ½	S11
Ni II	1212.959	0		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8d	² G° - ⁴ H	¾ - 1½	S11
Ni II	1213.361	7		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ D° - ³ F	¾ - ¾	S11
Ni II	1214.104	3		3d ⁸ (³ F)4p - 3d ⁸ (¹ D)5d	⁴ D° - ² G	½ - ¾	S11
Ni II	1214.153	40		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ D° - ³ F	¾ - ¾	S11
Ni II	1214.350	i		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ D° - ⁴ F	¾ - ¾	S11
Ni II	1217.180	100		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ D° - ⁴ F	¾ - ¾	S11
Ni II	1217.692	1		3d ⁷ 4s ³ - 3d ⁷ 4s4p	⁴ F - w ³ F°	¾ - ¾	S11
Ni II	1220.530	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ D° - ⁴ P	¾ - ¾	S11
Ni II	1220.950	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ D° - ⁴ F	¾ - ¾	S11
Ni II	1221.213	1		3d ⁸ (³ F)4p - 3d ⁸ (³ P)6s	⁴ D° - ⁴ P	¾ - ¾	S11
Ni II	1221.289	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ G	¾ - ¾	S11
Ni II	1221.992	40		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ F	¾ - ¾	S11
Ni II	1222.220	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)9s	⁴ F° - ⁴ F	¾ - ¾	S11
Ni II	1222.395	20		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ D° - ⁴ F	½ - ¾	S11
Ni II	1222.678	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ G° - ³ F	¾ - ¾	S11
Ni II	1222.989	1		3d ⁷ 4s ² - 3d ⁷ 4s4p	⁴ F - s ⁴ D°	¾ - ¾	S11
Ni II	1223.466	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ G° - ³ F	¾ - ¾	S11
Ni II	1223.643	5		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ G	¾ - ¾	S11
Ni II	1223.775	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ² G	¾ - ¾	S11
Ni II	1224.033	75		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ H	¾ - ¾	S11
Ni II	1224.268	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ³ F	¾ - ¾	S11
Ni II	1224.839	2		3d ⁸ (¹ D)4s - 3d ⁸ (³ F)5p	³ D - ⁴ D°	¾ - ¾	S11
Ni II	1226.628	25		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	¾ - ¾	S11
Ni II	1227.267	15		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ D° - ⁴ F	¾ - ¾	S11
Ni II	1227.491	5		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	³ F - z ⁴ G°	¾ - ¾	S11
Ni II	1228.581	0		3d ⁸ (¹ D)4s - 3d ⁸ (³ F)5p	³ D - ⁴ D°	¾ - ¾	S11
Ni II	1229.684	10		3d ⁷ 4s ³ - 3d ⁷ 4s4p	⁴ F - v ⁴ F°	¾ - ¾	S11
Ni II	1230.116	8		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ G	¾ - ¾	S11
Ni II	1230.367	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ F	¾ - ¾	S11
Ni II	1230.782	40		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ G	¾ - 1½	S11
Ni II	1230.869	50					S11
Ni II	1230.889	25		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ F	¾ - ¾	S11
Ni II	1231.041	100		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ H	¾ - 1½	S11
Ni II	1232.107	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ D	¾ - ¾	S11
Ni II	1232.773	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ G	1½ - 1½	S11
Ni II	1232.886	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ F	1½ - 1½	S11
Ni II	1233.036	15		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ H	1½ - 1½	S11
Ni II	1233.250	150		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ H	1½ - 1½	S11
Ni II	1233.484	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ D° - ⁴ F	¾ - ¾	S11
Ni II	1233.557	100		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	¾ - 1½	S11
Ni II	1234.092	0		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ G° - ³ F	¾ - ¾	S11
Ni II	1234.375	4		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ³ D	¾ - ¾	S11
Ni II	1234.659	1		3d ⁸ (³ F)4p - 3d ⁸ (¹ D)5d	⁴ D° - ² F	¾ - ¾	S11
Ni II	1235.069	6		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ G	¾ - ¾	S11
Ni II	1235.112	20		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ G° - ⁴ F	¾ - ¾	S11
Ni II	1235.405	10		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	¾ - ¾	S11
Ni II	1236.474	0		3d ⁸ (³ F)4p - 3d ⁸ (³ P)6s	⁴ D° - ⁴ P	¾ - ¾	S11
Ni II	1236.799	25		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ G° - ⁴ F	¾ - ¾	S11
Ni II	1237.049	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ G° - ³ F	¾ - ¾	S11
Ni II	1237.247	1		3d ⁸ (³ P)4s - 3d ⁸ (³ F)5p	⁴ P - ³ D°	¾ - ¾	S11
Ni II	1237.260	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ F° - ⁴ G	¾ - ¾	S11
Ni II	1237.976	8		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ F° - ⁴ F	¾ - ¾	S11
Ni II	1238.919	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ G° - ⁴ D	¾ - ¾	S11
Ni II	1239.061	25		3d ⁷ 4s ³ - 3d ⁸ (¹ D)4f	⁴ F - ³ D°	¾ - ¾	S11
Ni II	1239.506	12		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	³ G° - ³ G	¾ - ¾	S11
Ni II	1239.832	60		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² G° - ³ H	¾ - 1½	S11
Ni II	1240.012	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	³ G° - ³ F	¾ - ¾	S11
Ni II	1240.877	50		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - z ⁴ G°	¾ - ¾	S11
Ni II	1241.189	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	⁴ F° - ⁴ G	¾ - ¾	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1241.233	2		$3d^8(3F)4p - 3d^8(3F)7d$	$2G^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1241.320	10		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1241.548	3		$3d^8(3D)4s - 3d^8(3F)5p$	$2D - 4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1241.588	10		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4H$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1241.827	1		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1242.099	30		$3d^8(3F)4p - 3d^8(3F)7d$	$2G^{\circ} - 2H$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1242.627	6		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1243.093	75		$3d^8(3F)4p - 3d^8(3F)8s$	$4G^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1243.345	1		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1243.622	3		$3d^8(3F)4s - 3d^7 4s 4p$	$4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1243.848	5		$3d^8(3F)4p - 3d^8(3F)7d$	$4G^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1244.104	3		$3d^8(3F)4p - 3d^8(3F)7d$	$4G^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1244.255	5		$3d^8(3F)4p - 3d^8(1D)5d$	$4G^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1244.560	50		$3d^8(3F)4p - 3d^8(3F)8s$	$4G^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1244.811	100					S11
Ni II	1246.598	150		$3d^8(3F)4p - 3d^8(3F)8s$	$4G^{\circ} - 4F$	$\frac{11}{2} - \frac{7}{2}$	S11
Ni II	1247.333	20		$3d^7 4s^2 - 3d^7 4s 4p$	$4F - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1247.509	6		$3d^8(3F)4s - 3d^7 4s 4p$	$4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1247.568	1		$3d^8(3F)4p - 3d^8(3F)9s$	$2F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1248.413	9		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1248.467	10		$3d^8(3F)4p - 3d^8(3F)8s$	$4G^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1248.844	4		$3d^8(3F)4p - 3d^8(3F)6g$	$4G^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1249.101	100		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4G$	$\frac{7}{2} - \frac{11}{2}$	S11
Ni II	1249.213	8		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1249.369	3		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4H$	$\frac{7}{2} - \frac{11}{2}$	S11
Ni II	1250.467	6		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1250.685	4		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 2D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1251.394	10		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1251.438	16		$3d^8(3F)4p - 3d^8(3F)8s$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1252.879	1		$3d^8(3F)4p - 3d^8(3F)9s$	$2D^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1253.122	50		$3d^8(3F)4p - 3d^8(3F)8s$	$2G^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1253.477	75		$3d^8(3F)4s - 3d^7 4s 4p$	$4F - z^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1253.599	4		$3d^8(3F)4s - 3d^7 4s 4p$	$4F - z^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1254.299	2		$3d^8(3F)4p - 3d^8(1D)5d$	$4D^{\circ} - 2D$	$\frac{11}{2} - \frac{7}{2}$	S11
Ni II	1254.346	0		$3d^7 4s^2 - 3d^8(3F)7p$	$4F - 2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1254.471	1		$3d^8(3F)4s - 3d^8(3F)5p$	$4P - 4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1254.721	50		$3d^8(3F)4p - 3d^8(3F)8s$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1254.978	7		$3d^8(3F)4p - 3d^8(3F)8s$	$4F^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1255.034	8		$3d^8(3F)4p - 3d^8(3F)8s$	$2G^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1255.335	6		$3d^8(3F)4p - 3d^8(3F)7d$	$2G^{\circ} - 2D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1256.029	5		$3d^7 4s^2 - 3d^8(3F)7p$	$4F - 4G^{\circ}$	$\frac{7}{2} - \frac{11}{2}$	S11
Ni II	1256.187	6		$3d^8(3F)4p - 3d^8(3F)7d$	$2G^{\circ} - 2G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1256.459	0		$3d^8(3F)4p - 3d^8(3F)7d$	$2G^{\circ} - 4H$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1256.708	1		$3d^8(3F)4p - 3d^8(3F)7d$	$2G^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1256.905	6		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1256.930	40		$3d^8(3F)4p - 3d^8(3F)8s$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1257.116	8		$3d^8(3F)4p - 3d^8(3F)8s$	$4G^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1258.303	0		$3d^8(3F)4p - 3d^8(1D)5d$	$4G^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1259.886	1		$3d^8(3F)4p - 3d^8(1D)5d$	$4F^{\circ} - 2G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1261.068	1		$3d^8(3F)4p - 3d^8(3F)7d$	$2G^{\circ} - 4H$	$\frac{7}{2} - \frac{11}{2}$	S11
Ni II	1261.786	12		$3d^8(3F)4p - 3d^8(3F)8s$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1261.975	10		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1262.239	8		$3d^8(3F)4p - 3d^8(3F)7d$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1262.979	2		$3d^8(3F)4p - 3d^8(1D)5d$	$4F^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1263.294	100		$3d^8(3F)4p - 3d^8(3F)8s$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1265.157	14		$3d^8(3F)4p - 3d^8(3F)8s$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1266.065	1		$3d^8(3F)4s - 3d^7 4s 4p$	$4F - z^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1266.608	8		$3d^8(3F)4p - 3d^8(3F)7d$	$2F^{\circ} - 2D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1267.478	6		$3d^8(3F)4p - 3d^8(3F)7d$	$2F^{\circ} - 2G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1268.007	8		$3d^8(3F)4p - 3d^8(3F)7d$	$2F^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1268.359	2		$3d^8(3F)4s - 3d^7 4s 4p$	$4F - z^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1269.059	1		$3d^8(3F)4s - 3d^7 4s 4p$	$4F - z^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1269.917	2		$3d^8(3F)4p - 3d^8(3F)8s$	$2G^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1270.061	1		$3d^7 4s^2 - 3d^7 4s 4p$	$4F - 1^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1270.180	15		$3d^8(3F)4p - 3d^8(3F)8s$	$2G^{\circ} - 2F$	$\frac{7}{2} - \frac{7}{2}$	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1271.993	1		3d ⁸ (² P)4s - 3d ⁷ (⁴ F)5p	⁴ P - ⁴ D°	½ - ½	S11
Ni II	1272.080	1		3d ⁸ (³ F)4p - 3d ⁸ (² F)7d	² D° - ² D	½ - ½	S11
Ni II	1273.488	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² D° - ² F	½ - ½	S11
Ni II	1273.717	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	² G° - ⁴ F	½ - ½	S11
Ni II	1274.180	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² D° - ⁴ F	½ - ½	S11
Ni II	1274.270	100		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - ² F°	½ - ½	S11
Ni II	1274.802	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² F° - ² G	½ - ½	S11
Ni II	1275.640	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	⁴ F° - ⁴ F	½ - ½	S11
Ni II	1276.859	1		3d ⁸ (³ F)4p - 3d ⁸ (¹ D)5d	⁴ F° - ² F	½ - ½	S11
Ni II	1277.243	20		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ² D	½ - ½	S11
Ni II	1277.344	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² G° - ⁴ G	½ - ½	S11
Ni II	1277.617	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² G° - ⁴ F	½ - ½	S11
Ni II	1277.725	2		3d ⁷ 4s ² - 3d ⁸ (³ F)7p	⁴ F - ⁴ F°	½ - ½	S11
Ni II	1277.967	18		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² D° - ² P	½ - ½	S11
Ni II	1278.637	100		3d ⁸ (³ F)4s - 3d ⁷ 4s ² p	⁴ F - ² F°	½ - ½	S11
Ni II	1279.400	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ² F	½ - ½	S11
Ni II	1281.056	1		3d ⁸ (³ F)4p - 3d ⁸ (³ P)5d	² D° - ⁴ F	½ - ½	S11
Ni II	1281.609	5		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ² F	½ - ½	S11
Ni II	1281.704	4		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ² P	½ - ½	S11
Ni II	1281.723	12		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	² F° - ² F	½ - ½	S11
Ni II	1281.834	20		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - ² F°	½ - ½	S11
Ni II	1282.179	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1282.732	1		3d ⁸ (¹ D)4s - 3d ⁷ 4s4p	² D - ² D°	½ - ½	S11
Ni II	1282.825	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ² P	½ - ½	S11
Ni II	1283.399	12		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - ² F°	½ - ½	S11
Ni II	1283.731	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² F° - ⁴ D	½ - ½	S11
Ni II	1284.327	25		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1286.338	50		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ D	½ - ½	S11
Ni II	1286.396	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7s	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1286.561	50		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ P	½ - ½	S11
Ni II	1287.329	15		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	² D° - ² F	½ - ½	S11
Ni II	1289.024	9		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² F° - ⁴ G	½ - ½	S11
Ni II	1289.298	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² F° - ⁴ F	½ - ½	S11
Ni II	1289.354	7		3d ⁸ (³ F)4p - 3d ⁸ (¹ D)5d	² G° - ² G	½ - ½	S11
Ni II	1289.369	11		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	² F° - ² F	½ - ½	S11
Ni II	1289.513	2		3d ⁸ (³ P)4s - 3d ⁸ (³ F)5p	² P - ² D°	½ - ½	S11
Ni II	1289.656	6		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - ² F°	½ - ½	S11
Ni II	1289.682	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² F° - ² D	½ - ½	S11
Ni II	1290.442	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² F° - ⁴ G	½ - ½	S11
Ni II	1290.908	4		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - ² F°	½ - ½	S11
Ni II	1291.251	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1291.614	10		3d ⁸ (³ F)4s - 3d ⁷ 4s4p	⁴ F - ² F°	½ - ½	S11
Ni II	1292.033	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ² D	½ - ½	S11
Ni II	1292.224	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ G° - ² H	½ - ½	S11
Ni II	1293.232	5		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² D° - ² D	½ - ½	S11
Ni II	1293.533	6		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ D	½ - ½	S11
Ni II	1294.509	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² D° - ⁴ P	½ - ½	S11
Ni II	1294.968	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7d	² D° - ⁴ F	½ - ½	S11
Ni II	1296.950	13		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ D	½ - ½	S11
Ni II	1297.087	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1297.417	3		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ P	½ - ½	S11
Ni II	1302.246	10		3d ⁸ (³ P)4s - 3d ⁸ (³ F)5p	² P - ² D°	½ - ½	S11
Ni II	1302.603	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ G° - ² D	½ - ½	S11
Ni II	1303.078	4		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ P	½ - ½	S11
Ni II	1303.170	2		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ D° - ⁴ F	½ - ½	S11
Ni II	1303.237	0		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ G° - ² G	½ - ½	S11
Ni II	1303.283	5		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	² F° - ⁴ F	½ - ½	S11
Ni II	1304.555	1		3d ⁸ (³ F)4p - 3d ⁸ (¹ D)5d	² F° - ² F	½ - ½	S11
Ni II	1304.594	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ G° - ⁴ G	½ - ½	S11
Ni II	1305.083	6		3d ⁸ (³ F)4p - 3d ⁸ (³ F)8s	² F° - ⁴ F	½ - ½	S11
Ni II	1305.169	25		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ G° - ⁴ H	½ - ½	S11
Ni II	1306.279	4		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ G° - ⁴ G	½ - ½	S11
Ni II	1306.528	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ G° - ² G	½ - ½	S11
Ni II	1306.621	6		3d ⁸ (³ F)4p - 3d ⁸ (³ F)7s	⁴ D° - ² F	½ - ½	S11
Ni II	1307.146	10		3d ⁸ (³ F)4p - 3d ⁸ (³ F)6d	⁴ G° - ² F	½ - ½	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1307.276	50		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4H$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1308.714	8		$3d^8(3F)4p - 3d^8(3F)6s$	$3D^{\circ} - 4F$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1308.869	16	10	$3d^8 - 3d^8(1G)4p$	$g^3D - 3F^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1309.079	0		$3d^8(3F)4p - 3d^8(3F)8s$	$3D^{\circ} - 4F$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1310.358	1		$3d^8(3F)4p - 3d^8(1D)5d$	$3D^{\circ} - 3F$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1310.457	15		$3d^8(3F)4p - 3d^8(3F)7s$	$4D^{\circ} - 4F$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1311.152	1		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 3H$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1313.403	7		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4G$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1313.903	2		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4F$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1314.771	12		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4G$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1314.847	12		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1315.255	70		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4H$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1315.558	3		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 3D$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1316.502	4		$3d^8(3F)4p - 3d^8(3F)7s$	$4D^{\circ} - 4F$	$\frac{1}{2} - \frac{9}{2}$	S11
Ni II	1317.045	6		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4G$	$\frac{11}{2} - \frac{11}{2}$	S11
Ni II	1317.122	10		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4F$	$\frac{11}{2} - \frac{9}{2}$	S11
Ni II	1317.220	500	10	$3d^8 - 3d^8(1G)4p$	$g^3D - 3F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1317.531	15		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4H$	$\frac{11}{2} - \frac{11}{2}$	S11
Ni II	1318.017	100		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4H$	$\frac{11}{2} - \frac{11}{2}$	S11
Ni II	1319.310	8		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4G$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1320.799	0		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1321.432	3		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 3G$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1321.704	2		$3d^8(3F)4p - 3d^8(3F)7s$	$4D^{\circ} - 4F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1322.825	2		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4G$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1323.107	1		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4D$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1323.417	25		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4H$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1324.475	25		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 3G$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1325.105	1		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 3F$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1325.242	1		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 4H$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1325.359	100		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 3H$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1325.691	4		$3d^8(3P)4s - 3d^8(3F)5p$	$3P - 4D^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	S11
Ni II	1326.292	7		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1326.548	11		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 3G$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1326.623	12		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 3G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1327.187	3		$3d^8(3F)4p - 3d^8(1D)5d$	$3D^{\circ} - 3D$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1327.319	20		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4H$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1327.730	8		$3d^8(3F)4p - 3d^8(3F)8s$	$3F^{\circ} - 4F$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1327.755	50		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 3H$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1328.847	3		$3d^8(3F)4p - 3d^8(3F)7s$	$4D^{\circ} - 4F$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1328.964	25		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4G$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1329.857	13		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4F$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1331.264	9		$3d^8(3F)4p - 3d^8(3F)7s$	$4G^{\circ} - 4F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1332.706	1		$3d^8(3F)4p - 3d^8(3F)6d$	$4G^{\circ} - 4D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1332.766	6		$3d^8(3F)4p - 3d^8(3F)7s$	$4G^{\circ} - 4F$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1332.808	7		$3d^8(3F)4p - 3d^8(1D)5d$	$3D^{\circ} - 3F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1333.171	3		$3d^8(3F)4p - 3d^8(3F)7s$	$4G^{\circ} - 3F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1334.101	10		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 3D$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1334.287	12		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4G$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1335.203	400		$3d^8 - 3d^8(1G)4p$	$g^3D - 3F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1335.779	18		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1336.201	2		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4H$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1337.958	15		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4D$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1338.402	1		$3d^8(3F)4p - 3d^8(3F)6d$	$3F^{\circ} - 3F$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1339.221	3		$3d^8(3F)4p - 3d^8(3F)6d$	$3F^{\circ} - 3G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1339.394	1		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 3D$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1339.487	3		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1340.007	15		$3d^8(3F)4p - 3d^8(3F)7s$	$4G^{\circ} - 4F$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1340.374	20		$3d^8(3F)4p - 3d^8(3F)6d$	$3F^{\circ} - 3H$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1341.226	0		$3d^8(1G)4s - 3d^8(3F)5p$	$3G - 3F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1342.242	20		$3d^8(3F)4p - 3d^8(3F)7s$	$4G^{\circ} - 4F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1343.544	10		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 3G$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1343.642	2		$3d^8(3F)4p - 3d^8(3F)6d$	$4F^{\circ} - 4D$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1344.196	2		$3d^8(3F)4p - 3d^8(3F)5g$	$4F^{\circ} - 4D$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1344.334	1		$3d^8(3F)4p - 3d^8(3F)6d$	$3G^{\circ} - 4H$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1344.614	50		$3d^8(3F)4p - 3d^8(3F)7s$	$4G^{\circ} - 4F$	$\frac{11}{2} - \frac{9}{2}$	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1345.882	50		$3d^0 - 3d^0(^2P)4p$	$g^2D - ^4S^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1346.334	1		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4G^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1348.333	30		$3d^0(^1D)4s - 3d^7 4s 4p$	$^2D - z^4D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1349.594	0		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2G^0 - ^4H$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1349.791	12		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^4F^0 - ^4G$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1350.256	5		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1350.321	10		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^4F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1351.287	10		$3d^0(^1D)4s - 3d^7 4s 4p$	$^2D - z^4D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1351.862	35		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^2G^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1352.237	10		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2F^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1353.606	8		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1353.821	15		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^2G^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1354.023	2		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4F^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1356.318	5		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4G^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1356.469	20		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2F^0 - ^2G$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1356.653	9		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1357.132	11		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2F^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1357.371	5		$3d^0(^2P)4s - 3d^7 4s 4p$	$^2P - z^2D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1358.475	25		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1358.992	15		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1360.956	14		$3d^0(^1D)4s - 3d^7 4s 4p$	$^2D - z^4D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1361.757	5		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1361.885	50		$3d^0(^1D)4s - 3d^7 4s 4p$	$^2D - z^4D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1362.926	20		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1363.421	3		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1363.540	2		$3d^0(^1G)4s - 3d^0(^2F)5p$	$^2G - ^2F^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1363.617	2		$3d^0(^2P)4s - 3d^7 4s 4p$	$^1P - z^4D^0$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1363.861	1		$3d^0(^2F)4s - 3d^7 4s 4p$	$^2F - z^4F^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1364.067	25		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1364.202	25		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2F^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1364.505	20		$3d^0(^2P)4s - 3d^7 4s 4p$	$^4P - z^4D^0$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1364.793	2		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1365.048	25		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2F^0 - ^2G$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1365.760	4		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1366.947	5		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^2F^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1367.067	20		$3d^0(^2P)4s - 3d^7 4s 4p$	$^3P - z^2D^0$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1367.394	1		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2G^0 - ^4G$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1368.171	10		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^4D^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1369.651	20		$3d^0(^2P)4s - 3d^7 4s 4p$	$^4P - z^4D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1370.136	500	8	$3d^0 - 3d^0(^2P)4p$	$g^3D - ^2P^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1370.549	25		$3d^0(^2P)4s - 3d^7 4s 4p$	$^4P - z^4D^0$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1370.804	4		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1371.733	1		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^2G^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1373.746	4		$3d^0 - 3d^0(^2P)4p$	$g^2D - ^4S^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1374.075	150	9	$3d^0 - 3d^0(^2P)4p$	$g^2D - ^2S^0$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1375.822	50		$3d^0(^2P)4s - 3d^7 4s 4p$	$^2P - z^2D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1377.001	10		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^4F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1377.912	7		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2G^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1378.578	1		$3d^0(^2P)4s - 3d^7 4s 4p$	$^4P - z^4D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1379.586	50		$3d^0(^1D)4s - 3d^7 4s 4p$	$^2D - z^4G^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1379.980	12		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1380.793	20		$3d^0(^2F)4p - 3d^0(^2F)6d$	$g^2D - ^2P^0$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1381.295	200	8	$3d^0 - 3d^0(^2P)4p$	$^4F - ^2G^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1381.423	6		$3d^7 4s^2 - 3d^0(^2F)6p$	$g^2D - ^2D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1381.694	4		$3d^0 - 3d^0(^2P)4p$	$^2D^0 - ^2D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1382.695	2		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2F^0 - ^4G$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1383.966	0		$3d^0(^1D)4s - 3d^7 4s 4p$	$^2D - z^4G^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1384.327	12		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2F^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1385.216	6		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^2F^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1386.063	1		$3d^0(^1G)4s - 3d^0(^2F)5p$	$^2G - ^4F^0$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1387.745	10		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1387.851	5		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1388.796	1		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^4P$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1391.761	2		$3d^0(^2F)4p - 3d^0(^2F)6d$	$^2D^0 - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1393.330	100		$3d^0(^2F)4p - 3d^0(^2F)7s$	$^2D^0 - ^2D^0$	$\frac{3}{2} - \frac{3}{2}$	S11
				$3d^0 - 3d^0(^2P)4p$	$g^2D - ^2D^0$	$\frac{3}{2} - \frac{3}{2}$	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1393.867	12		$3d^8(2F)4p - 3d^8(2F)7s$	$2F^{\circ} - 2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1396.695	10		$3d^8(1D)4s - 3d^7 4s 4p$	$2D - 2^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1396.790	14					
Ni II	1397.480	2					
Ni II	1397.858	2					
Ni II	1398.009	3		$3d^8(1G)4s - 3d^8(2F)5p$	$2G - 4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1398.612	40		$3d^8(2F)4p - 3d^8(2F)5g$	$2D^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1398.758	16					
Ni II	1399.026	80		$3d^8(2P)4s - 3d^7 4s 4p$	$4P - 2^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1399.361	12	8	$3d^8(2F)4p - 3d^8(2F)5g$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{9}{2}$	S11
Ni II	1400.644	30		$3d^8 - 3d^8(2P)4p$	$g^2D - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1402.379	20					
Ni II	1408.796	10		$3d^7 4s^2 - 3d^8(2F)6p$	$4F - 4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1409.612	15					
Ni II	1410.219	4		$3d^8(2F)4p - 3d^8(2F)6d$	$2F^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1411.071	100		$3d^8(2F)4p - 3d^8(2F)7s$	$2F^{\circ} - 4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1412.868	30		$3d^8 - 3d^8(2P)4p$	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1413.679	10		$3d^8 - 3d^8(2P)4p$	$g^2D - 4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1414.299	15					
Ni II	1414.444	1		$3d^8 - 3d^8(2P)4p$	$g^2D - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1415.728	20		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1416.060	12		$3d^8 - 3d^8(2P)4p$	$g^2D - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1416.660	0		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 2F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1417.007	10		$3d^8(2F)4p - 3d^8(2F)7s$	$2D^{\circ} - 4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1417.553	1		$3d^8(2F)4p - 3d^8(2F)7s$	$2D^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1417.699	10		$3d^8(2P)4s - 3d^7 4s 4p$	$4P - 2^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1420.674	5					
Ni II	1420.843	18		$3d^8(2P)4s - 3d^7 4s 4p$	$4P - 2^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1421.913	1		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1423.212	16		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1423.786	11		$3d^8 - 3d^8(2P)4p$	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1424.890	3		$3d^7 4s^2 - 3d^8(2F)6p$	$4F - 4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1425.025	10		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 2P$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1425.579	6					
Ni II	1425.604	3		$3d^7 4s^2 - 3d^8(2F)4f$	$4F - 4H^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1427.782	10		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1431.270	8					
Ni II	1431.492	25		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4P$		S11
Ni II	1433.745	1		$3d^7 4s^2 - 3d^8(2P)5p$	$4F - 4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1434.373	12		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4D$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1434.493	14		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1434.546	12					
Ni II	1434.688	1		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4D$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1434.837	1		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1435.348	5		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4P$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1436.165	50		$3d^8(2P)4s - 3d^7 4s 4p$	$4P - 2^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1439.094	8					
Ni II	1439.283	1		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1439.352	8		$3d^7 4s^2 - 3d^7 4s 4p$	$4F - 2^4G^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1443.080	13		$3d^8(2P)4p - 3d^8(2F)8s$	$4P^{\circ} - 2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1443.838	10		$3d^8(2P)4p - 3d^8(2F)7d$	$4P^{\circ} - 4D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1445.098	13		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1445.460	14		$3d^8(2P)4p - 3d^8(2P)5d$	$4P^{\circ} - 4D$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1446.589	20		$3d^8 - 3d^8(2P)4p$	$g^2D - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1450.005	14					
Ni II	1452.558	15		$3d^8 - 3d^8(2P)4p$	$g^2D - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1453.359	15		$3d^8 - 3d^8(1D)4p$	$g^2D - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1454.292	2					
Ni II	1454.852	20	7	$3d^7 4s^2 - 3d^8(2P)5p$	$4F - 4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1456.913	16		$3d^8(1D)4p - 3d^8(2P)5d$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1457.359	5		$3d^7 4s^2 - 3d^8(2P)5p$	$4F - 2^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1457.863	5		$3d^8 - 3d^8(1D)4p$	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1458.170	4					
Ni II	1458.342	4		$3d^8(1D)4p - 3d^8(2P)5d$	$2P^{\circ} - 4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1459.611	1		$3d^8(2F)4p - 3d^8(2F)5d$	$2F^{\circ} - 4D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II				$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II				$3d^8(1D)4p - 3d^8(2P)5d$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II				$3d^7 4s^2 - 3d^8(1D)6p$	$4P - 2^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11

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Ni II	1459.640	1		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4G$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1459.715	12		$3d^8(1D)4p - 3d^8(2P)5d$	$2F^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1459.809	9		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 2F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1460.078	6		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1460.136	1		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1460.312	1		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 2P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1460.408	2		$3d^8(1D)4p - 3d^8(2F)6g$	$2F^{\circ} - 2G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1461.840	8		$3d^8(2P)4p - 3d^8(2F)7d$	$4P^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1462.482	8		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 2P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1462.944	20		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1463.113	14		$3d^7 4s^2 - 3d^8(2P)5p$	$4F - 4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1464.301	8		$3d^8(1D)4p - 3d^8(2F)7d$	$2F^{\circ} - 4G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1464.369	10		$3d^8(1D)4p - 3d^8(2F)8s$	$2F^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1467.265	60		$3d^8 - 3d^8(1D)4p$	$2D^{\circ} - 2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1467.637	10		$3d^7 4s^2 - 3d^7 4s 4p$	$2G - w^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1467.694	10		$3d^8(1D)4p - 3d^8(2P)5d$	$2D^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1467.762	100	6	$3d^8 - 3d^8(1D)4p$	$2D^{\circ} - 2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1468.268	30		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1468.465	25		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1469.200	10		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1469.601	3		$3d^8(1D)4p - 3d^8(2P)5d$	$2P^{\circ} - 4D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1470.322	1		$3d^7 4s^2 - 3d^8(2P)5p$	$4F - 4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1470.386	2		$3d^8(1D)4p - 3d^8(2P)5d$	$2P^{\circ} - 4D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1470.666	5		$3d^8(1D)4p - 3d^8(2P)5d$	$2D^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1471.466	10		$3d^8(2P)4p - 3d^8(2F)7d$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1471.961	1		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1472.571	10		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1472.835	5		$3d^8(1D)4p - 3d^8(2F)8s$	$2D^{\circ} - 2F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1472.889	2		$3d^7 4s^2 - 3d^8(2F)4f$	$4F - 4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1473.249	1		$3d^8(1D)4p - 3d^8(2F)7d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1474.312	1		$3d^7 4s^2 - 3d^8(2F)4f$	$4F - 4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1474.597	4		$3d^8(2F)4p - 3d^8(2F)5d$	$4G^{\circ} - 2H$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1474.910	1		$3d^8(1D)4p - 3d^8(2P)5d$	$2P^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1475.270	3		$3d^7 4s^2 - 3d^8(2P)5p$	$4F - 4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1475.645	1		$3d^8(1D)4p - 3d^8(2P)5d$	$2P^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1475.734	3		$3d^7 4s^2 - 3d^8(2F)9p$	$2G - 4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1475.801	2		$3d^8(1D)4p - 3d^8(2P)5d$	$2P^{\circ} - 4P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1476.043	25		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1477.053	1		$3d^8(1D)4p - 3d^8(2F)8s$	$2P^{\circ} - 4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1477.227	4		$3d^8 - 3d^8(1D)4p$	$2D^{\circ} - 2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1477.264	1		$3d^7 4s^2 - 3d^8(2P)4f$	$4P - 4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1479.443	10		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1480.331	30		$3d^8(1D)4p - 3d^8(2P)5d$	$2D^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1481.091	75		$3d^7 4s^2 - 3d^8(1D)5p$	$4F - 2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1481.560	15		$3d^8(2P)4p - 3d^8(1D)5d$	$4P^{\circ} - 2P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1481.744	15		$3d^8(2P)4p - 3d^8(1D)5d$	$4P^{\circ} - 2P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1481.883	12		$3d^8(2P)4p - 3d^8(1D)5d$	$4P^{\circ} - 2D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1481.898	4		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 2P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1481.982	10		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1482.240	100		$3d^8(1D)4p - 3d^8(2P)5d$	$2D^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1482.393	8		$3d^8 - 3d^8(1D)4p$	$2D^{\circ} - 2P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1483.277	40		$3d^8(1D)4s - 3d^7 4s 4p$	$2D - z^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1483.554	15		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1484.227	25		$3d^8(2P)4p - 3d^8(1D)5d$	$4P^{\circ} - 2P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1484.592	1		$3d^8(2P)4p - 3d^8(1D)5d$	$4P^{\circ} - 2G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1485.185	10		$3d^8(2P)4p - 3d^8(1D)5d$	$4P^{\circ} - 2D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1485.375	60		$3d^8(1D)4p - 3d^8(2P)5d$	$2P^{\circ} - 4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1485.987	2		$3d^8(1D)4p - 3d^8(2F)7d$	$2D^{\circ} - 2C$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1486.372	5		$3d^8(2P)4p - 3d^8(2P)6s$	$4P^{\circ} - 4P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1486.668	7		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1487.242	50		$3d^8(2P)4p - 3d^8(2F)8s$	$4P^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1487.438	5		$3d^7 4s^2 - 3d^8(2F)4f$	$4F - 2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1487.455	6		$3d^8 - 3d^8(1D)4p$	$2D^{\circ} - 2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1488.730	16		$3d^8(2F)4p - 3d^8(2F)5d$	$4D^{\circ} - 4P$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1488.845	5		$3d^8(1D)4p - 3d^8(2F)7d$	$2D^{\circ} - 4F$	$\frac{3}{2} - \frac{7}{2}$	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1488.896	100		$3d^8(^2P)4p - 3d^8(^1D)5d$	$^4P^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1489.079	35		$3d^8(^2P)4p - 3d^8(^1D)5d$	$^4P^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1489.729	5		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1490.262	7		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - v^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1491.176	5		$3d^8(^2F)4p - 3d^8(^1G)4d$	$^4G^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1491.308	4		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1491.588	4		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1491.776	6		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1491.823	3		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^2G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1491.899	40		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4H$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1493.022	15		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1493.315	2		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1494.151	50		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4H$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1494.236	6		$3d^8(^2P)4p - 3d^8(^1D)5d$	$^4P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1494.701	10		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - w^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1495.383	40		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1495.570	20		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1496.308	10		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1496.409	2		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1496.463	1		$3d^8(^1D)4p - 3d^8(^2F)7d$	$^2D^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1498.734	1		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4F^{\circ} - ^2H$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1499.701	15		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1500.437	200	7	$3d^8 - 3d^8(^1D)4p$	$g^2D - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1500.651	7		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1501.885	20		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1501.962	6		$3d^8 - 3d^8(^2P)4p$	$g^2D - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1502.150	75		$3d^8 - 3d^8(^2P)4p$	$g^2D - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1502.669	20		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1503.123	7		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - w^4F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1503.209	12		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1504.485	75		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4H$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1504.590	5		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^4D^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1505.642	13		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1506.184	16		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1506.585	25		$3d^7 4s^2 - 3d^8(^2F)6f$	$^4P - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1506.851	7		$3d^8(^1D)4p - 3d^8(^2F)8s$	$^2D^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1506.968	10		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2F^{\circ} - ^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1506.995	5		$3d^7 4s^2 - 3d^8(^1D)5p$	$^4F - ^2F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1507.465	18		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4H$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1507.961	15		$3d^7 4s^2 - 3d^8(^2F)8p$	$^2G - ^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1508.249	10		$3d^8(^2P)4p - 3d^8(^2F)7d$	$^4D^{\circ} - ^2G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1508.262	7		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1508.315	10		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1508.498	4		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4H$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1508.816	100		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^4D^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1509.113	1		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^4D^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1509.308	12		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - w^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1509.345	8		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^4D^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1509.602	4		$3d^8(^1D)4p - 3d^8(^2F)7d$	$^2D^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1509.767	100		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2F^{\circ} - ^2G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1510.067	1		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1510.232	16		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4G^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1510.366	4		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4F^{\circ} - ^2G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1510.690	3		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^4D^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1510.741	5		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^4D^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1510.859	75	6	$3d^8 - 3d^8(^1D)4p$	$g^2D - ^2F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1511.185	8		$3d^7 4s^2 - 3d^8(^1D)5p$	$^4F - ^2F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1511.314	3		$3d^8(^1D)4p - 3d^8(^2P)6s$	$^2F^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1511.467	10		$3d^8(^1D)4p - 3d^8(^2P)6s$	$^2F^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1512.237	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1512.742	11		$3d^7 4s^2 - 3d^8(^2F)8p$	$^2G - ^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1513.016	11		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1513.550	1		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4F^{\circ} - ^4G$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1513.783	15		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^4D^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1514.222	50		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2F^{\circ} - ^2F$	$\frac{1}{2} - \frac{3}{2}$	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1514.336	10					S11
Ni II	1514.372	80		$3d^7 4s^3 - 3d^8(^1D)6p$	$^2G - ^3F^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1514.411	17					S11
Ni II	1514.552	5		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1514.856	8		$3d^8(^1D)4p - 3d^8(^3F)7d$	$^3P^{\circ} - ^4D$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1515.157	15		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1515.269	25		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^2G$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1515.329	8		$3d^8(^1D)4s - 3d^7 4s 4p$	$^3D - z^4D^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	S11
Ni II	1515.518	5		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1515.692	1		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4P$	$\frac{7}{2} - \frac{1}{2}$	S11
Ni II	1515.791	30		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4H$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1515.825	40		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	S11
Ni II	1516.048	17		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1516.215	50		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1516.503	3		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^3F$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1517.449	25		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1517.480	40		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^2G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1517.894	100		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^3H$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1517.984	15		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^2G$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1519.371	40		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1519.513	15		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1519.745	4		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3D^{\circ} - ^3P$	$\frac{7}{2} - \frac{1}{2}$	S11
Ni II	1519.935	100		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3F^{\circ} - ^2G$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1520.077	4		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1520.168	14		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4G^{\circ} - ^4G$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1520.294	10		$3d^8(^1G)4s - 3d^7 4s 4p$	$^3G - z^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1520.392	30		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4H$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1520.467	40		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^3H$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1520.932	10		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^3F^{\circ} - ^4P$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1520.944	20		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3D^{\circ} - ^3P$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1521.119	100		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4F$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1521.596	15		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^3F^{\circ} - ^4G$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1521.673	18		$3d^7 4s^2 - 3d^7 4s 4p$	$^2G - v^2G^{\circ}$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1521.889	12		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^3D^{\circ} - ^3P$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1521.992	10		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^3D^{\circ} - ^4P$	$\frac{7}{2} - \frac{1}{2}$	S11
Ni II	1522.517	0		$3d^8(^3F)4p - 3d^8(^3F)6s$	$^4D^{\circ} - ^3F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1522.569	30		$3d^8(^1D)4p - 3d^8(^3F)8s$	$^3F^{\circ} - ^4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1522.691	10		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1522.846	12		$3d^7 4s^2 - 3d^8(^1D)5p$	$^4F - ^3D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1522.990	11		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1523.102	3		$3d^8(^3F)4p - 3d^8(^1G)4d$	$^4F^{\circ} - ^3F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1523.160	6		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1523.278	30		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1523.897	15		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1524.302	50		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3F^{\circ} - ^3F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1524.758	4		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{1}{2}$	S11
Ni II	1524.834	22		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3D^{\circ} - ^3F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1524.996	14		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	S11
Ni II	1525.422	8		$3d^8(^3F)4p - 3d^8(^3F)5s$	$^4D^{\circ} - ^3F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1526.480	4		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1526.999	20		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4G$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1527.497	15		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$\frac{9}{2} - \frac{7}{2}$	S11
Ni II	1527.661	1		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^3D^{\circ} - ^4P$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1527.968	18		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - s^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1528.508	22		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1528.703	1		$3d^8(^3P)4p - 3d^8(^3F)8s$	$^4D^{\circ} - ^3F$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1529.148	4		$3d^8(^3P)4p - 3d^8(^3F)7d$	$^4D^{\circ} - ^3D$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1529.812	0		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - w^4F^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1530.080	18		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4F$	$\frac{9}{2} - \frac{9}{2}$	S11
Ni II	1530.428	10		$3d^7 4s^2 - 3d^8(^1D)5p$	$^4F - ^2I^{\circ}$	$\frac{9}{2} - \frac{3}{2}$	S11
Ni II	1530.636	75		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4G$	$\frac{9}{2} - \frac{11}{2}$	S11
Ni II	1530.663	30		$3d^8(^3P)4p - 3d^8(^3F)8d$	$^3D^{\circ} - ^4P$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1530.995	16		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^3D^{\circ} - ^3D$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1531.288	3		$3d^8(^3P)4p - 3d^8(^3F)7d$	$^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1531.408	14					S11

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1531.640	18		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1531.720	1		$3d^7 4s^2 - 3d^8(^3F)6f$	$^2G^{\circ} - ^2H^{\circ}$	$\frac{3}{2} - \frac{11}{2}$	S11
Ni II	1531.952	16		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1531.972	20		$3d^8(^3F)4p - 3d^8(^3F)6s$	$^4D^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1532.741	14		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4G$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1533.669	17					S11
Ni II	1533.885	12		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2D^{\circ} - ^2G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1533.991	20		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2F^{\circ} - ^2G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1534.484	12					S11
Ni II	1534.546	11		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^2F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1534.861	10		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1535.477	12		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1535.961	15		$3d^7 4s^2 - 3d^8(^3P)4f$	$^2G^{\circ} - ^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1536.051	30		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1536.118	15		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4D$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1536.367	1		$3d^7 4s^2 - 3d^8(^3F)6f$	$^2G^{\circ} - ^2H^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1536.398	20		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1536.717	15		$3d^8(^1D)4p - 3d^8(^3F)8s$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1536.746	25		$3d^8 - 3d^8(^3P)4p$	$g^2D - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1536.779	10					S11
Ni II	1536.944	12		$3d^8 - 3d^8(^3P)4p$	$g^2D - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1537.038	12		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2F^{\circ} - ^2H$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1537.216	20		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - v^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1537.322	2		$3d^7 4s^2 - 3d^8(^1D)4f$	$^4P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1537.477	15		$3d^7 4s^2 - 3d^8(^3P)4f$	$^2G^{\circ} - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1537.776	1		$3d^8(^3P)4p - 3d^8(^3F)8d$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1537.859	25					S11
Ni II	1538.388	30					S11
Ni II	1538.483	30		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1538.567	4		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1538.722	0		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1538.831	3		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4G^{\circ} - ^4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1538.956	1		$3d^7 4s^2 - 3d^8(^3F)8p$	$^2G^{\circ} - ^4G^{\circ}$	$\frac{3}{2} - \frac{11}{2}$	S11
Ni II	1539.649	15					S11
Ni II	1539.731	1		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1539.949	2		$3d^8(^1D)4p - 3d^8(^1D)5d$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1540.015	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - w^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1540.281	25		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^2G$	$\frac{7}{2} - \frac{9}{2}$	S11
Ni II	1540.760	35		$3d^7 4s^2 - 3d^8(^3F)8p$	$^2G^{\circ} - ^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1540.908	4		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1541.324	14					S11
Ni II	1541.356	11		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1541.560	4		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1541.801	2		$3d^8(^1G)4p - 3d^8(^1G)6s$	$^2H^{\circ} - ^2G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1542.024	1		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2D^{\circ} - ^2G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1542.208	18		$3d^7 4s^2 - 3d^8(^1D)5p$	$^4F - ^2P^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1542.388	1		$3d^7 4s^2 - 3d^8(^1D)5p$	$^4F - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1542.401	3		$3d^8(^3P)4p - 3d^8(^3F)6g$	$^2D^{\circ} - ^2G$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1542.773	15		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1543.132	1		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1544.273	3		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1544.968	5		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4D$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1544.980	10		$3d^7 4s^2 - 3d^8(^1D)5p$	$^4F - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1545.408	30		$3d^8(^1D)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1545.453	12					S11
Ni II	1545.717	16					S11
Ni II	1545.881	5		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1546.070	4		$3d^8(^3F)4p - 3d^8(^3F)6s$	$^4D^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1547.337	15		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4G$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1547.407	13		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1547.547	3		$3d^7 4s^2 - 3d^7 4s 4p$	$^2G^{\circ} - v^2G^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1548.344	16		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^4F^{\circ} - ^4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1549.588	1		$3d^8(^3F)4p - 3d^8(^3F)5d$	$^2G^{\circ} - ^4H$	$\frac{3}{2} - \frac{11}{2}$	S11
Ni II	1549.818	0		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1549.964	4		$3d^8(^3P)4p - 3d^8(^3P)5d$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S11

Element	Wavelength	Intensity	Mu. triplet	Configuration	Term	J - J	References
Ni II	1550.479	3					
Ni II	1550.495	2		$3d^7 4s^2 - 3d^8(^2P)4f$	$^2G - ^4D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1550.912	10		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4F^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1552.276	5		$3d^8(^1D)4p - 3d^8(^2P)6s$	$^2P - ^4P$	$7/2 - 7/2$	S11
Ni II	1553.012	0		$3d^7 4s^2 - 3d^8(^2P)4f$	$^2G - ^4G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1554.124	50		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^2D^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1554.293	8		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - v^4P^{\circ}$	$7/2 - 7/2$	S11
Ni II	1554.332	8		$3d^8(^2P)4p - 3d^8(^2F)5s$	$^4D^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1554.509	6		$3d^8(^2F)4p - 3d^8(^2F)6s$	$^4D^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1555.062	2		$3d^8(^2P)4p - 3d^8(^1D)6s$	$^4P^{\circ} - ^2D$	$7/2 - 7/2$	S11
Ni II	1555.398	16		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1555.496	30		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^2P^{\circ} - ^2P$	$7/2 - 7/2$	S11
Ni II	1555.585	8		$3d^7 4s^2 - 3d^7 4s 4p$	$^2G - v^2G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1555.957	13		$3d^8(^1G)4p - 3d^8(^1G)6s$	$^2H^{\circ} - ^2G$	$7/2 - 7/2$	S11
Ni II	1556.766	10		$3d^8(^2F)4p - 3d^8(^2P)4d$	$^4D^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1556.997	4					
Ni II	1557.194	1		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^2P^{\circ} - ^2P$	$7/2 - 7/2$	S11
Ni II	1557.290	12		$3d^7 4s^2 - 3d^8(^1D)4f$	$^4P - ^2D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1558.087	10		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2F^{\circ} - ^2G$	$7/2 - 7/2$	S11
Ni II	1558.443	12		$3d^8(^2F)4p - 3d^8(^2P)4d$	$^4D^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1558.501	2					
Ni II	1558.544	5		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - x^4G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1558.597	15		$3d^7 4s^2 - 3d^8(^1D)5p$	$^4F - ^2D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1558.655	40		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^2F^{\circ} - ^2F$	$7/2 - 7/2$	S11
Ni II	1559.159	18					
Ni II	1559.822	1					
Ni II	1560.341	6		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^2F^{\circ} - ^4H$	$7/2 - 7/2$	S11
Ni II	1560.459	25		$3d^8(^1G)4p - 3d^8(^1G)6s$	$^2F^{\circ} - ^2G$	$7/2 - 7/2$	S11
Ni II	1560.517	10					
Ni II	1560.796	5		$3d^8(^2F)4p - 3d^8(^2F)6s$	$^4G^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1560.831	15		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1560.935	4		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P - v^4P^{\circ}$	$7/2 - 7/2$	S11
Ni II	1561.015	4		$3d^8(^2P)4s - 3d^7 4s 4p$	$^4P - v^4D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1561.229	15		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1561.733	2		$3d^8(^2F)4p - 3d^8(^2F)6s$	$^2G^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1561.968	11		$3d^8(^2F)4p - 3d^8(^2F)6s$	$^4G^{\circ} - ^2F$	$7/2 - 7/2$	S11
Ni II	1562.329	18		$3d^7 4s^2 - 3d^7 4s 4p$			
Ni II	1563.111	7		$3d^7 4s^2 - 3d^8(^2P)4f$	$^2G - w^2G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1563.376	50		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^2G - ^2G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1563.604	120		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P^{\circ} - ^4P$	$7/2 - 7/2$	S11
Ni II	1564.273	15		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - v^4P^{\circ}$	$7/2 - 7/2$	S11
Ni II	1564.389	8		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^4F - w^4D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1565.001	1		$3d^8(^2P)4p - 3d^8(^2F)6g$	$^4F^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1565.399	20		$3d^8(^2F)4p - 3d^8(^2F)6s$	$^2D^{\circ} - ^2F$	$7/2 - 7/2$	S11
Ni II	1566.019	7		$3d^8(^2F)4p - 3d^8(^2F)7d$	$^4F^{\circ} - ^2F$	$7/2 - 7/2$	S11
Ni II	1566.890	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^4D^{\circ} - ^4G$	$7/2 - 7/2$	S11
Ni II	1567.069	15			$^4F - v^4D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1567.220	10		$3d^8(^2F)4p - 3d^8(^2F)5G$	$^2D^{\circ} - ^2F$	$7/2 - 7/2$	S11
Ni II	1567.298	3		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1567.323	10		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^2D^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1567.336	12		$3d^7 4s^2 - 3d^8(^2F)8p$	$^2G - ^4G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1567.370	3					
Ni II	1567.872	1					
Ni II	1567.966	4		$3d^7 4s^2 - 3d^7 4s 4p$	$^2G - v^2D^{\circ}$	$7/2 - 7/2$	S11
Ni II	1568.698	1		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^2P^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1569.172	16		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^2F^{\circ} - ^2G$	$7/2 - 7/2$	S11
Ni II	1569.415	1		$3d^8(^2P)4p - 3d^8(^2P)5d$	$^2P^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1569.624	13					
Ni II	1569.972	2		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$7/2 - 7/2$	S11
Ni II	1570.302	10		$3d^8(^2F)4p - 3d^8(^2F)6s$	$^4G^{\circ} - ^4F$	$7/2 - 7/2$	S11
Ni II	1570.392	60		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^2D^{\circ} - ^2P$	$7/2 - 7/2$	S11
Ni II	1570.512	3		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^2F^{\circ} - ^2F$	$7/2 - 7/2$	S11
Ni II	1570.701	1					
Ni II	1571.145	12		$3d^7 4s^2 - 3d^7 4s 4p$	$^4P - v^4P^{\circ}$	$7/2 - 7/2$	S11
Ni II	1571.162	12		$3d^8(^2F)4p - 3d^8(^2F)5d$	$^2G^{\circ} - ^4G$	$7/2 - 7/2$	S11
Ni II	1571.162	12		$3d^8(^1D)4p - 3d^8(^2F)6d$	$^2F^{\circ} - ^2F$	$7/2 - 7/2$	S11

Elem. no.	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1571.257	10					S11
Ni II	1571.532	2		$3d^7 4s^5 - 3d^6(^6F)7f$	$^2P - ^4D^{\circ}$? $\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1571.550	2		$3d^6(^2F)4p - 3d^6(^2F)5d$	$^2G^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1572.540	25		$3d^6(^2F)4p - 3d^6(^2F)5d$	$^2F^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1572.646	4		$3d^6(^2F)4p - 3d^6(^1G)4d$	$^2F^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1572.993	1		$3d^6(^2F)4p - 3d^6(^2P)4d$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1573.071	10					S11
Ni II	1574.202	18		$3d^6(^2F)4p - 3d^6(^1G)5s$	$^4D^{\circ} - ^2G$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1574.423	100		$3d^7 4s^5 - 3d^7 4s 4p$	$^4P - v^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1574.942	20		$3d^7 4s^5 - 3d^7 4s 4p$	$^2G - v^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1574.976	5		$3d^6(^2P)4p - 3d^6(^2P)6s$	$^4D^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1575.003	16		$3d^7 4s^5 - 3d^7 4s 4p$	$^2G - s^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1575.090	15					S11
Ni II	1575.559	1		$3d^6(^2F)4p - 3d^6(^2F)5d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1575.597	9		$3d^6(^2F)4p - 3d^6(^2F)6s$	$^4G^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1577.015	30		$3d^7 4s^5 - 3d^7 4s 4p$	$^4P - v^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1577.115	16		$3d^7 4s^5 - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1577.933	14		$3d^6(^2F)4p - 3d^6(^1G)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1578.865	20		$3d^6(^2F)4p - 3d^6(^2F)6s$	$^4G^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1578.990	60					S11
Ni II	1579.073	18					S11
Ni II	1579.563	18		$3d^6(^2P)4p - 3d^6(^2P)5d$	$^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1579.791	17					S11
Ni II	1579.877	2		$3d^6(^2F)4p - 3d^6(^2F)6s$	$^4G^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1579.959	3		$3d^7 4s^5 - 3d^7 4s 4p$	$^4F - v^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1580.588	8		$3d^6(^2P)4p - 3d^6(^1D)5d$	$^4D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1581.085	6		$3d^6(^1D)4p - 3d^6(^1D)6s$	$^2F^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1581.334	25		$3d^7 4s^5 - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1581.704	10		$3d^7 4s^5 - 3d^6(^2F)5f$	$^4P - ^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1581.826	6		$3d^6(^2F)4p - 3d^6(^2P)4d$	$^4D^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1582.135	2		$3d^6(^2F)4p - 3d^6(^2F)5d$	$^2F^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1582.373	0		$3d^6(^2P)4p - 3d^6(^1D)5d$	$^4D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1582.689	10					S11
Ni II	1583.051	17		$3d^7 4s^5 - 3d^7 4s 4p$	$^2G - v^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1583.398	1		$3d^6(^2P)4p - 3d^6(^2P)6s$	$^4D^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1583.436	10		$3d^7 4s^5 - 3d^7 4s 4p$	$^4F - w^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1583.509	15		$3d^6(^2P)4p - 3d^6(^2P)6s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1584.530	10					S11
Ni II	1584.563	16		$3d^6(^2P)4p - 3d^6(^2P)6s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1585.117	200		$3d^7 4s^5 - 3d^7 4s 4p$	$^2G - w^2G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1585.702	4		$3d^6(^2F)4p - 3d^6(^2F)5d$	$^2F^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1586.677	4		$3d^6(^2F)4p - 3d^6(^2F)6s$	$^4F^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1587.138	3		$3d^7 4s^5 - 3d^7 4s 4p$	$^4F - x^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1587.207	8		$3d^7 4s^5 - 3d^7 4s 4p$	$^4F - x^4G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1587.443	18		$3d^6(^2F)4p - 3d^6(^2F)5s$	$^2G^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1587.845	35		$3d^6(^2P)4p - 3d^6(^2P)6s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1588.200	10		$3d^6(^2F)4p - 3d^6(^2F)5d$	$^2F^{\circ} - ^4G$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1588.369	15		$3d^6(^2P)4p - 3d^6(^1D)5d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1588.464	10					S11
Ni II	1588.715	9		$3d^6(^2F)4p - 3d^6(^2F)6s$	$^2G^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1588.798	20		$3d^6(^1D)4p - 3d^6(^2F)5g$	$^2P^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1589.061	40					S11
Ni II	1589.116	80		$3d^6(^2P)4p - 3d^6(^2P)5d$	$^2S^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1589.246	200		$3d^7 4s^5 - 3d^7 4s 4p$	$^2G - w^2G^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1589.474	5		$3d^7 4s^5 - 3d^7 4s 4p$	$^4F - x^4F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1589.547	1		$3d^6(^2P)4p - 3d^6(^2P)5d$	$^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1589.644	20		$3d^6(^2P)4p - 3d^6(^2P)6s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1589.772	80		$3d^7 4s^5 - 3d^7 4s 4p$	$^4F - w^4D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1589.903	8		$3d^6(^2F)4p - 3d^6(^2F)6s$	$^4F^{\circ} - ^4F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1590.422	0		$3d^6(^2F)4p - 3d^6(^2F)6s$	$^4F^{\circ} - ^2F$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1590.529	10		$3d^6(^2P)4p - 3d^6(^2F)7d$	$^2D^{\circ} - ^4F$? $\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1590.703	1		$3d^6(^2P)4p - 3d^6(^2P)6s$	$^4D^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1591.041	50		$3d^6(^2F)4s - 3d^6(^1G)4p$	$^2F - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	S11
Ni II	1591.099	16					S11
Ni II	1591.350	10					S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1591.415	80		$3d^7 4s^0 - 3d^8 (^6F) 6f$	$^2G - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1591.732	2		$3d^8 (^6F) 4p - 3d^8 (^6F) 5d$	$^4F^{\circ} - ^4G$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1592.089	200		$3d^7 4s^0 - 3d^7 4s 4p$	$^2G - w^6F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1592.144	15		$3d^8 (^3P) 4p - 3d^8 (^8P) 6s$	$^4D^{\circ} - ^4P$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1592.248	25		$3d^7 4s^0 - 3d^8 (^6F) 6f$	$^2G - ^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1592.479	50		$3d^7 4s^0 - 3d^8 (^6F) 6f$	$^2G - ^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1592.403	15		$3d^7 4s^0 - 3d^7 4s 4p$	$^4F - w^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1592.662	1		$3d^8 (^1D) 4p - 3d^8 (^1D) 6s$	$^8D^{\circ} - ^2D$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1593.132	1		$3d^8 (^1D) 4p - 3d^8 (^1D) 6s$	$^8F^{\circ} - ^8D$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1593.200	15					S:1
Ni II	1593.522	15					S11
Ni II	1593.611	150		$3d^7 4s^0 - 3d^7 4s 4p$	$^2G - w^6F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1593.698	40		$3d^7 4s^0 - 3d^7 4s 4p$	$^4F - t^8D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1594.019	1		$3d^8 (^3F) 4p - 3d^8 (^3F) 5d$	$^8F^{\circ} - ^4F$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1594.287	6		$3d^8 (^3F) 4p - 3d^8 (^3F) 5d$	$^8D^{\circ} - ^4D$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1594.346	35					S11
Ni II	1594.575	1		$3d^8 (^8P) 4p - 3d^8 (^8F) 6d$	$^4P^{\circ} - ^4P$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1594.703	12		$3d^7 4s^0 - 3d^7 4s 4p$	$^4F - x^4G^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1595.519	3		$3d^8 (^8F) 4p - 3d^8 (^3F) 6s$	$^4F^{\circ} - ^4F$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1595.608	70		$3d^7 4s^0 - 3d^8 (^1D) 4f$	$^2G - ^4H^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1595.768	70		$3d^8 (^8P) 4p - 3d^8 (^8P) 6s$	$^4D^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1595.919	15		$3d^8 (^8P) 4p - 3d^8 (^3P) 5d$	$^4S^{\circ} - ^4P$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1596.074	60		$3d^8 (^3P) 4p - 3d^8 (^3F) 7d$	$^4S^{\circ} - ^8P$	$\frac{5}{2} - \frac{1}{2}$	S11
Ni II	1596.874	1		$3d^8 (^8F) 4p - 3d^8 (^8F) 5d$	$^8F^{\circ} - ^8P$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1597.031	1		$3d^8 (^3P) 4p - 3d^8 (^3P) 5d$	$^8S^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1597.101	25					S11
Ni II	1597.484	9		$3d^8 (^3P) 4p - 3d^8 (^3P) 5d$	$^4S^{\circ} - ^4P$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1597.886	7		$3d^8 (^3F) 4p - 3d^8 (^3F) 5d$	$^3D^{\circ} - ^4F$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1598.282	40		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P - v^8D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1598.371	30		$3d^8 (^3P) 4p - 3d^8 (^8F) 6g$	$^8D^{\circ} - ^4D$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1598.860	18					S11
Ni II	1599.251	40					S11
Ni II	1599.282	12		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - x^4G^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1599.439	1		$3d^8 (^3F) 4p - 3d^8 (^3F) 5d$	$^3D^{\circ} - ^4F$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1599.549	10		$3d^8 (^8F) 4p - 3d^8 (^3F) 6s$	$^4F^{\circ} - ^4F$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1599.603	25		$3d^7 4s^2 - 3d^7 4s 4p$	$^2G - s^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1600.268	10		$3d^8 (^3F) 4p - 3d^8 (^3F) 5d$	$^8D^{\circ} - ^4P$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1600.565	16					S11
Ni II	1600.753	3		$3d^8 (^3F) 4p - 3d^8 (^3P) 4d$	$^4G^{\circ} - ^4P$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1601.045	16		$3d^7 4s^2 - 3d^8 (^1D) 4f$	$^2G - ^2G^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1601.240	10		$3d^7 4s^0 - 3d^7 4s 4p$	$^4P - t^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1601.288	8		$3d^8 (^3P) 4p - 3d^8 (^3P) 5d$	$^8S^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1601.518	1		$3d^8 (^3F) 4s - 3d^8 (^3P) 4p$	$^4F - ^3D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1601.742	4		$3d^8 (^3P) 4p - 3d^8 (^3P) 5d$	$^4S^{\circ} - ^4F$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1601.928	10		$3d^8 (^3P) 4p - 3d^8 (^8P) 5d$	$^4S^{\circ} - ^4P$	$\frac{5}{2} - \frac{1}{2}$	S11
Ni II	1602.209	12		$3d^7 4s^0 - 3d^7 4s 4p$	$^4P - t^4D^{\circ}$	$\frac{5}{2} - \frac{1}{2}$	S11
Ni II	1602.679	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^2G - v^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1602.973	20		$3d^8 (^3F) 4s - 3d^8 (^3P) 4p$	$^4F - ^4D^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1603.224	1		$3d^8 (^3F) 4f - 3d^8 (^3P) 4d$	$^4G^{\circ} - ^4F$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1603.410	20		$3d^8 (^3F) 4s - 3d^8 (^1G) 4p$	$^3F - ^8F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1603.555	25					S11
Ni II	1603.728	16		$3d^7 4s^0 - 3d^8 (^3F) 5f$	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1603.917	5		$3d^7 4s^0 - 3d^8 (^3F) 5f$	$^4P - ^8D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	S11
Ni II	1604.394	2		$3d^7 4s^0 - 3d^8 (^3F) 5f$	$^4P - ^4G^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	S11
Ni II	1604.482	18					S11
Ni II	1604.570	5		$3d^8 (^3F) 4p - 3d^8 (^3P) 4d$	$^4D^{\circ} - ^4F$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1604.696	3		$3d^7 4s^0 - 3d^8 (^3F) 5f$	$^4P - ^4D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1605.027	9		$3d^7 4s^0 - 3d^8 (^8F) 5f$	$^4P - ^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1605.217	4		$3d^8 (^3P) 4p - 3d^8 (^1D) 5d$	$^3D^{\circ} - ^8P$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1605.744	35		$3d^7 4s^0 - 3d^7 4s 4p$	$^4F - x^4F^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1605.910	60					S11
Ni II	1606.280	12		$3d^8 (^1D) 4p - 3d^8 (^3F) 5g$	$^3P^{\circ} - ^3F$	$\frac{5}{2} - \frac{5}{2}$	S11
Ni II	1606.469	30					S11
Ni II	1606.695	8		$3d^8 (^3F) 4p - 3d^8 (^3F) 6s$	$^4F^{\circ} - ^4F$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1606.729	15					S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1606.902	13					S11
Ni II	1607.849	29					S11
Ni II	1607.987	3		$3d^8(^1D)4p - 3d^8(^3F)5g$	$^2F^{\circ} - ^4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1608.134	60		$3d^74s^3 - 3d^74s4p$	$^4F - ^1D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1608.177	80		$3d^8(^1G)4s - 3d^74s4p$	$^2G - z^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1608.358	30		$3d^74s^2 - 3d^74s4p$	$^4P - ^1D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1608.442	25		$3d^74s^3 - 3d^74s4p$	$^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1608.708	1		$3d^8(^1G)4p - 3d^8(^3F)9s$	$^2F^{\circ} - ^2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1609.343	1		$3d^8(^3F)4p - 3d^8(^3P)4d$	$^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1609.474	12		$3d^8(^3P)4p - 3d^8(^1D)5d$	$^2D^{\circ} - ^2D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1610.102	20		$3d^74s^2 - 3d^74s4p$	$^4P - ^1D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1610.532	18		$3d^8(^3P)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^2P$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1611.061	8		$3d^74s^3 - 3d^8(^3F)5f$	$^4P - ^3D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1611.079	6		$3d^74s^2 - 3d^74s4p$	$^2G - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1611.390	25					S11
Ni II	1611.927	2		$3d^8(^3P)4p - 3d^8(^3F)8s$	$^2D^{\circ} - ^4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1612.113	1		$3d^8(^1D)4p - 3d^8(^3F)6d$	$^2D^{\circ} - ^2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1612.450	20		$3d^74s^2 - 3d^8(^3F)5f$	$^4P - ^3P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1612.532	2		$3d^8(^3F)4p - 3d^8(^3P)4d$	$^4P^{\circ} - ^4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1613.716	60		$3d^74s^2 - 3d^74s4p$	$^2G - w^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1613.820	20		$3d^74s^2 - 3d^74s4p$	$^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1613.949	1		$3d^8(^3P)4p - 3d^8(^3F)6g$	$^2D^{\circ} - ^4D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1614.495	10					S11
Ni II	1614.824	30					S11
Ni II	1614.911	90		$3d^8(^3F)4p - 3d^8(^3F)6s$	$^2G^{\circ} - ^2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1615.459	120		$3d^74s^3 - 3d^74s4p$	$^4P - ^1D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1615.387	15		$3d^8(^3P)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^2P$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1616.456	2		$3d^8(^1G)4p - 3d^8(^3F)8d$	$^2F^{\circ} - ^4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1616.536	25		$3d^74s^3 - 3d^74s4p$	$^4P - ^1D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1616.917	25		$3d^74s^2 - 3d^74s4p$	$^4F - x^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1616.993	2		$3d^8(^3P)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^4P$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1617.088	50					S11
Ni II	1617.144	40		$3d^8(^1G)4p - 3d^8(^3F)8d$	$^2F^{\circ} - ^4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1617.299	40		$3d^74s^2 - 3d^74s4p$	$^4P - ^1D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1618.950	20		$3d^74s^2 - 3d^74s4p$	$^2H - w^2G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1619.193	1		$3d^74s^2 - 3d^8(^3P)4f$	$^2P - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1619.395	6		$3d^74s^2 - 3d^74s4p$	$^2G - v^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1619.607	7		$3d^74s^2 - 3d^8(^3F)6f$	$^2F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1619.857	20					S11
Ni II	1619.964	6		$3d^74s^2 - 3d^8(^3F)6f$	$^2P - ^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1620.331	18		$3d^8(^3F)4p - 3d^8(^1G)5s$	$^4G^{\circ} - ^2G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1620.428	1		$3d^74s^2 - 3d^74s4p$	$^2G - w^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1620.946	1		$3d^8(^3P)4p - 3d^8(^1D)5d$	$^2D^{\circ} - ^2P$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1621.460	40		$3d^8(^3P)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^4P$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1621.880	6		$3d^8(^3F)4p - 3d^8(^3F)6s$	$^4F^{\circ} - ^4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1621.926	18		$3d^8(^3F)4s - 3d^8(^3P)4p$	$^4F - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1622.106	80					S11
Ni II	1622.796	20		$3d^74s^2 - 3d^74s4p$	$^4F - ^1D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1622.981	1		$3d^8(^3F)4p - 3d^8(^1D)4d$	$^4D^{\circ} - ^2G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1624.084	60		$3d^74s^2 - 3d^8(^1D)4f$	$^2G - ^3H^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1624.172	20		$3d^74s^2 - 3d^8(^3F)7p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1624.773	16		$3d^74s^2 - 3d^74s4p$	$^4F - x^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1625.233	25					S11
Ni II	1625.288	2		$3d^8(^3P)4p - 3d^8(^1D)5d$	$^2D^{\circ} - ^2D$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1626.161	12					S11
Ni II	1626.309	20		$3d^74s^2 - 3d^74s4p$	$^2P - w^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1626.320	15		$3d^74s^2 - 3d^8(^3F)5f$	$^4P - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1626.366	6		$3d^8(^3P)4p - 3d^8(^3P)6s$	$^2D^{\circ} - ^2P$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1626.961	12		$3d^74s^2 - 3d^8(^3F)5f$	$^4P - ^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1627.396	12		$3d^8(^3F)4s - 3d^8(^3P)4p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1627.656	4		$3d^74s^2 - 3d^8(^3F)5f$	$^4P - ^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1628.126	15		$3d^8(^3P)4p - 3d^8(^3F)7s$	$^4P^{\circ} - ^4F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1628.497	10		$3d^8(^3F)4s - 3d^8(^1G)4p$	$^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1628.726	15					S11
Ni II	1628.810	20		$3d^74s^2 - 3d^8(^3F)9p$	$^2H - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11

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Ni II	1619.282	160		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - x^4G^\circ$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1629.445	11		$3d^6(^1G) 4p - 3d^6(^3P) 5d$	$^3H^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1629.591	70		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P - v^2D^\circ$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1629.718	1		$3d^7 4s^2 - 3d^6(^1D) 4f$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1630.130	20					S11
Ni II	1630.356	10		$3d^6(^3F) 4p - 3d^6(^3P) 4d$	$^4D^\circ - ^4D$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1631.024	25					S11
Ni II	1631.182	12		$3d^6(^1G) 4p - 3d^6(^3F) 8d$	$^2F^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1632.152	15					S11
Ni II	1632.171	30		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - w^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1632.488	6		$3d^6(^3P) 4p - 3d^6(^3P) 6s$	$^2P^\circ - ^3P$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1632.960	2		$3d^6(^3P) 4p - 3d^6(^3P) 6s$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1633.625	10		$3d^6(^3F) 4p - 3d^6(^3F) 6s$	$^2F^\circ - ^2F$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1633.988	35					S11
Ni II	1635.070	30		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P - w^2P^\circ$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1635.340	100		$3d^6(^3F) 4p - 3d^6(^3P) 4d$	$^4G^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1636.231	4		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1636.488	3		$3d^6(^1D) 4p - 3d^6(^3F) 6d$	$^2D^\circ - ^4D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1637.072	20					S11
Ni II	1637.140	2		$3d^6(^3P) 4p - 3d^6(^1D) 5d$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1637.267	10					S11
Ni II	1637.439	100		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P - w^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1637.509	20		$3d^6(^3P) 4p - 3d^6(^3P) 6s$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1637.589	300		$3d^7 4s^2 - 3d^7 4s 4p$	$^2G - x^3H^\circ$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1638.963	4		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - x^4F^\circ$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1640.769	7		$3d^7 4s^2 - 3d^6(^3F) 5f$	$^4P - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1641.418	10		$3d^7 4s^2 - 3d^6(^3F) 5f$	$^4P - ^3P^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1642.299	20					S11
Ni II	1642.324	40		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P - w^2D^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1642.351	15					S11
Ni II	1642.670	5		$3d^6(^3P) 4p - 3d^6(^3P) 6s$	$^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1642.739	2		$3d^6(^3F) 4p - 3d^6(^3F) 6s$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1642.792	2		$3d^6(^3P) 4p - 3d^6(^3F) 6d$	$^4D^\circ - ^4F$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1643.271	80		$3d^7 4s^2 - 3d^7 4s 4p$	$^2G - x^3H^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1643.334	20		$3d^7 4s^2 - 3d^6(^3F) 5f$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1644.040	14					S11
Ni II	1644.137	6		$3d^6(^3F) 4p - 3d^6(^3F) 6s$	$^3F^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1645.654	0		$3d^7 4s^2 - 3d^6(^3F) 5f$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1647.637	10					S11
Ni II	1648.381	1		$3d^7 4s^2 - 3d^6(^3F) 5f$	$^4P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1649.396	13		$3d^6(^3P) 4p - 3d^6(^3P) 6s$	$^3P^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1649.905	3		$3d^6(^3F) 4p - 3d^6(^3F) 6s$	$^2D^\circ - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1650.412	14		$3d^6(^3F) 4s - 3d^6(^3P) 4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1650.835	10		$3d^7 4s^2 - 3d^6(^3F) 5f$	$^4P - ^4S^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1652.270	13					S11
Ni II	1652.355	3		$3d^6(^3F) 4s - 3d^6(^3P) 4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1652.725	10					S11
Ni II	1652.839	15					S11
Ni II	1653.369	18					S11
Ni II	1653.687	10		$3d^7 4s^2 - 3d^6(^3F) 7p$	$^2G - ^2G^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1653.779	10					S11
Ni II	1655.749	1		$3d^6(^3P) 4p - 3d^6(^3F) 6d$	$^4D^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1655.903	0		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P - s^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1656.840	3		$3d^7 4s^2 - 3d^6(^3F) 6f$	$^3P - ^4P^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1657.313	10		$3d^6(^3P) 4p - 3d^6(^3P) 6s$	$^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1661.018	20		$3d^6(^1D) 4p - 3d^6(^3F) 5g$	$^2D^\circ - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1662.423	20					S11
Ni II	1662.892	25					S11
Ni II	1663.563	16		$3d^7 4s^2 - 3d^6(^3F) 7p$	$^2G - ^4F^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1664.316	10		$3d^6(^3F) 4s - 3d^6(^3P) 4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1664.384	2		$3d^6(^1G) 4p - 3d^6(^1G) 6s$	$^2G^\circ - ^2G$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1664.459	8		$3d^7 4s^2 - 3d^7 4s 4p$	$^2P - s^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1665.477	4		$3d^6(^3F) 4s - 3d^6(^3P) 4p$	$^4F - ^4D^\circ$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1666.045	0		$3d^7 4s^2 - 3d^6(^3F) 5f$	$^4P - ^4S^\circ$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1666.828	4b		$3d^6(^3F) 4p - 3d^6(^3F) 6s$	$^2F^\circ - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni II	1667.930	4		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1668.122	1		$3d^8(^2F)4p - 3d^8(^1D)4d$	$^4D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1670.935	7		$3d^7 4s^2 - 3d^8(^2F)5f$	$^2G - ^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1671.514	12		$3d^7 4s^2 - 3d^8(^2F)8p$	$^2H - ^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1674.000	10		$3d^8(^2F)4s - 3d^8(^1D)4p$	$^4F - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1676.317	3		$3d^8(^2F)4p - 3d^8(^2F)6s$	$^2D^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1677.297	1		$3d^2(^2P)4p - 3d^8(^1D)5d$	$^2S^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1678.447	1		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^2S^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1678.476	10		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1678.941	1		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1679.068	1		$3d^2(^2P)4p - 3d^8(^2P)6s$	$^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1684.952	70		$3d^7 4s^2 - 3d^7 4s 4p$	$^2H - v^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1685.465	8		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^2S^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1685.965	9		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1690.514	12		$3d^8(^2P)4p - 3d^8(^2P)6s$	$^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1691.231	11		$3d^7 4s^2 - 3d^7 4s 4p$	$^2D - v^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1693.177	10		$3d^7 4s^2 - 3d^2(^1D)6p$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1694.384	2		$3d^7 4s^2 - 3d^2(^1D)4f$	$^2P - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1695.594	8		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1698.400	4		$3d^7 4s^2 - 3d^2(^2F)6f$	$^2H - ^2I^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1699.772	2		$3d^7 4s^2 - 3d^8(^2P)4f$	$^2H - ^4G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1700.665	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1701.504	2		$3d^2(^2F)4p - 3d^8(^2P)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1702.150	1		$3d^7 4s^2 - 3d^8(^2F)5f$	$^2G - ^4H^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1702.265	7		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1703.408	25	5	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1705.581	11					S11
Ni II	1706.170	2		$3d^7 4s^2 - 3d^8(^2F)8p$	$^2H - ^4G^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1708.386	25		$3d^7 4s^2 - 3d^8(^2F)8p$	$^2H - ^4G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1709.598	200	4	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1710.032	3		$3d^7 4s^2 - 3d^8(^2F)5f$	$^2G - ^4H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1713.285	2		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1717.700	3		$3d^7 4s^2 - 3d^8(^2P)4f$	$^2H - ^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1719.906	5		$3d^7 4s^2 - 3d^8(^2P)4f$	$^2H - ^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1721.092	15		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1722.113	1		$3d^7 4s^2 - 3d^8(^2P)4f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1722.646	2		$3d^7 4s^2 - 3d^7 4s 4p$	$^2D - w^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1723.859	20		$3d^7 4s^2 - 3d^7 4s 4p$	$^2H - v^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1723.957	1		$3d^8(^1G)4p - 3d^8(^1D)5d$	$^2F^{\circ} - ^2G$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1726.324	4		$3d^7 4s^2 - 3d^7 4s 4p$	$^2D - v^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1728.022	1		$3d^7 4s^2 - 3d^8(^2F)6f$	$^2H - ^4I^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1734.904	8		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1735.135	5		$3d^7 4s^2 - 3d^7 4s 4p$	$^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1738.059	3		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1738.311	12		$3d^7 4s^2 - 3d^8(^1G)5p$	$^2G - ^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1738.549	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^4F - y^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1738.793	4		$3d^7 4s^2 - 3d^8(^2F)6f$	$^2H - ^4I^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S11
Ni II	1740.619	30		$3d^7 4s^2 - 3d^7 4s 4p$	$^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1741.547	1000	5	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1746.989	1		$3d^8(^2F)4s - 3d^8(^2P)4p$	$^4F - ^4P^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	S11
Ni II	1748.265	500	5	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1751.911	300	4	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1754.808	50	4	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1756.829	2		$3d^7 4s^2 - 3d^8(^2F)6f$	$^2D - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1763.097	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^2H - w^2G^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S11
Ni II	1769.940	2		$3d^7 4s^2 - 3d^8(^1G)5p$	$^2G - ^2H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S11
Ni II	1771.865	4		$3d^7 4s^2 - 3d^2(^1G)5p$	$^2G - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1772.197	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^2D - w^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1773.949	25	3	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1783.317	1		$3d^9 - 3d^8(^2F)4p$	$g^2D - ^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1788.485	100	5	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1789.640	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^2D - v^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1791.219	1		$3d^7 4s^2 - 3d^7 4s 4p$	$^2D - w^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S11
Ni II	1804.473	30	2	$3d^9 - 3d^8(^2F)4p$	$g^2D - ^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	S11
Ni II	1808.330	2		$3d^8(^2F)4p - 3d^8(^1D)4d$	$^2D^{\circ} - ^2F$	$\frac{3}{2} - \frac{7}{2}$	S11

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Ni II	1812.065	30	24	$3d^8(^2F)4s - 3d^8(^1D)4p$	$^2F - ^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1820.916	1		$3d^8 - 3d^8(^2F)4p$	$g^2D - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1825.068	1	2	$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1832.144	1		$3d^8(^2F)4s - 3d^8(^1D)4p$	$^2F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1832.566	1		$3d^8 - 3d^8(^2F)4p$	$g^2D - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1833.403	5	1	$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1837.744	1		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1837.985	2	1	$3d^8(^1G)4p - 3d^8(^2F)5g$	$^2F^{\circ} - ^4G$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1842.889	1		$3d^8 - 3d^8(^2F)4p$	$g^2D - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1852.522	2		$3d^8(^2F)4p - 3d^8(^1D)4d$	$^2D^{\circ} - ^2F$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1852.875	2	1	$3d^8(^2F)4s - 3d^8(^1D)4p$	$^2F - ^2P^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	S11
Ni II	1860.689	1		$3d^7 4s^2 - 3d^8(^2F)7p$	$^2H - ^4F^{\circ}$	$\frac{11}{2} - \frac{9}{2}$	S11
Ni II	1860.796	1	6	$3d^8(^2F)4s - 3d^8(^1D)4p$	$^4F - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1864.558	6		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1865.637	5		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1866.499	5	3	$3d^7 4s^2 - 3d^8(^2P)5p$	$^4P - ^4S^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1870.460	6		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1875.069	3	1	$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1876.180	1		$3d^7 4s^2 - 3d^8(^2P)5p$	$^4P - ^4S^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1876.418	2		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1877.838	40	24	$3d^8(^2F)4s - 3d^8(^2F)5p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1878.103	2		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1881.155	25	4	$3d^8(^2F)4s - 3d^8(^1D)4p$	$^2F - ^2D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1883.170	4		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1885.525	20		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1886.043	12	23	$3d^8(^2F)4s - 3d^8(^2P)4p$	$^2F - ^4P^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S11
Ni II	1893.600	1		$3d^8(^1D)4s - 3d^8(^1G)4p$	$^2D - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1895.082	6	1	$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1896.147	2		$3d^8 - 3d^8(^2F)4p$	$g^2D - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1900.025	4		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1900.865	15	1	$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1900.921	2		$3d^8(^1D)4s - 3d^8(^1G)4p$	$^2D - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1907.612	1	1	$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1908.326	1		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1912.146	2		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1918.37	P	1	$3d^8 - 3d^8(^2F)4p$	$g^2D - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K8
Ni II	1920.582	1		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1927.707	2	1	$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1929.063	1		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1937.661	1		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1938.579	2	1	$3d^8(^2F)4s - 3d^8(^2P)4p$	$^2F - ^4P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1939.56	P		$3d^8 - 3d^8(^2F)4p$	$g^2D - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K8
Ni II	1939.901	10	1	$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1943.060	2		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1943.744	2		$3d^7 4s^2 - 3d^8(^2F)5p$	$^4F - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1951.92	P	1	$3d^8 - 3d^8(^2F)4p$	$g^2D - ^4D^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	K8
Ni II	1953.407	40		$3d^8(^1D)4s - 3d^8(^2P)4p$	$^2D - ^4S^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1954.709	1	44	$3d^7 4s^2 - 3d^8(^1G)5p$	$^2H - ^2G^{\circ}$	$\frac{11}{2} - \frac{9}{2}$	S11
Ni II	1965.357	8		$3d^8(^2P)4s - 3d^8(^1G)4p$	$^4P - ^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1980.010	15	34	$3d^8(^1D)4s - 3d^8(^2P)4p$	$^2D - ^4S^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1980.699	3	1	$3d^8(^1D)4s - 3d^8(^2P)4p$	$^2D - ^2S^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1993.570	2		$3d^8(^2P)4p - 3d^8(^2P)4d$	$^4P^{\circ} - ^4P$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1993.906	1	33	$3d^8(^2P)4p - 3d^8(^2P)4d$	$^4P^{\circ} - ^4P$	$\frac{7}{2} - \frac{7}{2}$	S11
Ni II	1995.723	15		$3d^8(^1D)4s - 3d^8(^2P)4p$	$^2D - ^2P^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	S11

NICKEL III (Ni²⁺), Z = 28
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁸ ³F₄ (26 electrons)
 Ionization Potential 283 700 cm⁻¹; 35.17 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	615.164	0					
Ni III	615.554	5					
Ni III	625.306	15		3d ⁸ - 3d ⁷ (b ² D)4p	a ¹ D - w ³ P ^o	2 - 1	S9
Ni III	625.682	100		3d ⁸ - 3d ⁷ (b ² D)4p	a ¹ D - w ³ P ^o	2 - 2	S9
Ni III	625.938	15		3d ⁸ - 3d ⁷ (b ² D)4p	a ³ P - w ³ P ^o	2 - 1	S9
				3d ⁸ - 3d ⁷ (b ² D)4p	a ³ P - w ³ P ^o	2 - 2	S9
				3d ⁸ - 3d ⁷ (b ² D)4p	a ³ P - w ³ P ^o	2 - 2	S9
Ni III	626.548	10			a ³ P - w ³ P ^o	1 - 0	S9
Ni III	626.923	30		3d ⁸ - 3d ⁷ (b ² D)4p	a ³ P - w ³ P ^o		
Ni III	627.541	15		3d ⁸ - 3d ⁷ (b ² D)4p	a ³ P - w ³ P ^o		
Ni III	630.711	500		3d ⁸ - 3d ⁷ (b ² D)4p	a ³ P - w ³ P ^o	1 - 1	S9
Ni III	635.406	1		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	a ³ P - w ³ P ^o	1 - 2	S9
				3d ⁸ - 3d ⁷ (² F)4p	a ⁵ F - u ³ F ^o	0 - 1	S9
Ni III	637.057	15			ga ³ F - x ¹ G ^o	3 - 3	S9
Ni III	637.535	200				4 - 4	S9
Ni III	639.338	10		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - w ³ F ^o	4 - 3	S9
Ni III	641.689	10		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - v ³ D ^o	4 - 3	S9
Ni III	641.866	5		3d ⁸ - 3d ⁷ (² F)4p	a ³ P - u ³ D ^o	2 - 2	S9
		100		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - w ³ F ^o	4 4	S9
				3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - v ³ D ^o	3 - 2	S9
Ni III	642.611	1					
Ni III	644.488	0		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - w ³ F ^o	3 - 3	S9
Ni III	644.948	20		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - y ¹ D ^o	3 - 2	S9
Ni III	645.305	30					
Ni III	645.632	2		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - v ³ D ^o	2 - 1	S9
				3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - v ³ D ^o	2 - 2	S9
Ni III	646.890	1					
Ni III	647.319	0		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - v ³ D ^o	2 - 2	S9
Ni III	648.271	3		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - v ³ D ^o		
Ni III	649.006	2		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - v ³ D ^o	2 - 3	S9
Ni III	650.701	2		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - w ³ F ^o	3 - 4	S9
				3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - y ¹ D ^o	2 - 2	S9
				3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - w ³ F ^o	3 - 2	S9
Ni III	652.652	30		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - y ⁵ F ^o	5 - 4	S9
Ni III	652.837	1					
Ni III	653.496	10		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - y ⁵ F ^o	5 - 5	S9
Ni III	654.445	10		3d ⁸ - 3d ⁷ (² F)4p	ga ³ F - w ³ F ^o	2 - 2	S9
Ni III	654.768	5					
				3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - y ⁵ F ^o	4 - 4	S9
Ni III	655.120	0					
Ni III	656.431	1		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - u ³ F ^o	4 - 3	S9
Ni III	656.724	1		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - y ⁵ F ^o	3 - 3	S9
Ni III	657.304	1		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	a ⁵ F - y ⁵ F ^o	4 - 5	S9
Ni III	657.668	0		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	b ³ F - u ³ F ^o	3 - 2	S9
				3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - y ⁵ F ^o	2 - 2	S9
Ni III	657.998	0					
Ni III	658.810	0		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - y ⁵ F ^o	3 - 4	S9
Ni III	660.079	30		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - y ⁵ F ^o	2 - 3	S9
Ni III	660.620	10		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - u ³ F ^o	4 - 4	S9
Ni III	661.061	5		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - u ³ F ^o	3 - 3	S9
				3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - u ³ F ^o	2 - 2	S9
Ni III	662.366	200					
Ni III	663.568	150		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - t ³ D ^o	4 - 3	S9
Ni III	664.851	100		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	5 - 4	S9
Ni III	666.477	50		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - t ³ D ^o	3 - 2	S9
Ni III	666.585	30		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	4 - 3	S9
				3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - t ³ D ^o	2 - 1	S9
Ni III	667.783	5h					
Ni III	667.976	1		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	4 - 4	S9
Ni III	668.195	10		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - t ³ D ^o	3 - 3	S9
Ni III	668.697	1		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	3 - 2	S9
Ni III	669.458	5		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁴ D)4p	b ³ F - t ³ D ^o	2 - 2	S9
				3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	2 - 1	S9
Ni III	669.755	5					
Ni III	670.440	0		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	3 - 3	S9
Ni III	670.640	2		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	1 - 0	S9
Ni III	671.065	0		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	2 - 2	S9
Ni III	676.941	500		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	a ⁵ F - x ⁵ D ^o	1 - 1	S9
Ni III	682.947	5					
Ni III	683.186	10		3d ⁷ (⁴ F)4s - 3d ⁶ 4s(⁶ D)4p	b ³ F - y ⁵ F ^o	4 - 3	S9
Ni III	683.455	10					
Ni III	683.590	10		3d ⁶ - 3d ⁷ (² H)4p	ga ³ F - y ¹ H ^o	4 - 5	S9
Ni III	683.918	10					

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	689.210	100					S9
Ni III	700.168	200					S9
Ni III	701.361	1		$3d^8 - 3d^7(^2F)4p$	$a^1D - v^3D^o$	2-3	S9
Ni III	701.778	100		$3d^8 - 3d^7(^2H)4p$	$ga^3F - y^3H^o$	4-5	S9
Ni III	705.991	0		$3d^8 - 3d^7(^2F)4p$	$a^1D - y^1D^o$	2-2	S9
Ni III				$3d^8 - 3d^7(^2H)4p$	$ga^3F - y^3H^o$	3-4	S9
Ni III	707.754	0		$3d^8 - 3d^7(^2D)4p$	$ga^3F - x^3P^o$	2-2	S9
Ni III	708.853	5		$3d^8 - 3d^7(^2D)4p$	$ga^3F - z^1D^o$	3-2	S9
Ni III	709.027	100					S9
Ni III	711.518	20		$3d^8 - 3d^7(^2D)4p$	$ga^3F - x^3F^o$	4-3	S9
Ni III	711.772	100		$3d^8 - 3d^7(^2F)4p$	$a^3P - v^3D^o$	2-2	S9
Ni III	712.976	100		$3d^8 - 3d^7(^2F)4p$	$a^3P - v^3D^o$	1-1	S9
Ni III	713.332	300		$3d^8 - 3d^7(^2F)4p$	$a^3P - v^3D^o$	2-3	S9
Ni III	713.385	300		$3d^8 - 3d^7(^2F)4p$	$a^3P - v^3D^o$	1-2	S9
Ni III	714.254	100		$3d^8 - 3d^7(^2F)4p$	$a^3P - v^3D^o$	0-1	S9
Ni III	714.965	1		$3d^8 - 3d^7(^2F)4p$	$a^3P - y^1D^o$	2-2	S9
Ni III	715.563	100		$3d^8 - 3d^7(^2P)4p$	$ga^2F - y^3P^o$	3-2	S9
Ni III	716.608	20		$3d^8 - 3d^7(^2F)4p$	$a^3P - y^1D^o$	1-2	S9
Ni III	716.708	20		$3d^8 - 3d^7(^2F)4p$	$a^3P - y^1D^o$	1-2	S9
Ni III	718.287	10					S9
Ni III	718.480	500b		$3d^8 - 3d^7(^2D)4p$	$ga^2F - x^3F^o$	3-3	S9
Ni III	718.674	100		$3d^8 - 3d^7(^2P)4p$	$ga^2F - y^3P^o$	2-1	S9
Ni III	720.337	15		$3d^8 - 3d^7(^2D)4p$	$ga^2F - x^3F^o$	3-4	S9
Ni III	721.259	200		$3d^8 - 3d^7(^2D)4p$	$ga^2F - x^3F^o$	2-2	S9
Ni III	721.418	100		$3d^8 - 3d^7(^2P)4p$	$ga^2F - z^1P^o$	2-1	S9
Ni III	722.094	300	12	$3d^8 - 3d^7(^2D)4p$	$ga^2F - w^3D^o$	4-3	S9
Ni III	724.471	20		$3d^8 - 3d^7(^2H)4p$	$ga^2F - x^3G^o$	4-4	S9
Ni III	725.196	250	12	$3d^8 - 3d^7(^2D)4p$	$ga^2F - w^3D^o$	3-2	S9
Ni III	727.313	15		$3d^8 - 3d^7(^2H)4p$	$ga^2F - x^3G^o$	3-3	S9
Ni III	729.249	100	12	$3d^8 - 3d^7(^2D)4p$	$ga^2F - w^3D^o$	3-3	S9
Ni III	729.820	500		$3d^8 - 3d^7(^2H)4p$	$ga^2F - x^3G^o$	4-5	S9
Ni III	730.014	50		$3d^8 - 3d^7(^2D)4p$	$ga^2F - w^3D^o$	2-2	S9
Ni III	730.109	250	11	$3d^8 - 3d^7(^2P)4p$	$ga^2F - x^3D^o$	4-3	S9
Ni III	731.481	150		$3d^8 - 3d^7(^2D)4p$	$ga^2F - w^3D^o$	2-1	S9
Ni III	731.696	400		$3d^8 - 3d^7(^2H)4p$	$ga^2F - x^3G^o$	3-4	S9
Ni III	732.158	300		$3d^8 - 3d^7(^2H)4p$	$ga^2F - x^3G^o$	2-3	S9
Ni III	733.807	20		$3d^7(^4P)4s - 3d^8 4s(^4D)4p$	$b^3P - u^3F^o$? 1-2	S9
Ni III	734.100	5	12	$3d^8 - 3d^7(^2D)4p$	$ga^2F - w^3D^o$	2-3	S9
Ni III	737.419	50h	11	$3d^8 - 3d^7(^2P)4p$	$ga^2F - x^3D^o$	3-3	S9
Ni III	738.258	200	11	$3d^8 - 3d^7(^2P)4p$	$ga^2F - x^3D^o$	3-2	S9
Ni III	740.235	100	11	$3d^8 - 3d^7(^2P)4p$	$ga^2F - x^3D^o$	2-1	S9
Ni III	740.620	30		$3d^8 - 3d^7(^2G)4p$	$ga^2F - z^1F^o$	4-3	S9
Ni III	742.391	3	11	$3d^8 - 3d^7(^2P)4p$	$ga^2F - x^3D^o$	2-3	S9
Ni III	743.275	2	11	$3d^8 - 3d^7(^2P)4p$	$ga^2F - x^3D^o$	2-2	S9
Ni III	745.955	100		$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3G^o$	4-4	S9
Ni III	744.400	5		$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3G^o$	4-3	S9
Ni III	744.784	100		$3d^8 - 3d^7(^2F)4p$	$a^1G - x^1G^o$	4-4	S9
Ni III	745.058	40		$3d^8 - 3d^7(^2G)4p$	$ga^2F - z^1H^o$	4-5	S9
Ni III	746.319	50h		$3d^8 - 3d^7(^4P)4p$	$ga^2F - z^2P^o$	3-2	S9
Ni III	747.015	30		$3d^8 - 3d^7(^2F)4p$	$a^1G - w^3F^o$	4-3	S9
Ni III	747.213	20		$3d^8 - 3d^7(^4P)4p$	$ga^2F - z^2P^o$	2-1	S9
Ni III	747.697	5		$3d^8 - 3d^7(^2F)4p$	$a^1G - v^3D^o$	4-3	S9
Ni III	747.989	300	9	$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3G^o$	4-5	S9
Ni III	749.677	200	8	$3d^8 - 3d^7(^4P)4p$	$ga^2F - z^2P^o$	4-3	S9
Ni III	750.053	300		$3d^8 - 3d^7(^2G)4p$	$ga^2F - z^1G^o$	4-4	S9
Ni III	750.983	150	4	$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3F^o$	4-3	S9
Ni III	751.333	150	6	$3d^8 - 3d^7(^4F)4p$	$ga^2F - y^3D^o$	4-3	S9
Ni III	751.573	150	9	$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3G^o$	3-4	S9
Ni III	752.023	200	9	$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3G^o$	3-3	S9
Ni III	752.603	100	4	$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3F^o$	3-2	S9
Ni III	753.252	30		$3d^8 - 3d^7(^2G)4p$	$ga^2F - z^1F^o$	2-3	S9
Ni III	753.378	10h		$3d^8 - 3d^7(^2F)4p$	$a^1G - w^3F^o$	4-4	S9
Ni III	756.687	100	5	$3d^8 - 3d^7(^2G)4p$	$ga^2F - z^2H^o$	4-4	S9
Ni III	757.201	50	9	$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3G^o$	2-3	S9
Ni III	757.397	5		$3d^8 - 3d^7(^4P)4p$	$ga^2F - z^2P^o$	3-3	S9
Ni III	757.795	300	4	$3d^8 - 3d^7(^2G)4p$	$ga^2F - y^3F^o$	2-2	S9

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	758.039	150		$3d^8 - 3d^7(^2D)4p$	$a^1D - y^1P^o$	2-1	S9
Ni III	758.733	250	4	$3d^8 - 3d^7(^2G)4p$	$ga^3F - y^3F^o$	3-3	S9
Ni III	758.773	250	4	$3d^8 - 3d^7(^2G)4p$	$ga^3F - y^3F^o$	4-4	S9
Ni III	759.098	100	6	$3d^8 - 3d^7(^4P)4p$	$ga^3F - y^3D^o$	3-3	S9
Ni III	760.021	15	6	$3d^8 - 3d^7(^4P)4p$	$ga^3F - y^3D^o$? 2-1	S9
Ni III	760.452	10		$3d^8 - 3d^7(^2G)4p$	$ga^3F - z^3H^o$	4-5	S9
Ni III	760.684	5	6	$3d^8 - 3d^7(^4P)4p$	$ga^3F - y^3D^o$? 3-2	S9
Ni III	762.951	5		$3d^8 - 3d^7(^4P)4p$	$ga^3F - z^3P^o$	2-1	S9
Ni III	764.014	100		$3d^8 - 3d^7(^2G)4p$	$ga^3F - y^3F^o$	2-3	S9
Ni III	764.354	50	6	$3d^8 - 3d^7(^4P)4p$	$ga^3F - y^3D^o$	2-3	S9
Ni III	765.726	50		$3d^8 - 3d^7(^2D)4p$	$a^1D - x^3P^o$	2-1	S9
Ni III	766.000	5	6	$3d^8 - 3d^7(^4P)4p$	$ga^3F - y^3D^o$	2-2	S9
Ni III	766.693	100		$3d^8 - 3d^7(^2G)4p$	$ga^3F - y^3F^o$	3-4	S9
Ni III	767.400	5		$3d^8 - 3d^7(^4P)4p$	$ga^3F - y^3D^o$	4-4	S9
Ni III	770.216	400		$3d^8 - 3d^7(^2D)4p$	$a^1D - y^1F^o$	2-3	S9
Ni III	772.040	200		$3d^8 - 3d^7(^2D)4p$	$a^1D - x^3P^o$	2-2	S9
Ni III	773.464	100		$3d^8 - 3d^7(^2D)4p$	$a^3P - y^1P^o$	2-1	S9
Ni III	775.364	5		$3d^8 - 3d^7(^2D)4p$	$a^3P - y^1P^o$	1-1	S9
Ni III	776.884	5		$3d^8 - 3d^7(^2D)4p$	$a^3P - y^1P^o$	0-1	S9
Ni III	777.181	100					S9
Ni III	778.806	500		$3d^8 - 3d^7(^2D)4p$	$a^1D - z^1D^o$? 2-2	S9
Ni III	780.572	30		$3d^7(a^3D)4s - 3d^6 4s(^4D)4p$	$b^1D - u^3F^o$? 2-2	S9
Ni III	781.486	50		$3d^8 - 3d^7(^2D)4p$	$a^3P - x^3P^o$	2-1	S9
Ni III	783.419	30		$3d^8 - 3d^7(^2D)4p$	$a^3P - x^3P^o$	1-1	S9
Ni III	785.020	200d		$3d^8 - 3d^7(^2P)4p$	$a^1D - y^3F^o$	2-1	S9
Ni III	786.145	20		$3d^8 - 3d^7(^2D)4p$	$a^3P - y^1F^o$	2-3	S9
Ni III	788.039	300		$3d^8 - 3d^7(^2D)4p$	$a^3P - x^3F^o$	2-2	S9
Ni III	788.298	200		$3d^8 - 3d^7(^2P)4p$	$a^1D - z^1P^o$	2-1	S9
Ni III	790.000	20		$3d^8 - 3d^7(^2D)4p$	$a^3P - x^3P^o$	1-2	S9
Ni III	790.450	20		$3d^8 - 3d^7(^2D)4p$	$a^1D - x^3F^o$	2-3	S9
Ni III	797.092	30		$3d^8 - 3d^7(^2D)4p$	$a^3P - z^1D^o$	1-2	S9
Ni III	798.572	2		$3d^8 - 3d^7(^2D)4p$	$a^1D - w^3D^o$	2-2	S9
Ni III	800.332	100		$3d^8 - 3d^7(^2D)4p$	$a^1D - w^3D^o$	2-1	S9
Ni III	801.145	20		$3d^8 - 3d^7(^2H)4p$	$a^1D - x^3G^o$	2-3	S9
Ni III	801.591	100		$3d^8 - 3d^7(^2P)4p$	$a^3P - y^3P^o$	2-1	S9
Ni III	803.490	20		$3d^8 - 3d^7(^2D)4p$	$a^1D - w^3D^o$	2-3	S9
Ni III	803.612	3		$3d^8 - 3d^7(^2P)4p$	$a^3P - y^3P^o$	1-1	S9
Ni III	805.007	200		$3d^8 - 3d^7(^2P)4p$	$a^3P - z^1P^o$	2-1	S9
Ni III	805.263	20		$3d^8 - 3d^7(^2P)4p$	$a^3P - y^3P^o$	0-1	S9
Ni III	807.055	100		$3d^8 - 3d^7(^2P)4p$	$a^3P - z^1P^o$	1-1	S9
Ni III	807.213	30		$3d^8 - 3d^7(^2D)4p$	$a^3P - x^3F^o$	2-3	S9
Ni III	808.711	10		$3d^8 - 3d^7(^2P)4p$	$a^3P - z^1P^o$	0-1	S9
Ni III	811.568	500		$3d^8 - 3d^7(^2F)4p$	$a^1G - y^1H^o$	4-5	S9
Ni III	813.426	10		$3d^8 - 3d^7(^2P)4p$	$a^1D - x^3D^o$	2-3	S9
Ni III	815.718	5h		$3d^8 - 3d^7(^2D)4p$	$a^3P - w^3D^o$	2-2	S9
Ni III	817.544	5		$3d^8 - 3d^7(^2D)4p$	$a^3P - w^3D^o$	2-1	S9
Ni III	817.833	20		$3d^8 - 3d^7(^2D)4p$	$a^3P - w^3D^o$	1-2	S9
Ni III	818.389	1		$3d^8 - 3d^7(^2H)4p$	$a^3P - x^3G^o$	2-3	S9
Ni III	819.237	10		$3d^8 - 3d^7(^4P)4p$	$a^1D - z^3P^o$	2-1	S9
Ni III	819.665	5		$3d^8 - 3d^7(^2D)4p$	$a^3P - w^3D^o$	1-1	S9
Ni III	820.851	50		$3d^8 - 3d^7(^2D)4p$	$a^3P - w^3D^o$	2-3	S9
Ni III	821.373	15		$3d^8 - 3d^7(^2D)4p$	$a^3P - w^3D^o$	0-1	S9
Ni III	824.292	20		$3d^8 - 3d^7(^4P)4p$	$a^1D - z^3P^o$	2-2	S9
Ni III	825.300	10h		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^o$	1-0	S9
Ni III	826.138	500		$3d^8 - 3d^7(^2H)4p$	$a^1G - y^1C^o$	4-4	S9
Ni III	826.501	200		$3d^8 - 3d^7(^2G)4p$	$a^1D - z^1F^o$	2-3	S9
Ni III	828.109	100		$3d^8 - 3d^7(^2D)4p$	$z^1G - y^1F^o$	4-3	S9
Ni III	828.491	3		$3d^8 - 3d^7(^2P)4p$	$a^3P - x^3D^o$	2-1	S9
Ni III	830.666	10		$3d^8 - 3d^7(^2P)4p$	$a^3P - x^3D^o$	1-1	S9
Ni III	831.229	100		$3d^8 - 3d^7(^2P)4p$	$a^3P - x^3D^o$	2-3	S9
Ni III	831.487	5		$3d^7(^4F)4s - 3d^7(b^2D)4p$	$a^3F - w^3P^o$? 1-1	S9
Ni III	832.284	5		$3d^8 - 3d^7(^2P)4p$	$a^3P - x^3D^o$	2-2	S9
Ni III	834.058	20		$3d^8 - 3d^7(^2H)4p$	$a^1G - y^3H^o$	4-4	S9
Ni III	837.025	20		$3d^8 - 3d^7(^2H)4p$	$a^1G - y^3H^o$	4-5	S9
Ni III	837.266	50		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^o$	2-1	S9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	839.478	5		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^{\circ}$	1 - 1	S9
Ni III	841.256	20		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^{\circ}$	0 - 1	S9
Ni III	841.825	2		$3d^8 - 3d^7(^4F)4p$	$a^1D - y^3D^{\circ}$	2 - 2	S9
Ni III	842.142	500	3	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3D^{\circ}$	4 - 3	S9
Ni III	842.546	50		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^{\circ}$	2 - 2	S9
Ni III	844.787	50		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^{\circ}$	1 - 2	S9
Ni III	844.859	100		$3d^8 - 3d^7(^2G)4p$	$a^3P - z^1F^{\circ}$	2 - 3	S9
Ni III	845.242	400	3	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3D^{\circ}$	3 - 2	S9
Ni III	847.433	300	3	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3D^{\circ}$	2 - 1	S9
Ni III	849.810	5		$3d^8 - 3d^7(^2G)4p$	$a^3P - y^3G^{\circ}$	2 - 3	S9
Ni III	851.521	15		$3d^8 - 3d^7(^2D)4p$	$a^1G - x^3F^{\circ}$	4 - 3	S9
Ni III	851.788	15		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3D^{\circ}$	2 - 2	S9
Ni III	852.567	10h		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3F^{\circ}$	4 - 3	S9
Ni III	853.398	5		$3d^8 - 3d^7(^4P)4p$	$a^3P - y^3D^{\circ}$	2 - 1	S9
Ni III	855.719	2		$3d^8 - 3d^7(^4P)4p$	$a^3P - y^3D^{\circ}$	1 - 1	S9
Ni III	855.922	100d		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^{\circ}$	2 - 2	S9
Ni III	856.506	50	2	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3F^{\circ}$	3 - 2	S9
Ni III	856.684	50		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^{\circ}$	2 - 3	S9
Ni III	857.087	200	1	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	4 - 4	S9
Ni III	857.550	50h		$3d^8 - 3d^7(^4P)4p$	$a^3P - y^3D^{\circ}$	0 - 1	S9
Ni III	858.198	20		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^{\circ}$	1 - 2	S9
Ni III	858.861	20h		$3d^8 - 3d^7(^4P)4p$	$a^3P - y^3D^{\circ}$	2 - 3	S9
Ni III	859.387	20		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3P^{\circ}$	1 - 1	S9
Ni III	859.854	50					S9
Ni III	860.238	150		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	3 - 3	S9
Ni III	860.642	300	2	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3F^{\circ}$	4 - 4	S9
Ni III	860.905	10		$3d^8 - 3d^7(^4P)4p$	$a^3P - y^3D^{\circ}$	2 - 2	S9
Ni III	862.882	300	2	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3F^{\circ}$	3 - 3	S9
Ni III	863.217	300	2	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3F^{\circ}$	2 - 2	S9
Ni III	867.023	50	1	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	2 - 3	S9
Ni III	867.194	100	1	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	3 - 4	S9
Ni III	867.508	300	1	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	4 - 5	S9
Ni III	869.702	200	2	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3F^{\circ}$	2 - 3	S9
Ni III	869.926	10		$3d^8 - 3d^7(^2H)4p$	$a^1G - z^3I^{\circ}$	4 - 5	S9
Ni III	870.845	200	2	$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3F^{\circ}$	3 - 4	S9
Ni III	875.641	150		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3S^{\circ}$	2 - 1	S9
Ni III	877.852	P		$3d^8 - 3d^7(^2H)4p$	$a^1G - x^3G^{\circ}$	4 - 5	S9
Ni III	878.078	30		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3S^{\circ}$	1 - 1	S9
Ni III	879.471	50		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	4 - 4	S9
Ni III	880.028	20		$3d^8 - 3d^7(^4P)4p$	$a^3P - z^3S^{\circ}$	0 - 1	S9
Ni III	882.642	20		$3d^8 - 3d^7(^4P)4p$	$a^3P - y^3D^{\circ}$	2 - 1	S9
Ni III	883.849	50		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	4 - 5	S9
Ni III	885.103	3		$3d^8 - 3d^7(^4P)4p$	$a^3P - y^3D^{\circ}$	1 - 1	S9
Ni III	885.455	2		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3D^{\circ}$	4 - 3	S9
Ni III	896.924	10		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	3 - 3	S9
Ni III	890.131	5		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	3 - 4	S9
Ni III	892.041	3		$3d^8 - 3d^7(^4F)4p$	$ga^3F - z^3G^{\circ}$	2 - 2	S9
Ni III	893.533	50		$3d^8 - 3d^7(^2G)4p$	$a^1G - z^1F^{\circ}$	4 - 3	S9
Ni III	900.008	100		$3d^8 - 3d^7(^2G)4p$	$a^1G - z^1H^{\circ}$	4 - 5	S9
Ni III	904.294	50		$3d^8 - 3d^7(^2G)4p$	$a^1G - y^3G^{\circ}$	4 - 5	S9
Ni III	968.100	20	13	$3d^8 - 3d^7(^4F)4p$	$a^3P - z^3D^{\circ}$	1 - 1	S9
Ni III	970.478	50	13	$3d^8 - 3d^7(^4F)4p$	$a^3P - z^3D^{\circ}$	0 - 1	S9
Ni III	970.790	20	13	$3d^8 - 3d^7(^4F)4p$	$a^3P - z^3D^{\circ}$	2 - 2	S9
Ni III	973.786	300	13	$3d^8 - 3d^7(^4F)4p$	$a^3P - z^3D^{\circ}$	1 - 2	S9
Ni III	979.589	400	13	$3d^8 - 3d^7(^4F)4p$	$a^3P - z^3D^{\circ}$	2 - 3	S9
Ni III	1305.344	100		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	5 - 4	S9
Ni III	1321.804	10		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	4 - 4	S9
Ni III	1328.084	75		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	4 - 3	S9
Ni III	1330.787	2		$3d^7(^2F)4s - 3d^7(^2D)4p$	$a^1F - v^3F^{\circ}$	3 - 3	S9
Ni III	1341.421	10		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	3 - 3	S9
Ni III	1342.148	50		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	3 - 2	S9
Ni III	1351.256	30		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	2 - 1	S9
Ni III	1352.052	20		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	2 - 2	S9
Ni III	1353.512	20		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	1 - 0	S9
Ni III	1357.802	50		$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^5F - y^3D^{\circ}$	1 - 1	S9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	1362.783	3		$3d^7(^2D)4s - 3d^7(^2F)4p$	$a^3D - v^2D^{\circ}$? 1-1	S9
Ni III	1374.491	5		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 8$	4-5	S9
Ni III	1374.660	10		$3d^7(^4F)4s - 3d^7(^4P)4p$	$b^3F - z^5P^{\circ}$	3-2	S9
Ni III	1376.183	15					S9
Ni III	1382.077	10		$3d^7(^4F)4s - 3d^7(^2G)4p$	$b^3F - y^2G^{\circ}$	4-5	S9
Ni III	1337.870	3		$3d^7(^4F)4s - 3d^7(^4P)4p$	$b^3F - z^5P^{\circ}$	4-3	S9
Ni III	1388.629	5					S9
Ni III	1389.149	1		$3d^7(^4F)4s - 3d^7(^2G)4p$	$b^3F - z^1G^{\circ}$	4-4	S9
Ni III	1389.735	20		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 7$	4-4	S9
Ni III	1392.377	30		$3d^7(^4F)4s - 3d^7(^2G)4p$	$b^3F - y^2F^{\circ}$	4-3	S9
Ni III	1395.459	10					S9
Ni III	1401.214	15		$3d^7(^4P)4s - 3d^7(^2D)4p$	$a^5P - z^1D^{\circ}$	3-2	S9
Ni III	1403.113	15		$3d^7(^4F)4p - 3d^7(^4F)5s$	$z^5F^{\circ} - e^5F$	5-4	S9
Ni III	1405.279	10					S9
Ni III	1405.421	10		$3d^7(^4F)4p - 3d^7(^4F)5s$	$z^5D^{\circ} - e^5F$? 4-4	S9
Ni III	1406.250	50		$3d^7(^4F)4p - 3d^7(^4F)5s$	$z^5F^{\circ} - e^5F$	4-4	S9
Ni III	1409.000	15					S9
Ni III	1409.974	5		$3d^7(^4F)4p - 3d^7(^4F)5s$	$z^5D^{\circ} - e^5F$? 3-3	S9
Ni III	1410.126	10					S9
Ni III	1410.344	15					S9
Ni III	1410.446	3		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 6$	3-3	S9
Ni III	1410.642	5					S9
Ni III	1412.304	50		$3d^7(^4F)4p - 3d^7(^4F)5s$	$z^5F^{\circ} - e^5F$	5-5	S9
Ni III	1413.211	5		$3d^7(^4F)4s - 3d^7(^2G)4p$	$b^3F - y^2F^{\circ}$	2-2	S9
Ni III	1414.389	20					S9
Ni III	1414.916	15		$3d^7(^2G)4s - 3d^7(^2H)4p$	$a^2G - y^1H^{\circ}$? 4-5	S9
Ni III	1415.467	3		$3d^7(^4F)4p - 3d^7(^4F)5s$	$z^5F^{\circ} - e^5F$	4-5	S9
Ni III	1415.909	5					S9
Ni III	1416.956	75		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 5$	5-6	S9
Ni III	1417.249	2		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 4$	5-5	S9
Ni III	1417.387	2		$3d^7(^4F)4s - 3d^7(^2G)4p$	$b^3F - y^2F^{\circ}$	3-3	S9
Ni III	1417.841	10					S9
Ni III	1418.292	5		$3d^7(^2D)4s - 3d^7(^2F)4p$	$b^1D - v^2D^{\circ}$? 2-2	S9
Ni III	1419.382	10		$3d^7(^4F)4s - 3d^7(^2G)4p$	$b^3F - y^2F^{\circ}$	4-4	S9
Ni III	1420.448	75		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 4$	4-4	S9
Ni III	1421.082	10		$3d^7(^4F)4s - 3d^7(^4P)4p$	$b^3F - y^2D^{\circ}$? 2-1	S9
Ni III	1423.722	10					S9
Ni III	1424.511	100		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 3$	4-5	S9
Ni III	1425.737	5					S9
Ni III	1427.087	5					S9
Ni III	1427.639	20		$3d^7(^4P)4s - 3d^7(^2P)4p$	$a^5P - y^2P^{\circ}$	3-2	S9
Ni III	1427.914	3		$3d^7(^4P)4s - 3d^7(^2P)4p$	$a^5P - y^2P^{\circ}$	2-1	S9
Ni III	1428.870	200		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5G^{\circ} - 8$	5-4	S9
Ni III	1434.133	30		$3d^7(^4P)4s - 3d^7(^2P)4p$	$a^5P - y^2P^{\circ}$	2-2	S9
Ni III	1434.306	200		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 2$	5-4	S9
Ni III	1435.609	10					S9
Ni III	1438.152	2		$3d^7(^4P)4s - 3d^7(^2D)4p$	$a^5P - x^2F^{\circ}$	2-2	S9
Ni III	1439.809	20					S9
Ni III	1442.235	5					S9
Ni III	1445.374	40		$3d^7(^4F)4s - 3d^7(^2G)4p$	$b^3F - y^2F^{\circ}$	3-4	S9
Ni III	1446.748	15	35	$3d^7(^4F)4p - 3d^7(^4F)5s$	$z^5D^{\circ} - e^5F$	4-5	S9
Ni III	1448.175	30		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 1$	5-4	S9
Ni III	1451.504	200		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5F^{\circ} - 1$	4-4	S9
Ni III	1452.532	20					S9
Ni III	1453.882	50					S9
Ni III	1457.430	10		$3d^7(^4F)4s - 3d^7(^4P)4p$	$b^3F - y^2D^{\circ}$	4-3	S9
Ni III	1457.575	10					S9
Ni III	1457.829	50					S9
Ni III	1458.284	5					S9
Ni III	1461.649	10		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5G^{\circ} - 6$	4-4	S9
Ni III	1462.239	5					S9
Ni III	1464.989	5					S9
Ni III	1465.606	10	36	$3d^7(^4F)4p - 3d^7(^4F)5s$	$z^5G^{\circ} - e^5F$	6-5	S9
Ni III	1466.027	5					S9
Ni III	1469.836	3		$3d^7(^4F)4p - 3d^7(^4F)4d$	$z^5D^{\circ} - 2$	4-4	S9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	1470.642	2		3d ⁷ (⁴ F)4p - 3d ⁷ (¹ F)4d	z ⁴ G° - 5	6 - 5	S9
Ni III	1473.939	5					S9
Ni III	1474.402	5					S9
Ni III	1475.368	15	37	3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	z ³ G° - e ² F	5 - 4	S9
Ni III	1475.662	5					S9
Ni III	1477.801	10	38	3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	z ² F° - e ³ F	4 - 3	S9
Ni III	1478.252	10		3d ⁷ (⁴ P)4s - 3d ⁷ (² D)4p	b ² P - y ¹ F°	6 - 1	S9
Ni III	1478.854	10					S9
Ni III	1483.044	10		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)4d	z ⁴ G° - 3	5 - 4	S9
Ni III	1484.268	3		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	z ⁴ G° - e ⁴ F	? 3 - 4	S9
Ni III	1488.424	3	37	3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	z ² G° - e ³ F	4 - 3	S9
Ni III	1491.111	1		3d ⁷ (² G)4s - 3d ⁷ (² H)4p	a ² G - y ² H°	5 - 6	S9
Ni III	1491.309	2		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)4d	z ² G° - 7	5 - 4	S9
Ni III	1492.622	30		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)4d	z ² D° - 2	5 - 4	S9
Ni III	1492.990	30					S9
Ni III	1495.641	20	38	3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	z ³ F° - e ² F	4 - 4	S9
Ni III	1498.338	5					S9
Ni III	1501.311	5	38	3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	z ³ F° - e ² F	3 - 3	S9
Ni III	1505.165	5		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ P)4p	b ² F - y ⁴ D°	? 2 - 2	S9
Ni III	1506.518	1	37	3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	z ² G° - e ² F	4 - 4	S9
Ni III	1512.046	10		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)4d	z ² F° - 7	4 - 5	S9
Ni III	1526.305	5		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)4d	z ² G° - 8	? 3 - 4	S9
Ni III	1536.246	5					S9
Ni III	1540.759	50		3d ⁷ (² G)4s - 3d ⁷ (² H)4p	b ¹ G - y ¹ G°	4 - 4	S9
Ni III	1547.641	20		3d ⁷ (² G)4s - 3d ⁷ (² D)4p	b ¹ G - y ¹ F°	4 - 3	S9
Ni III	1552.365	10		3d ⁷ (⁴ P)4s - 3d ⁷ (² D)4p	b ³ P - x ² P°	2 - 2	S9
Ni III	1555.598	2		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - z ² P°	3 - 2	S9
Ni III	1568.569	5		3d ⁷ (² G)4s - 3d ⁷ (² H)4p	b ¹ G - y ² H°	4 - 4	S9
Ni III	1579.999	15		3d ⁷ (⁴ P)4s - 3d ⁷ (² D)4p	b ³ P - z ¹ D°	2 - 2	S9
Ni III	1586.909	1		3d ⁷ (² G)4s - 3d ⁷ (² D)4p	a ² G - w ² D°	3 - 2	S9
Ni III	1589.625	2		3d ⁷ (² G)4s - 3d ⁷ (² H)4p	a ² G - x ² G°	5 - 4	S9
Ni III	1597.077	3		3d ⁷ (² G)4s - 3d ⁷ (² H)4p	a ² G - x ² G°	3 - 3	S9
Ni III	1597.899	3		3d ⁷ (⁴ P)4s - 3d ⁷ (² P)4p	b ³ P - z ¹ P°	0 - 1	S9
Ni III	1598.673	15					S9
Ni III	1600.294	10		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ⁵ F - z ² F°	5 - 4	S9
Ni III	1602.505	15		3d ⁷ (⁴ P)4s - 3d ⁷ (² P)4p	b ² P - z ¹ P°	1 - 1	S9
Ni III	1604.537	300		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - z ² P°	3 - 3	S9
Ni III	1609.876	100		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - z ² P°	2 - 2	S9
Ni III	1610.534	20		3d ⁷ (⁴ P)4s - 3d ⁷ (² G)4p	a ⁵ P - y ² F°	3 - 3	S9
Ni III	1612.165	30		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - y ² D°	3 - 3	S9
Ni III	1612.474	10	17	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ⁵ F - z ² G°	4 - 4	S9
Ni III	1612.730	30		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - z ² P°	2 - 3	S9
Ni III	1612.966	1		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - y ² D°	1 - 1	S9
Ni III	1615.597	2		3d ⁷ (² G)4s - 3d ⁷ (² H)4p	a ² G - x ² G°	5 - 5	S9
Ni III	1618.127	15					S9
Ni III	1618.801	20		3d ⁷ (⁴ P)4s - 3d ⁷ (² G)4p	a ⁵ P - y ² F°	2 - 3	S9
Ni III	1619.414	20		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - y ² D°	3 - 2	S9
Ni III	1619.642	30		3d ⁷ (⁴ P)4s - 3d ⁷ (² P)4p	b ³ P - z ¹ P°	2 - 1	S9
Ni III	1620.443	100		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - y ² D°	2 - 3	S9
Ni III	1621.830	50		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - z ² P°	1 - 2	S9
Ni III	1621.942	50	17	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ⁵ F - z ² G°	2 - 3	S9
Ni III	1623.622	35		3d ⁷ (² D)4s - 3d ⁷ (² D)4p	a ² D - x ² P°	2 - 1	S9
Ni III	1624.220	20	17	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ⁵ F - z ² G°	5 - 5	S9
Ni III	1626.096	100		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - z ² P°	1 - 1	S9
Ni III	1627.751	3		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - y ² D°	2 - 2	S9
Ni III	1629.000	25		3d ⁷ (² D)4s - 3d ⁷ (² D)4p	a ² D - x ² P°	3 - 2	S9
Ni III	1630.120	3		3d ⁷ (² P)4s - 3d ⁷ (² D)4p	a ¹ P - y ¹ P°	1 - 1	S9
Ni III	1630.602	5		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - y ¹ G°	4 - 4	S9
Ni III	1631.479	2		3d ⁷ (² G)4s - 3d ⁷ (² D)4p	b ¹ G - x ² F°	4 - 3	S9
Ni III	1631.754	2		3d ⁷ (² P)4s - 3d ⁷ (² D)4p	c ³ P - x ² P°	1 - 2	S9
Ni III	1632.166	100	17	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ⁵ F - z ² G°	3 - 4	S9
Ni III	1639.996	25		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ⁵ P - y ² D°	1 - 2	S9
Ni III	1644.466	1		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - y ² H°	5 - 4	S9
Ni III	1649.771	100	17	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ⁵ F - z ² G°	4 - 5	S9
Ni III	1652.866	300		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - y ² H°	6 - 6	S9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	1653.119	200		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^1H - y^1H^\circ$	5-5	S9
Ni III	1656.126	250		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - y^2H^\circ$	5-5	S9
Ni III	1659.438	10		$3d^7(a^2D)4s - 3d^7(^2D)4p$	$a^2D - z^1D^\circ$	3-2	S9
Ni III	1661.786	200		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - y^2H^\circ$	4-4	S9
Ni III	1662.311	1		$3d^7(^2P)4s - 3d^7(^2D)4p$	$c^2P - z^1D^\circ$	1-2	S9
Ni III	1665.859	20					S9
Ni III	1666.102	20		$3d^7(^2P)4s - 3d^7(^2D)4p$	$a^1P - x^2P^\circ$	1-1	S9
Ni III	1666.828	20b		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - y^2H^\circ$	5-6	S9
Ni III	1672.213	50					S9
Ni III	1673.659	10		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - y^2H^\circ$	4-5	S9
Ni III	1676.054	1		$3d^7(^4P)4s - 3d^7(^4P)4p$	$b^2P - z^2P^\circ$	1-0	S9
Ni III	1680.532	10					S9
Ni III	1682.029	10	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	4-3	S9
Ni III	1682.443	1	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	5-5	S9
Ni III	1683.471	2		$3d^7(^2D)4s - 3d^7(^2D)4p$	$a^2D - z^1D^\circ$	2-2	S9
Ni III	1683.688	30		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - v^2D^\circ$	2-1	S9
Ni III	1684.515	1					S9
Ni III	1685.085	5		$3d^7(^4P)4s - 3d^7(^2D)4p$	$b^2P - w^2D^\circ$	2-3	S9
Ni III	1685.977	5		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - v^2D^\circ$	2-2	S9
Ni III	1686.216	75		$3d^7(a^2D)4s - 3d^7(^2D)4p$	$b^1D - y^1P^\circ$	2-1	S9
Ni III	1687.897	400	25	$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^2P - y^2D^\circ$	3-4	S9
Ni III	1689.121	5					S9
Ni III	1690.372	20		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - v^2D^\circ$	3-2	S9
Ni III	1690.634	5					S9
Ni III	1690.974	15		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - x^1G^\circ$	4-4	S9
Ni III	1692.219	3h		$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - z^1H^\circ$	5-5	S9
Ni III	1692.514	1000	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	5-6	S9
Ni III	1693.559	3	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	4-4	S9
Ni III	1694.307	5		$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^2P - y^2S^\circ$	1-1	S9
Ni III	1694.582	2		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - v^2D^\circ$	2-3	S9
Ni III	1695.599	30		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - w^2F^\circ$	3-3	S9
Ni III	1695.910	5	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	3-2	S9
Ni III	1696.195	5		$3d^7(^2P)4s - 3d^7(^2D)4p$	$a^1P - x^2P^\circ$	1-2	S9
Ni III	1698.176	50	25	$3d^7(^4F)4s - 3d^7(^4P)4p$	$a^2P - y^2D^\circ$	3-3	S9
Ni III	1698.381	5		$3d^7(^4P)4s - 3d^7(^2P)4p$	$b^2P - x^2D^\circ$	1-1	S9
Ni III	1699.024	10		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - v^2D^\circ$	3-3	S9
Ni III	1699.349	8		$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^2P - y^2D^\circ$	3-2	S9
Ni III	1701.081	10		$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - z^1F^\circ$	3-3	S9
Ni III	1701.599	60	30	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2G^\circ$	4-4	S9
Ni III	1702.591	10		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - w^2F^\circ$	4-3	S9
Ni III	1703.467	50	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	3-3	S9
Ni III	1703.925	3		$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2G^\circ$	4-3	S9
Ni III	1704.128	10		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - y^1D^\circ$	2-2	S9
Ni III	1704.641	60					S9
Ni III	1706.041	10		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - v^2D^\circ$	4-3	S9
Ni III	1706.246	15		$3d^7(^2P)4s - 3d^7(^2P)4p$	$c^2P - z^1P^\circ$	1-1	S9
Ni III	1707.242	10	25	$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^2P - y^2D^\circ$	2-1	S9
Ni III	1707.346	200	25	$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^2P - y^2D^\circ$	2-3	S9
Ni III	1707.426	200	30	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2G^\circ$	5-5	S9
Ni III	1708.552	50	25	$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^2P - y^2D^\circ$	2-2	S9
Ni III	1709.901	800	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	4-5	S9
Ni III	1711.779	10	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	2-2	S9
Ni III	1712.893	5		$3d^7(^2D)4s - 3d^7(^2P)4p$	$a^1D - y^2P^\circ$	2-1	S9
Ni III	1713.864	10		$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^2P - y^2D^\circ$	1-0	S9
Ni III	1714.698	100		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^1H - y^1G^\circ$	5-4	S9
Ni III	1715.303	650	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	3-4	S9
Ni III	1715.931	100	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2D^\circ$	4-3	S9
Ni III	1716.886	75	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2D^\circ$	3-2	S9
Ni III	1718.184	20		$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - z^1G^\circ$	5-4	S9
Ni III	1718.365	150	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2D^\circ$	5-4	S9
Ni III	1718.873	20	30	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2G^\circ$	3-4	S9
Ni III	1719.008	20		$3d^7(^2P)4s - 3d^7(^2P)4p$	$c^2P - z^1P^\circ$	0-1	S9
Ni III	1719.458	500	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2G^\circ$	2-3	S9
Ni III	1719.892	50	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^2F - z^2D^\circ$	2-1	S9
Ni III	1720.708	20	25	$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^2P - y^2D^\circ$	1-1	S9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J J	References
Ni III	1721.256	200	30	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2G^o$	3-3	S9
Ni III	1721.799	0		$3d^7(^2D)4s - 3d^7(^2P)4p$	$a^2D - y^2P^o$	2-2	S9
Ni III	1722.038	15		$3d^7(^4P)4s - 3d^7(^4P)4p$	$a^4P - y^4D^o$	1-2	S9
Ni III	1722.283	400	16	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^4G^o$	1-2	S9
Ni III	1722.790	20	30	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2G^o$	4-5	S9
Ni III	1723.793	150		$3d^7(a^2D)4s - 3d^7(^2D)4p$	$a^2D - x^2F^o$	3-4	S9
Ni III	1724.291	75	28	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2F^o$	3-2	S9
Ni III	1724.523	50	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2D^o$	1-0	S9
Ni III	1727.640	20		$3d^7(^2D)4s - 3d^7(^2D)4p$	$a^2D - x^2F^o$	2-2	S9
Ni III	1728.738	20		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - w^2F^o$	3-4	S9
Ni III	1729.219	2		$3d^7(^2P)4s - 3d^7(^2D)4p$	$a^2P - z^4D^o$	1-2	S9
Ni III	1729.384	25		$3d^7(^4P)4s - 3d^7(^2P)4p$	$b^2P - x^2D^o$	2-3	S9
Ni III	1730.255	10		$3d^7(^4P)4s - 3d^7(^4P)4p$	$b^4P - z^2P^o$	0-1	S9
Ni III	1730.483	75	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2D^o$	1-1	S9
Ni III	1731.733	2		$3d^7(^2G)4s - 3d^7(^4P)4p$	$a^2G - z^2P^o$	4-3	S9
Ni III	1733.129	250	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2D^o$	2-2	S9
Ni III	1733.762	50		$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - z^2G^o$	4-4	S9
Ni III	1735.628	2		$3d^7(^4P)4s - 3d^7(^4P)4p$	$b^4P - z^2P^o$	1-1	S9
Ni III	1735.713	5					S9
Ni III	1736.011	50		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - w^2F^o$	4-4	S9
Ni III	1736.051	50		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - w^2F^o$	2-2	S9
Ni III	1738.252	500	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2D^o$	3-3	S9
Ni III	1738.785	300	28	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2F^o$	4-3	S9
Ni III	1740.671	15		$3d^7(^2G)4s - 3d^7(^4P)4p$	$a^2G - y^2D^o$	4-3	S9
Ni III	1742.718	10		$3d^7(^2F)4s - 3d^7(^2F)4p$	$c^2F - w^2F^o$	3-2	S9
Ni III	1740.944	30		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - z^2H^o$	5-6	S9
Ni III	1741.963	300	21	$3d^7(^4F)4s - 3d^7(^4F)4p$	$b^4F - z^2D^o$	4-3	S9
Ni III	1743.903	1	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2D^o$	1-2	S9
Ni III	1747.011	550	15	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2D^o$	4-4	S9
Ni III	1747.680	50		$3d^7(a^2D)4s - 3d^7(^2D)4p$	$b^4D - y^4F^o$	2-3	S9
Ni III	1749.202	1		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - y^2H^o$	5-4	S9
Ni III	1752.427	300	21	$3d^7(^4F)4s - 3d^7(^4F)4p$	$b^4F - z^2D^o$	3-2	S9
Ni III	1753.011	400		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - z^2F^o$	6-7	S9
Ni III	1753.150	3		$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^2D - v^2F^o$	2-3	S9
Ni III	1753.377	10	29	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - z^2H^o$	5-4	S9
Ni III	1755.757	1		$3d^7(^4P)4s - 3d^7(^4P)4p$	$b^4P - z^2P^o$	2-1	S9
Ni III	1756.151	1		$3d^7(^2P)4s - 3d^7(^2D)4p$	$c^2P - w^2D^o$	2-3	S9
Ni III	1756.801	2		$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2F^o$	3-3	S9
Ni III	1757.034	25		$3d^7(a^2D)4s - 3d^7(^2D)4p$	$b^4D - x^2P^o$	2-2	S9
Ni III	1758.468	10		$3d^7(^4P)4s - 3d^7(^4P)4p$	$b^4F - z^2P^o$	1-2	S9
Ni III	1760.260	20		$3d^7(^2P)4s - 3d^7(^2P)4p$	$a^2P - y^2P^o$	1-1	S9
Ni III	1760.560	150	21	$3d^7(^4F)4s - 3d^7(^4F)4p$	$b^4F - z^2D^o$	2-1	S9
Ni III	1762.394	20		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - y^2H^o$	5-5	S9
Ni III	1763.607	20		$3d^7(^2P)4s - 3d^7(^2D)4p$	$c^2P - w^2D^o$	1-1	S9
Ni III	1764.688	800	14	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2F^o$	5-4	S9
Ni III	1765.229	2		$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$b^2D - v^2F^o$	3-3	S9
Ni III	1767.938	500	14	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2F^o$	4-3	S9
Ni III	1769.642	1000	14	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2F^o$	5-5	S9
Ni III	1770.153	7		$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2D^o$	3-4	S9
Ni III	1771.492	100	14	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2F^o$	2-1	S9
Ni III	1773.788	40	2	$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - z^2H^o$	5-5	S9
Ni III	1774.640	10					S9
Ni III	1775.750	150		$3d^7(a^2D)4s - 3d^7(^2D)4p$	$a^2D - w^2D^o$	3-3	S9
Ni III	1776.068	400		$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - z^2H^o$	5-6	S9
Ni III	1776.802	30		$3d^7(^2P)4s - 3d^7(^2P)4p$	$a^2P - z^2P^o$	1-1	S9
Ni III	1777.227	10		$3d^7(^2P)4s - 3d^7(^2D)4p$	$c^2P - w^2D^o$	0-1	S9
Ni III	1778.583	10					S9
Ni III	1778.730	30		$3d^7(^2D)4s - 3d^7(^2D)4p$	$a^2D - w^2D^o$	2-2	S9
Ni III	1779.127	20		$3d^7(^4P)4s - 3d^7(^4P)4p$	$b^4P - z^2P^o$	2-2	S9
Ni III	1779.442	30	21	$3d^7(^4F)4s - 3d^7(^4F)4p$	$b^4F - z^2D^o$	2-2	S9
Ni III	1781.088	15		$3d^7(^2G)4s - 3d^7(^2G)4p$	$a^2G - y^2F^o$	4-4	S9
Ni III	1781.279	50	21	$3d^7(^4F)4s - 3d^7(^4F)4p$	$b^4F - z^2D^o$	3-3	S9
Ni III	1782.747	60	14	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2F^o$	1-1	S9
Ni III	1784.882	75		$3d^7(^2H)4s - 3d^7(^2H)4p$	$a^2H - x^2G^o$	4-3	S9
Ni III	1786.927	60	14	$3d^7(^4F)4s - 3d^7(^4F)4p$	$a^4F - z^2F^o$	2-2	S9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	1787.456	2		3d ⁷ (² D)4s - 3d ⁷ (² D)4p	a ² D - w ³ D ^o	2 - 1	S9
Ni III	1788.301	200	27	3d ⁷ (² G)4s - 3d ⁷ (² G)4p	a ² G - z ² H ^o	3 - 4	S9
Ni III	1788.502	150b		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² F ^o	4 - 3	S9
Ni III	1789.888	3		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	c ² P - z ² P ^o	1 - 0	S9
Ni III	1789.983	5		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - z ² I ^o	5 - 5	S9
Ni III	1790.402	250	27	3d ⁷ (² G)4s - 3d ⁷ (² G)4p	a ² G - z ² H ^o	4 - 5	S9
Ni III	1790.934	200		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - x ² G ^o	5 - 4	S9
Ni III	1791.644	200	14	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ² F - z ² F ^o	3 - 3	S9
Ni III	1792.513	25		3d ⁷ (a ² D)4s - 3d ⁷ (² D)4p	b ¹ D - z ¹ D ^o	2 - 2	S9
Ni III	1792.994	100		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - z ¹ F ^o	4 - 3	S6
Ni III	1794.904	200	14	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ² F - z ² F ^o	4 - 4	S9
Ni III	1795.192	20		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - z ² I ^o	6 - 6	S9
Ni III	1798.366	29		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ² F - z ² F ^o	1 - 2	S9
Ni III	1799.023	5					S9
Ni III	1800.031	20		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ² F - z ² F ^o	4 - 5	S9
Ni III	1801.506	50	20	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² F ^o	3 - 2	S9
Ni III	1804.394	30		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	c ² P - x ² D ^o	2 - 3	S9
Ni III	1806.457	30		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ¹ D ^o	1 - 1	S9
Ni III	1806.550	30					S9
Ni III	1807.056	50					S9
Ni III	1807.245	300		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - x ² G ^o	6 - 5	S9
Ni III	1809.200	5		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² F ^o	2 - 3	S9
Ni III	1807.335	15		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ² F - z ² F ^o	2 - 3	S9
Ni III	1810.489	150		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - z ² I ^o	4 - 5	S9
Ni III	1811.689	200		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - z ² I ^o	5 - 6	S9
Ni III	1812.539	3		3d ⁷ (b ² D)4s - 3d ⁷ (b ² D)4p	b ² D - w ² P ^o	2 - 1	S9
Ni III	1812.769	20		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - y ² G ^o	4 - 4	S9
Ni III	1814.082	1		3d ⁷ (² D)4s - 3d ⁷ (² D)4p	a ² D - w ² D ^o	1 - 1	S9
Ni III	1815.307	20		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	c ² P - x ² D ^o	1 - 1	S9
Ni III	1815.398	15		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - y ² G ^o	4 - 3	S9
Ni III	1815.650	2h		3d ⁷ (b ² D)4s - 3d ⁷ (b ² D)4p	b ² D - w ² P ^o	2 - 2	S9
Ni III	1816.990	1		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - z ² P ^o	0 - 1	S9
Ni III	1817.598	15		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - z ² P ^o	1 - 2	S9
Ni III	1819.275	300		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - z ¹ H ^o	4 - 5	S9
Ni III	1819.325	3		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	a ² F - z ² F ^o	3 - 4	S9
Ni III	1822.918	25		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - z ² P ^o	1 - 1	S9
Ni III	1823.061	800	20	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² F ^o	4 - 4	S9
Ni III	1823.936	1		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ² H - x ² G ^o	5 - 5	S9
Ni III	1825.084	20		3d ⁷ (a ² D)4s - 3d ⁷ (² P)4p	a ² D - x ² D ^o	3 - 3	S9
Ni III	1828.279	15		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ² D ^o	2 - 1	S9
Ni III	1828.672	15		3d ⁷ (b ² D)4s - 3d ⁷ (b ² D)4p	b ² D - w ² P ^o	3 - 2	S9
Ni III	1830.006	400	20	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² F ^o	3 - 3	S9
Ni III	1830.075	200	20	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² F ^o	2 - 2	S9
Ni III	1830.859	15					S9
Ni III	1833.669	20		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	c ² P - x ² D ^o	1 - 2	S9
Ni III	1834.381	15					S9
Ni III	1834.890	20					S9
Ni III	1836.843	30		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - y ² G ^o	4 - 5	S9
Ni III	1839.092	1		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	a ¹ P - w ² D ^o	1 - 1	S9
Ni III	1840.421	40		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ² D ^o	1 - 2	S9
Ni III	1841.866	15		3d ⁷ (² D)4s - 3d ⁷ (² P)4p	a ² D - z ² P ^o	1 - 0	S9
Ni III	1843.406	50	34	3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - z ² P ^o	2 - 3	S9
Ni III	1843.689	1		3d ⁷ (a ² D)4s - 3d ⁷ (² P)4p	b ¹ D - z ¹ P ^o	2 - 1	S9
Ni III	1845.141	15		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - z ² P ^o	2 - 1	S9
Ni III	1847.275	650	19	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² G ^o	2 - 3	S9
Ni III	1849.319	100		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - z ¹ G ^o	4 - 4	S9
Ni III	1849.473	50		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	a ¹ F - x ¹ G ^o	3 - 4	S9
Ni III	1849.540	75	19	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² G ^o	3 - 4	S9
Ni III	1853.480	30		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ² D ^o	2 - 3	S9
Ni III	1854.149	800	19	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² G ^o	4 - 5	S9
Ni III	1857.158	0		3d ⁷ (² G)4s - 3d ⁷ (² P)4p	b ¹ G - y ² D ^o	4 - 3	S9
Ni III	1858.750	300		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ¹ H - z ¹ I ^o	5 - 6	S9
Ni III	1859.480	2		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² F ^o	2 - 3	S9
Ni III	1866.163	5		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² F ^o	3 - 4	S9
Ni III	1867.706	3		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	a ¹ P - z ² P ^o	1 - 0	S9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni III	1858.201	20					S9
Ni III	1879.063	5		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	a ¹ F - y ¹ D°	3 - 2	S9
Ni III	1880.438	5		3d ⁷ (² D)4s - 3d ⁷ (⁴ P)4p	a ² D - z ² P°	3 - 2	S9
Ni III	1882.686	25					S9
Ni III	1885.864	10					S9
Ni III	1890.155	15		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - z ² H°	4 - 4	S9
Ni III	1895.479	5		3d ⁷ (² F)4s - 3d ⁷ (² P)4p	a ¹ P - x ² D°	1 - 1	S9
Ni III	1902.607	50		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ P)4p	b ² P - z ² S°	0 - 1	S9
Ni III	1905.262	15		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - y ² F°	4 - 4	S9
Ni III	1909.091	5		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - z ² S°	1 - 1	S9
Ni III	1913.890	30		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	b ¹ G - z ² H°	4 - 5	S9
Ni III	1914.076	3		3d ⁷ (² D)4s - 3d ⁷ (⁴ P)4p	a ² D - z ² P°	1 - 1	S9
Ni III	1914.75	1		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ¹ H - z ² I°	5 - 5	S9
Ni III	1914.919	1		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	a ² H - y ² G°	5 - 4	S9
Ni III	1914.409	5		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	a ¹ P - x ² D°	1 - 2	S9
Ni III	1915.497	5		3d ⁷ (² D)4s - 3d ⁷ (² H)4p	b ¹ D - x ² G°	2 - 3	S9
Ni III	1915.534	2		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ¹ H - x ² G°	5 - 4	S9
Ni III	1922.51	!		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	a ² H - y ² G°	6 - 5	S9
Ni III	1923.463	5		3d ⁷ (² D)4s - 3d ⁷ (² G)4p	a ² D - z ¹ F°	2 - 3	S9
Ni III	1930.431	200	18	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² G°	4 - 5	S9
Ni III	1933.50	P		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - z ² S°	2 - 1	S9
Ni III	1935.947	5		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ² D°	0 - 1	S9
Ni III	1936.10	2		3d ⁷ (² D)4s - 3d ⁷ (² D)4p	b ² D - u ² D°	2 - 2	S9
Ni III	1939.40	3		3d ⁷ (² P)4s - 3d ⁷ (⁴ P)4p	c ² P - y ² D°	1 - 1	S9
Ni III	1939.588	100		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	a ¹ H - z ² I°	5 - 6	S9
Ni III	1941.41	0		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	a ² H - y ² G°	4 - 3	S9
Ni III	1941.58	0		3d ⁷ (² D)4s - 3d ⁷ (² D)4p	b ² D - u ² D°	2 - 3	S9
Ni III	1942.64	0		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ² D°	1 - 1	S9
Ni III	1942.886	10					S9
Ni III	1944.36	2		3d ⁷ (² P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ² D°	1 - 2	S9
Ni III	1950.90	0		3d ⁷ (² D)4s - 3d ⁷ (² D)4p	b ² D - u ² D°	3 - 2	S9
Ni III	1952.540	200	24	3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ² P - z ² S°	3 - 2	S9
Ni III	1955.74	0		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	a ² H - z ¹ G°	5 - 4	S9
Ni III	1956.402	3		3d ⁷ (² D)4s - 3d ⁷ (² D)4p	b ² D - u ² D°	3 - 3	S9
Ni III	1956.964	20	18	3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² G°	3 - 4	S9
Ni III	1961.324	5		3d ⁷ (² D)4s - 3d ⁷ (² G)4p	a ² D - y ² F°	3 - 3	S9
Ni III	1963.73	2		3d ⁷ (² D)4s - 3d ⁷ (⁴ P)4p	a ² D - y ² D°	3 - 3	S9
Ni III	1964.689	100	24	3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ² P - z ² S°	2 - 2	S9
Ni III	1968.053	3		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ² D°	2 - 3	S9
Ni III	1969.62	0		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	b ² P - y ² D°	2 - 2	S9
Ni III	1970.54	0		3d ⁷ (² P)4s - 3d ⁷ (⁴ P)4p	a ¹ P - z ² P°	1 - 2	S9
Ni III	1974.493	15		3d ⁷ (² D)4s - 3d ⁷ (⁴ P)4p	a ² D - y ² D°	3 - 2	S9
Ni III	1974.780	15		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² G°	2 - 3	S9
Ni III	1977.84	1		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	b ² F - z ² D°	4 - 4	S9
Ni III	1980.248	2		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	a ² H - z ¹ G°	4 - 4	S9
Ni III	1982.538	50	24	3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	a ² P - z ² S°	1 - 2	S9
Ni III	1987.83	1h		3d ⁷ (² D)4s - 3d ⁷ (⁴ P)4p	a ² D - z ² P°	2 - 1	S9
Ni III	1992.362	10		3d ⁷ (² D)4s - 3d ⁷ (² F)4p	b ¹ D - x ² D°	2 - 2	S9

NICKEL IV (Ni³⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p⁶3d⁷ 4F_{9/2} (25 electrons)
Ionization Potential [476 000] cm⁻¹; [59] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni IV	533.155	200		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 7/2	P20
Ni IV	534.408	210		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	7/2 - 5/2	P20
Ni IV	536.302	630		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 5/2	P20
Ni IV	536.556	570		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	7/2 - 7/2	P20
Ni IV	536.849	490		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 5/2	P20
Ni IV	537.073	460		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 3/2	P20
Ni IV	537.976	690		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 7/2	P20
Ni IV	538.520	200		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 5/2	P20
Ni IV	539.027	220		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 7/2	P20
Ni IV	539.609	610		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	7/2 - 5/2	P20
Ni IV	539.72	150		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	7/2 - 5/2	P20
Ni IV	540.807	450		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 7/2	P20
Ni IV	541.434	280		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	7/2 - 7/2	P20
Ni IV	541.709	390		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 1/2	P20
Ni IV	542.099	210		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 5/2	F20
Ni IV	542.33	210		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ P ^o	5/2 - 3/2	G4, P20
Ni IV	542.53	560		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 3/2	P20
Ni IV	543.20	430		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ P ^o	5/2 - 7/2	G4, P20
Ni IV	543.807	100		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 5/2	P20
Ni IV	544.01	110		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ P ^o	3/2 - 3/2	G4, P20
Ni IV	545.08	130		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ P ^o	5/2 - 7/2	G4, P20
Ni IV	546.75	110		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ P ^o	7/2 - 7/2	G4, P20
Ni IV	549.10	140		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ F ^o	5/2 - 7/2	G4, P20
Ni IV	549.33	140		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ F ^o	5/2 - 5/2	G4, P20
Ni IV	552.44	130		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ F ^o	7/2 - 5/2	G4, P20
Ni IV	554.90	100		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ P ^o	5/2 - 3/2	G4, P20
Ni IV	573.06	90		3d ⁷ - 3d ⁶ (⁶ D)4p	ga ⁴ F - z ⁶ D ^o	5/2 - 5/2	G4, P20
Ni IV	575.816	410		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P ^o	3/2 - 1/2	P20
Ni IV	576.378	440		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P ^o	5/2 - 3/2	P20
Ni IV	577.203	250		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P ^o	3/2 - 3/2	P20
Ni IV	577.788	200		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁶ P ^o	1/2 - 1/2	P20
Ni IV	579.008	690		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P ^o	5/2 - 3/2	P20
Ni IV	579.172	460		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P ^o	1/2 - 3/2	P20
Ni IV	579.833	450		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ P ^o	3/2 - 5/2	P20
Ni IV	593.156	120		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D ^o	3/2 - 3/2	P20
Ni IV	593.848	100		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D ^o	5/2 - 5/2	P20
Ni IV	594.291	130		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D ^o	1/2 - 1/2	P20
Ni IV	594.702	300		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D ^o	3/2 - 5/2	P20
Ni IV	595.248	160		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D ^o	1/2 - 3/2	P20
Ni IV	596.050	400		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁴ D ^o	5/2 - 3/2	P20
Ni IV	602.50	140		3d ⁷ - 3d ⁶ (⁶ D)4p	a ⁴ P - z ⁶ P ^o	5/2 - 7/2	G4, P20
Ni IV	1309.340	30		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ F ^o	7/2 - 7/2	G4, P20
Ni IV	1314.760	30		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ F ^o	5/2 - 5/2	G4, P20
Ni IV	1319.139	30h		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ F ^o	5/2 - 7/2	G4, P20
Ni IV	1324.857	100		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ D ^o	7/2 - 7/2	G4, P20
Ni IV	1327.655	50		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ D ^o	7/2 - 5/2	G4, P20
Ni IV	1328.470	70		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ F ^o	7/2 - 5/2	G4, P20
Ni IV	1329.885	10		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ D ^o	5/2 - 5/2	G4, P20
Ni IV	1336.790	70		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ D ^o	3/2 - 3/2	G4, P20
Ni IV	1337.737	100		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ D ^o	5/2 - 5/2	G4, P20
Ni IV	1338.786	70		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁴ D ^o	7/2 - 7/2	G4, P20
Ni IV	1339.071	740		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	3/2 - 3/2	P20
Ni IV	1345.718	760		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	7/2 - 7/2	P20
Ni IV	1346.083	740		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	3/2 - 3/2	P20
Ni IV	1359.215	650		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	1/2 - 3/2	P20
Ni IV	1356.078	650		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	5/2 - 5/2	P20
Ni IV	1357.063	760		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	5/2 - 7/2	P20
Ni IV	1363.258	560		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	3/2 - 5/2	P20
Ni IV	1371.679	580		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	7/2 - 7/2	P20
Ni IV	1382.443	380		3d ⁶ (⁶ D)4s - 3d ⁶ (⁶ D)4p	a ⁶ D - z ⁶ P ^o	5/2 - 7/2	P20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni IV	1395.985	480		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1398.195	780		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1408.256	10		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1409.846	640		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1411.461	780		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P26
Ni IV	1418.501	150		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1419.583	470		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1421.225	620		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1425.802	100		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1426.362	510		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1427.453	400		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1430.186	430		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1430.439	540		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	P20
Ni IV	1431.013	370		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	P20
Ni IV	1432.453	210		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1435.792	100		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1442.675	170		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	P20
Ni IV	1444.420	440		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1448.799	120		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1461.063	140		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1483.452	30h		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	G4, P20
Ni IV	1492.162	100		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	G4, P20
Ni IV	1500.128	300		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1503.482	310		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1505.173	230		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1512.733	600		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	P20
Ni IV	1516.671	590		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1520.631	660		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1524.245	280		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1525.316	710		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1527.693	750		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1534.715	810		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1534.931	480		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1537.249	700		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1538.927	610		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1542.261	220		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1543.411	790		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1545.400	440		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1546.230	680		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1548.037	760		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1548.676	450		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1550.185	320		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	P20
Ni IV	1550.775	700		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1552.730	50		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1553.426	690		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1553.491	590		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	P20
Ni IV	1556.669	230		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	P20
Ni IV	1558.240	560		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	P20
Ni IV	1559.327	440		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1559.917	640		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	P20
Ni IV	1560.175	690		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	P20
Ni IV	1560.492	340		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	P20
Ni IV	1561.153	200		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	G4, P20
Ni IV	1569.276	30		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	G4, P20
Ni IV	1569.915	400		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	G4, P20
Ni IV	1582.531	500		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	G4, P20
Ni IV	1584.297	100		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	G4, P20
Ni IV	1605.357	70		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	G4, P20
Ni IV	1631.376	100h		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	G4, P20
Ni IV	1633.549	20h		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	G4, P20
Ni IV	1635.707	300		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	7/2 - 5/2	G4, P20
Ni IV	1655.643	80		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	G4, P20
Ni IV	1657.878	200		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	5/2 - 3/2	G4, P20
Ni IV	1671.645	70		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	3/2 - 1/2	G4, P20
Ni IV	1679.478	150		3d ⁶ (⁵ D)4s - 3d ⁶ (⁵ D)4p	a ⁶ D - z ⁶ F ^o	1/2 - 1/2	G4, P20

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni IV	1829.497	200		$3d^6(^6D)4s - 3d^6(^6D)4p$	$a^4D - z^6D^o$	$\frac{7}{2} - \frac{7}{2}$	G4, P20

NICKEL V (Ni^{4+}), $Z = 28$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 \ ^5D_4$ (24 electrons)Ionization Potential [661 000] cm^{-1} ; [82] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni V	1123.20	0		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^7S - ^5P^o$? 3 - 2	M26
Ni V	1131.82	0		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^7S - ^5P^o$? 3 - 3	M26
Ni V	1244.15	300		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^7S - ^7P^o$? 3 - 4	M26
Ni V	1264.46	200		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^7S - ^7P^o$? 3 - 3	M26
Ni V	1276.90	100		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^7S - ^7P^o$? 3 - 2	M26
Ni V	1500.97	50		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^5S - ^5P^o$? 2 - 1	M26
Ni V	1306.60	100		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^5S - ^5P^o$? 2 - 2	M26
Ni V	1318.47	200		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^5S - ^5P^o$? 2 - 3	M26
Ni V	1501.90	30		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^5S - ^7P^o$? 2 - 3	M26
Ni V	1519.55	30		$3d^5(^6S)4s - 3d^5(^6S)4p$	$^5S - ^7P^o$? 2 - 2	M26

NICKEL VI (Ni^{5+}), $Z = 28$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)Ionization Potential [887 000] cm^{-1} ; [110] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni VI	260.348	400		$3d^5 - 3d^4 4p$	$g^6S - ^6P^o$	$\frac{7}{2} - \frac{7}{2}$	K21
Ni VI	260.591	300		$3d^5 - 3d^4 4p$	$g^6S - ^6P^o$	$\frac{7}{2} - \frac{7}{2}$	K21
Ni VI	260.713	250		$3d^5 - 3d^4 4p$	$g^6S - ^6P^o$	$\frac{7}{2} - \frac{7}{2}$	K21
Ni VI?	844.69	200					G9
Ni VI?	851.66	200					G9
Ni VI?	1073.11	120					G9
Ni VI?	1074.51	150					G9
Ni VI?	1081.82	10					G9
Ni VI?	1087.97	500					G9
Ni VI?	1093.37	400					G9
Ni VI?	1095.49	80					G9
Ni VI?	1141.96	100					G9
Ni VI?	1144.32	180					G9
Ni VI?	1145.53	150					G9
Ni VI?	1146.85	80					G9
Ni VI?	1150.22	100					G9
Ni VI?	1157.13	150					G9
Ni VI?	1161.61	20					G9
Ni VI?	1163.20	100					G9
Ni VI?	1170.08	150					G9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni VI?	1179.80	200					G9
Ni VI?	1186.90	20					G9
Ni VI?	1191.72	50					G9

NICKEL VII (Ni⁶⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p⁶3d⁴ ⁵D₀ (22 electrons)
Ionization Potential [1 097 000] cm⁻¹; [136] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni VII	205.275	100		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - z ⁵ P ^o	3 - 3	P17
Ni VII	205.359	20		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - z ⁵ P ^o	1 - 2	P17
Ni VII	205.637	320		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - z ⁵ P ^o	4 - 3	P17
Ni VII	205.689	10		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - z ⁵ P ^o	0 - 1	P17
Ni VII	205.807	200		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - z ⁵ P ^o	1 - 1	P17
Ni VII	205.885	240		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - z ⁵ P ^o	3 - 2	P17
Ni VII	206.030	100		3d ⁴ - 3d ³ (a ⁴ P)4p	ga ⁵ D - z ⁵ P ^o	2 - 1	P17
Ni VII	208.182	240		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G ^o	4 - 3	P17
Ni VII	208.580	200		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G ^o	5 - 4	P17
Ni VII	208.679	80		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G ^o	5 - 5	P17
Ni VII	208.940	240		3d ⁴ - 3d ³ (a ² H)4p	a ³ H - x ³ G ^o	6 - 5	P17
Ni VII	211.037	160		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G ^o	3 - 3	P17
Ni VII	211.298	80		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G ^o	4 - 3	P17
Ni VII	211.433	240		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G ^o	4 - 4	P17
Ni VII	211.539	10		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G ^o	4 - 5	P17
Ni VII	211.549	240w		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G ^o	5 - 4	P17
Ni VII	211.759	280		3d ⁴ - 3d ³ (a ² H)4p	a ³ G - x ³ G ^o	5 - 5	P17
Ni VII	211.993	180		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	2 - 3	P17
Ni VII	212.316	160		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	3 - 3	P17
Ni VII	212.516	700b		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	4 - 5	P17
Ni VII	212.560	20		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	2 - 2	P17
Ni VII	212.625	60		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	2 - 3	P17
Ni VII	212.856	20		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	1 - 2	P17
Ni VII	212.904	600		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	4 - 4	P17
Ni VII	212.919	400		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	3 - 3	P17
Ni VII	213.096	300		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	2 - 2	P17
Ni VII	213.133	80		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	0 - 1	P17
Ni VII	213.258	100		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	1 - 1	P17
Ni VII	213.339	200		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	4 - 3	P17
Ni VII	213.422	240		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	3 - 2	P17
Ni VII	213.496	300		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ F ^o	2 - 1	P17
Ni VII	213.515	500		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	3 - 4	P17
Ni VII	213.714	500		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	2 - 3	P17
Ni VII	213.908	600		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	4 - 4	P17
Ni VII	213.924	200		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	1 - 2	P17
Ni VII	214.042	300		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	3 - 3	P17
Ni VII	214.111	140		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	0 - 1	P17
Ni VII	214.166	40		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	2 - 2	P17
Ni VII	214.237	20		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	1 - 1	P17
Ni VII	214.430	120		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	4 - 3	P17
Ni VII	214.492	140d		3d ⁴ - 3d ³ (a ⁴ F)4p	ga ⁵ D - z ⁵ D ^o	3 - 2	P17
Ni VII	215.759	600		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ G ^o	6 - 5	P17
Ni VII	216.064	400		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ G ^o	5 - 4	P17
Ni VII	216.408	300		3d ⁴ - 3d ³ (a ² G)4p	a ³ H - y ³ G ^o	4 - 3	P17
Ni VII	216.550	140		3d ⁴ - 3d ³ (a ² G)4p	a ³ F - y ³ G ^o	4 - 5	P17

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni VII	217.018	160		$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^2G^\circ$	3 - 4	P17
Ni VII	217.138	240		$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^2G^\circ$	4 - 4	P17
Ni VII	217.658	160		$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^2G^\circ$	3 - 3	P17
Ni VII	217.781	10		$3d^4 - 3d^3(a^2G)4p$	$a^3F - y^2G^\circ$	4 - 3	P17
Ni VII	218.531	100		$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^2G^\circ$	4 - 5	P17
Ni VII	218.766	100		$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^2G^\circ$	5 - 5	P17
Ni VII	218.846	20		$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^2G^\circ$	3 - 4	P17
Ni VII	219.127	40		$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^2G^\circ$	4 - 4	P17
Ni VII	219.497	100		$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^2G^\circ$	3 - 3	P17
Ni VII	219.782	20		$3d^4 - 3d^3(a^2G)4p$	$a^3G - y^2G^\circ$	4 - 3	P17
Ni VII	223.248	20		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	3 - 4	P17
Ni VII	223.377	100		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	4 - 4	P17
Ni VII	223.762	60		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	2 - 3	P17
Ni VII	223.819	60		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	3 - 3	P17
Ni VII	223.948	20		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	4 - 3	P17
Ni VII	224.381	320		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^\circ$	6 - 5	P17
Ni VII	224.724	280		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^\circ$	5 - 4	P17
Ni VII	224.919	240		$3d^4 - 3d^3(a^4F)4p$	$a^3H - z^3G^\circ$	4 - 3	P17
Ni VII	225.182	20		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	3 - 4	P17
Ni VII	225.238	60		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	4 - 5	P17
Ni VII	225.476	40		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	4 - 4	P17
Ni VII	225.734	200		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	5 - 4	P17
Ni VII	225.760	40		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	3 - 4	P17
Ni VII	225.889	60		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	4 - 4	P17
Ni VII	226.062	180		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	4 - 3	P17
Ni VII	226.215	20		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	2 - 3	P17
Ni VII	226.268	40		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	3 - 3	P17
Ni VII	226.347	140		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3F^\circ$	3 - 2	P17
Ni VII	226.399	20		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3G^\circ$	4 - 3	P17
Ni VII	226.658	40		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	0 - 1	P17
Ni VII	227.191	140		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	1 - 2	P17
Ni VII	227.377	40		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	4 - 5	P17
Ni VII	227.570	10		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	1 - 1	P17
Ni VII	227.636	180		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	5 - 5	P17
Ni VII	227.734	40		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	3 - 4	P17
Ni VII	227.831	20		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 3	P17
Ni VII	227.889	160		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	2 - 3	P17
Ni VII	228.023	200		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	4 - 3	P17
Ni VII	228.039	80		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	4 - 4	P17
Ni VII	228.255	100		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	3 - 3	P17
Ni VII	228.299	10		$3d^4 - 3d^3(a^4F)4p$	$a^3G - z^3G^\circ$	5 - 4	P17
Ni VII	228.484	80		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 2	P17
Ni VII	228.541	100		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	3 - 2	P17
Ni VII	228.864	40		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3D^\circ$	2 - 1	P17
Ni VII	228.927	20		$3d^4 - 3d^3(a^4F)4p$	$a^3P - z^3D^\circ$	2 - 1	P17
Ni VII	229.569	80		$3d^4 - 3d^3(a^4F)4p$	$a^3F - z^3F^\circ$	2 - 1	P17

NICKEL VIII (Ni⁷⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p⁶3d³ 4F_{3/2} (21 electrons)
Ionization Potential [1 355 000] cm⁻¹; [165] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni VIII	167.07	80		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - z ⁴ P ^o	7/2 - 5/2	A4
Ni VIII	167.35	20		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - z ⁴ P ^o	5/2 - 3/2	A4
Ni VIII	167.66	10		3d ³ - 3d ² (a ¹ G)4p	ga ⁴ F - y ² G ^o	7/2 - 7/2	A4
Ni VIII	167.97	40		3d ³ - 3d ² (a ¹ G)4p	ga ⁴ F - y ² G ^o	5/2 - 3/2	A4
Ni VIII	168.08	20		3d ³ - 3d ² (a ¹ G)4p	ga ⁴ F - y ² G ^o	3/2 - 1/2	A4
Ni VIII	168.33	10		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - y ⁴ D ^o	7/2 - 5/2	A4
Ni VIII	168.58	150		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - y ⁴ D ^o	5/2 - 3/2	A4
Ni VIII	168.62	10		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - y ⁴ D ^o	3/2 - 1/2	A4
Ni VIII	168.87	40		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - y ⁴ D ^o	7/2 - 5/2	A4
Ni VIII	168.95	20		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - y ⁴ D ^o	5/2 - 3/2	A4
Ni VIII	169.16	400		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - y ⁴ D ^o	3/2 - 1/2	A4
Ni VIII	169.27	40		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - y ⁴ D ^o	7/2 - 5/2	A4
Ni VIII	170.17	80		3d ³ - 3d ² (a ¹ G)4p	a ² G - z ² H ^o	5/2 - 1/2	A4
Ni VIII	170.27	20		3d ³ - 3d ² (a ³ P)4p	ga ⁴ F - z ⁴ S ^o	7/2 - 5/2	A4
Ni VIII	170.52	250		3d ³ - 3d ² (a ¹ G)4p	a ² G - z ² H ^o	5/2 - 3/2	A4
Ni VIII	170.84	10		3d ³ - 3d ² (a ¹ G)4p	a ² G - z ² H ^o	3/2 - 1/2	A4
Ni VIII	172.10	40		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ² G ^o	7/2 - 5/2	A4
Ni VIII	172.32	20		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ² G ^o	5/2 - 3/2	A4
Ni VIII	172.67	40		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ² G ^o	3/2 - 1/2	A4
Ni VIII	172.93	20		3d ³ - 3d ² (a ¹ G)4p	a ² H - z ² H ^o	5/2 - 3/2	A4
Ni VIII	173.41	750		3d ³ - 3d ² (a ¹ G)4p	a ² H - z ² H ^o	3/2 - 1/2	A4
Ni VIII	173.95	40		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - z ⁴ P ^o	7/2 - 5/2	A4
Ni VIII	174.22	10		3d ³ - 3d ² (a ¹ G)4p	a ⁴ P - z ⁴ P ^o	5/2 - 3/2	A4
Ni VIII	174.24	750		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - z ⁴ P ^o	3/2 - 1/2	A4
Ni VIII	174.36	400		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - z ⁴ P ^o	7/2 - 5/2	A4
Ni VIII	174.46	250		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - z ⁴ P ^o	5/2 - 3/2	A4
Ni VIII	174.50	10		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - z ⁴ P ^o	3/2 - 1/2	A4
Ni VIII	174.75	40		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - y ⁴ D ^o	7/2 - 5/2	A4
Ni VIII	174.79	150		3d ³ - 3d ² (a ¹ G)4p	a ² G - y ² G ^o	5/2 - 3/2	A4
Ni VIII	174.88	80		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ² D ^o	7/2 - 5/2	A4
Ni VIII	174.92	750		3d ³ - 3d ² (a ¹ G)4p	a ² G - y ² G ^o	5/2 - 3/2	A4
Ni VIII	174.95	40		3d ³ - 3d ² (a ³ P)4p	a ² G - z ⁴ P ^o	7/2 - 5/2	A4
Ni VIII	175.13	400		3d ³ - 3d ² (a ¹ G)4p	a ² G - y ² G ^o	5/2 - 3/2	A4
Ni VIII	175.26	40		3d ³ - 3d ² (a ¹ G)4p	a ² G - y ² G ^o	3/2 - 1/2	A4
Ni VIII	175.28	40		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ D ^o	7/2 - 5/2	A4
Ni VIII	175.32	400d		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - y ⁴ D ^o	5/2 - 3/2	A4
Ni VIII	175.49	20		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ D ^o	3/2 - 1/2	A4
Ni VIII	175.54	40		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ² D ^o	7/2 - 5/2	A4
Ni VIII	175.56	750		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ D ^o	5/2 - 3/2	A4
Ni VIII	175.62	20		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - y ⁴ D ^o	3/2 - 1/2	A4
Ni VIII	175.64	400		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ D ^o	7/2 - 5/2	A4
Ni VIII	175.67	400		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ G ^o	5/2 - 1/2	A4
Ni VIII	175.80	1000		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ D ^o	3/2 - 1/2	A4
Ni VIII	175.82	1000		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	7/2 - 5/2	A4
Ni VIII	175.91	40		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - y ⁴ D ^o	5/2 - 3/2	A4
Ni VIII	175.94	750		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ² F ^o	7/2 - 5/2	A4
Ni VIII	176.03	400		3d ³ - 3d ² (a ¹ G)4p	ga ⁴ F - z ² F ^o	5/2 - 3/2	A4
Ni VIII	176.13	250		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 1/2	A4
Ni VIII	176.21	10		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - y ⁴ D ^o	7/2 - 5/2	A4
Ni VIII	176.25	80		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ G ^o	7/2 - 5/2	A4
Ni VIII	176.29	250		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 3/2	A4
Ni VIII	176.35	20		3d ³ - 3d ² (a ³ P)4p	a ⁴ P - y ⁴ D ^o	3/2 - 1/2	A4
Ni VIII	176.42	40		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	7/2 - 5/2	A4
Ni VIII	176.50	150		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 3/2	A4
Ni VIII	176.69	80		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ C ^o	3/2 - 1/2	A4
Ni VIII	176.74	250		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 3/2	A4
Ni VIII	176.87	750		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 1/2	A4
Ni VIII	176.95	250		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ G ^o	7/2 - 5/2	A4
Ni VIII	176.98	40		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	5/2 - 3/2	A4
Ni VIII	177.10	10		3d ³ - 3d ² (a ³ F)4p	ga ⁴ F - z ⁴ F ^o	3/2 - 1/2	A4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni VIII	177.19	400b		$3d^3 - 3d^2(a^3F)4p$	$g^4F - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	177.29	80		$3d^3 - 3d^2(a^3P)4p$	$a^4P - z^4S^o$	$\frac{1}{2} - \frac{3}{2}$	A4
Ni VIII	177.32	40		$3d^3 - 3d^2(a^1G)4p$	$a^3D - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	177.43	80		$3d^3 - 3d^2(a^3P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	177.63	10		$3d^3 - 3d^2(a^3F)4p$	$g^4F - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	177.73	40		$3d^3 - 3d^2(a^3P)4p$	$a^4P - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	177.83	10		$3d^3 - 3d^2(a^1G)4p$	$a^3H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	177.87	10		$3d^3 - 3d^2(a^3P)4p$	$a^3D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	177.97	20		$3d^3 - 3d^2(a^1G)4p$	$a^3H - y^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	178.06	20		$3d^3 - 3d^2(a^1G)4p$	$a^3H - y^2G^o$	$\frac{1}{2} - \frac{3}{2}$	A4
Ni VIII	178.52	80		$3d^3 - 3d^2(a^3P)4p$	$a^3H - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	178.77	400		$3d^3 - 3d^2(a^3P)4p$	$a^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	178.91	250		$3d^3 - 3d^2(a^3P)4p$	$a^3D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	179.77	40		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	179.97	550		$3d^3 - 3d^2(a^3P)4p$	$a^3D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	180.12	250		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	180.39	250		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	180.74	40		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	181.10	40		$3d^3 - 3d^2(a^3P)4p$	$a^3D - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	182.27	20		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	182.44	400		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	182.55	40		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	182.76	20		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	182.79	20		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	A4
Ni VIII	182.87	80		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	182.94	40		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$	A4
Ni VIII	182.96	80		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{1}{2} - \frac{3}{2}$	A4
Ni VIII	182.99	40		$3d^3 - 3d^2(a^3F)4p$	$a^3H - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	183.02	40		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{1}{2} - \frac{3}{2}$	A4
Ni VIII	183.16	10		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	183.23	10		$3d^3 - 3d^2(a^3F)4p$	$a^3H - z^2G^o$	$\frac{1}{2} - \frac{3}{2}$	A4
Ni VIII	183.39	20		$3d^3 - 3d^2(a^3F)4p$	$z^2G - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	183.44	40		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	183.51	150		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2G^o$	$\frac{3}{2} - \frac{1}{2}$	A4
Ni VIII	183.63	16		$3d^3 - 3d^2(a^3F)4p$	$a^2H - z^2G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	183.80	40		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	183.83	900		$3d^3 - 3d^2(a^3F)4p$	$a^3G - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	183.91	80d		$3d^3 - 3d^2(a^3F)4p$	$a^3G - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	183.97	20		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	184.12	900		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	184.20	10		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	184.40	10		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	184.44	550		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	184.58	10		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	184.62	10		$3d^3 - 3d^2(a^3F)4p$	$a^4P - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	184.68	40		$3d^3 - 3d^2(a^3F)4p$	$a^2G - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	184.95	40		$3d^3 - 3d^2(a^3F)4p$	$a^3G - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	185.18	20		$3d^3 - 3d^2(a^3F)4p$	$a^3G - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	185.23	10		$3d^3 - 3d^2(a^3F)4p$	$a^3G - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	185.65	80		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	185.82	10		$3d^3 - 3d^2(a^3F)4p$	$a^3G - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	186.16	10		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	186.18	80		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	186.31	10		$3d^3 - 3d^2(a^3F)4p$	$a^3D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	186.49	250		$3d^3 - 3d^2(a^3F)4p$	$a^2H - z^4G^o$	$\frac{3}{2} - \frac{1}{2}$	A4
Ni VIII	186.76	10		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	186.86	10		$3d^3 - 3d^2(a^3F)4p$	$a^3D - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	186.93	40		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	187.08	10		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	187.20	20		$3d^3 - 3d^2(a^3F)4p$	$a^3H - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	187.25	10		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	187.87	10		$3d^3 - 3d^2(a^3F)4p$	$a^2D - z^4G^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	188.06	20		$3d^3 - 3d^2(a^3F)4p$	$a^3D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4
Ni VIII	188.58	150		$3d^3 - 3d^2(a^3F)4p$	$a^3D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	A4

NICKEL IX (Ni⁸⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p⁶3d² ³F₂ (20 electrons)
Ionization Potential [1 573 000] cm⁻¹; [195] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni IX	101.657	80		3d ² - 3d4f	g ³ F - ³ G ^o	2 - 3	E37
Ni IX	101.701	80		3d ² - 3d4f	g ³ F - ³ G ^o	3 - 4	E37
Ni IX	101.846	100		3d ² - 3d4f	g ³ F - ³ G ^o	4 - 5	E37
Ni IX	101.932	20		3d ² - 3d4f	g ³ F - ³ G ^o	4 - 4	E37
Ni IX	102.283	10		3d ² - 3d4f	g ³ F - ³ F ^o	2 - 3	E37
Ni IX	102.340	60		3d ² - 3d4f	g ³ F - ³ F ^o	2 - 2	E37
Ni IX	102.364	1		3d ² - 3d4f	g ³ F - ³ F ^o	3 - 4	E37
Ni IX	102.480	60		3d ² - 3d4f	g ³ F - ³ F ^o	3 - 3	E37
Ni IX	102.539	1		3d ² - 3d4f	g ³ F - ³ F ^o	3 - 2	E37
Ni IX	102.602	100		3d ² - 3d4f	g ³ F - ³ F ^o	4 - 4	E37
Ni IX	102.710	1		3d ² - 3d4f	g ³ F - ³ F ^o	4 - 3	E37
Ni IX	103.428	40		3d ² - 3d4f	¹ D - ³ D ^o	2 - 2	E37
Ni IX	103.620	80		3d ² - 3d4f	¹ D - ¹ F ^o	2 - 3	E37
Ni IX	103.871	60		3d ² - 3d4f	¹ D - ¹ D ^o	2 - 2	E37
Ni IX	103.926	1		3d ² - 3d4f	³ P - ³ D ^o	0 - 1	E37
Ni IX	103.981	100		3d ² - 3d4f	³ P - ³ D ^o	1 - 2	E37
Ni IX	103.993	100		3d ² - 3d4f	³ P - ³ D ^o	2 - 3	E37

NICKEL X (Ni⁹⁺), Z = 28
Ground State 1s²2s²2p⁶3s²3p⁶3d ²D_{3/2} (19 electrons)
Ionization Potential 1 811 000 cm⁻¹; 224.5 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni X	61.809	1		3d - 7f	g ² D - ² F ^o	3/2 - 5/2	E37
Ni X	61.915	1		3d - 7f	g ² D - ² F ^o	5/2 - 7/2	E37
Ni X	66.542	10		3d - 6f	g ² D - ² F ^o	3/2 - 5/2	E37
Ni X	66.687	10		3d - 5f	g ² D - ² F ^o	5/2 - 7/2	E37
Ni X	74.097	20		3d - 5f	g ² D - ² F ^o	3/2 - 5/2	E37
Ni X	74.266	30		3d - 5f	g ² D - ² F ^o	5/2 - 7/2	E37
Ni X	82.892	2		3p ⁶ 3d - 3p ⁵ 3d(² D ^o)4s	g ² D - ² D ^o	3/2 - 5/2	H8
Ni X	83.108	25		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	5/2 - 7/2	H8
Ni X	83.326	2		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	5/2 - 3/2	H8
Ni X	83.576	10		3p ⁶ 3d - 3p ⁵ 3d(¹ F ^o)4s	g ² D - ² F ^o	5/2 - 7/2	H8
Ni X	84.194	2		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	3/2 - 5/2	H8
Ni X	84.418	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ C ^o	5/2 - 5/2	H8
Ni X	84.659	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	5/2 - 7/2	H8
Ni X	85.523	25		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ² F ^o	3/2 - 5/2	H8
Ni X	85.753	5		3p ⁶ 3d - 3p ⁵ 3d(² F ^o)4s	g ² D - ² F ^o	5/2 - 5/2	H8
Ni X	86.300	60		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ² F ^o	5/2 - 7/2	H8
Ni X	86.464	5		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ⁴ F ^o	3/2 - 5/2	H8
Ni X	86.865	2		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	g ² D - ⁴ F ^o	5/2 - 7/2	H8
Ni X	87.077	1		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² P ^o	3/2 - 3/2	H8
Ni X	87.317	25		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² P ^o	5/2 - 3/2	H8
Ni X	87.680	15		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	g ² D - ² P ^o	3/2 - 1/2	H8
Ni X	91.527	40		3d - 4f	g ² D - ² F ^o	3/2 - 5/2	E37
Ni X	91.790	60		3d - 4f	g ² D - ² F ^o	5/2 - 7/2	E37
Ni X	144.271	150		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	3/2 - 3/2	G17
Ni X	144.379	15		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	3/2 - 5/2	G17

Elem. ni	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni X	144.933	15		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni X	145.040	300		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni X	145.110	2		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni X	145.777	60		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni X	146.119	15		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni X	158.374	150		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni X	159.975	60		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni X	160.798	5		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	G17

NICKEL XI (Ni^{10+}), $Z = 28$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1S_0$ (18 electrons)
 Ionization Potential $2\ 591\ 000\ cm^{-1}$; $321.2\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XI	62.730	20		$3p^6 - 3p^5(^2P^o)4d$	$g^1S - (^{1/2}, \frac{3}{2})^o$	0 - 1	E37
Ni XI	63.641	40		$3p^6 - 3p^5(^2P^o)4d$	$g^1S - (^{3/2}, \frac{5}{2})^o$	0 - 1	E37
Ni XI	77.393	80		$3p^6 - 3p^5(^2P^o)4s$	$g^1S - \frac{1}{2} [\frac{1}{2}]^o$	0 - 1	E37
Ni XI	78.744	60		$3p^6 - 3p^5(^2P^o)4s$	$g^1S - \frac{3}{2} [\frac{3}{2}]^o$	0 - 1	E37
Ni XI	148.402	100		$3p^6 - 3p^5(^2P^o)3d$	$g^1S - ^1P^o$	0 - 1	E37

NICKEL XII (Ni^{11+}), $Z = 28$
 Ground State $1s^2 2s^2 2p^6 3s - 3p^5 \ ^2P_{3/2}$ (17 electrons)
 Ionization Potential $[2\ 839\ 200]\ cm^{-1}$; $[352]\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XII	147.847	1		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni XII	152.152	1		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	G17
Ni XII	152.153	15		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni XII	153.174	5		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G17
Ni XII	154.175	15		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	G17
Ni XII	157.798	2		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	G17
Ni XII	159.975	1		$3p^5 - 3p^4(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	G17
Ni XII	160.554	2		$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	G17
Ni XII	166.88			$3p^5 - 3p^4(^1D)3d$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F19

NICKEL XIII (Ni¹²⁺), Z = 28
 Ground State 1s²2s²2p⁶3s²3p⁴ ³P₂ (16 electrons)
 Ionization Potential [3 097 300] cm⁻¹; [384] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XIII	155.12			3p ⁴ - 3p ² (⁴ S°)3d	g ² P - ² D°	2 - 2	F19
Ni XIII	157.55	50		3p ⁴ - 3p ² (² D°)3d	¹ D - ¹ F°	2 - 3	F19, F11
Ni XIII	157.730	40		3p ⁴ - 3p ² (⁴ S°)3d	g ² P - ² D°	2 - 3	F19, F11
Ni XIII	158.77	50		3p ⁴ - 3p ² (⁴ S°)3d	g ² P - ² D°	0 - 1	F19, F11
Ni XIII	159.97			3p ⁴ - 3p ² (⁴ S°)3d	g ² P - ² D°	1 - 2	F19
Ni XIII	161.56	50		3p ⁴ - 3p ² (² D°)3d	¹ D - ¹ D°	2 - 2	F19, F11
Ni XIII	161.78			3p ⁴ - 3p ² (² D°)3d	¹ S - ¹ P°	0 - 1	F19
Ni XIII	164.15			3p ⁴ - 3p ² (² D°)3d	g ² P - ² P°	2 - 2	F19
Ni XIII	303.31			3s ² 3p ⁴ - 3s3p ⁵	g ² P - ² P°	2 - 2	F19
Ni XIII	1277.0	f		3p ⁴ - 3p ⁴	g ² P - ¹ S	1 - 0	S28

NICKEL XIV (Ni¹³⁺), Z = 28
 Ground State 1s²2s²2p⁶3s²3p³ ⁴S_{3/2} (15 electrons)
 Ionization Potential [3 436 000] cm⁻¹; [426] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XIV	164.146	35		3p ³ - 3p ² (¹ D)3d	² D° - ² F	3/2 - 3/2	F19, B5
Ni XIV	164.80			3p ³ - 3p ² (³ P)3d	² P° - ² D	1/2 - 3/2	F19
Ni XIV	168.12			3p ³ - 3p ² (³ P)3d	g ⁴ S° - ⁴ P	3/2 - 1/2	F19
Ni XIV	168.37			3p ³ - 3p ² (³ P)3d	² P° - ² D	3/2 - 3/2	F19
Ni XIV	169.69			3p ³ - 3p ² (³ P)3d	g ⁴ S° - ⁴ P	3/2 - 3/2	F19
Ni XIV	170.50			3p ³ - 3p ² (¹ D)3d	² D° - ² D	3/2 - 3/2	F19
Ni XIV	171.37			3p ³ - 3p ² (³ P)3d	g ⁴ S° - ⁴ P	3/2 - 3/2	F19
Ni XIV	172.15			3p ³ - 3p ² (¹ D)3d	² D° - ² D	3/2 - 3/2	F19
Ni XIV	177.28			3p ³ - 3p ² (¹ D)3d	² P° - ² P	3/2 - 3/2	F19
Ni XIV	177.56			3p ³ - 3p ² (¹ D)3d	² P° - ² P	1/2 - 1/2	F19
Ni XIV	253.69			3s ² 3p ³ - 3s3p ⁴	² D° - ² P	3/2 - 3/2	F19
Ni XIV	292.03			3s ² 3p ³ - 3s3p ⁴	² D° - ² D	3/2 - 3/2	F19
Ni XIV	302.27			3s ² 3p ³ - 3s3p ⁴	g ⁴ S° - ⁴ P	3/2 - 3/2	F19
Ni XIV	316.53			3s ² 3p ³ - 3s3p ⁴	g ⁴ S° - ⁴ P	3/2 - 3/2	F19
Ni XIV	1034.9	f		3p ³ - 3p ³	g ⁴ S° - ² P°	3/2 - 3/2	S28
Ni XIV	1175.3	f		3p ³ - 3p ³	g ⁴ S° - ² P°	3/2 - 3/2	S28
Ni XIV	1867.1	f		3p ³ - 3p ³	g ⁴ S° - ² D°	3/2 - 3/2	S28
Ni XIV	1966.6	f		3p ³ - 3p ³	² D° - ² P°	3/2 - 3/2	S28

NICKEL XV (Ni^{14+}), $Z = 28$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [3 718 300] cm^{-1} ; [461] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XV	173.73			$3p^3 - 3p3d$	$^1D - ^1P^\circ$	2-1	F19
Ni XV	174.99			$3p^2 - 3p3d$	$g^3P - ^3D^\circ$	1-2	F19
Ni XV	176.10			$3p^2 - 3p3d$	$g^3P - ^3D^\circ$	1-1	F19
Ni XV	176.70			$3p^2 - 3p3d$	$g^3P - ^3P^\circ$	0-1	F19
Ni XV	178.75			$3p^3 - 3p3d$	$g^3P - ^1D^\circ$	1-2	F19
Ni XV	178.87			$3p^3 - 3p3d$	$g^3P - ^2D^\circ$	2-2	F19
Ni XV	179.28			$3p^3 - 3p3d$	$g^3P - ^2D^\circ$	2-3	F19
Ni XV	180.06			$3p^3 - 3p3d$	$g^3P - ^2D^\circ$	2-1	F19
Ni XV	184.89			$3p^2 - 3p3d$	$g^3P - ^2P^\circ$	1-2	F19
Ni XV	189.21			$3p^2 - 3p3d$	$g^3P - ^2P^\circ$	2-2	F19
Ni XV	195.52			$3p^3 - 3p3d$	$^1D - ^1D^\circ$	2-2	F19
Ni XV	209.18			$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^2S^\circ$	0-1	F19
Ni XV	215.94			$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^2S^\circ$	1-1	F19
Ni XV	221.93			$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^2S^\circ$	2-1	F19
Ni XV	224.04			$3s^2 3p^2 - 3s 3p^3$	$^1D - ^1P^\circ$	2-1	F19
Ni XV	311.73			$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^2D^\circ$	1-2	F19
Ni XV	319.01			$3s^2 3p^2 - 3s 3p^3$	$g^3P - ^2D^\circ$	2-3	F19
Ni XV	1034.3	f		$3p^2 - 3p^2$	$g^3P - ^1S$	1-0	S28

NICKEL XVI (Ni^{15+}), $Z = 28$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}$ (13 electrons)
 Ionization Potential [4 000 600] cm^{-1} ; [496] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XVI	185.23			$3p - 3d$	$g^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F19
Ni XVI	194.04			$3p - 3d$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F19
Ni XVI	218.39			$3s^2 3p - 3s 3p^2$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{3}{2}$	F19
Ni XVI	223.09			$3s^2 3p - 3s 3p^2$	$g^2P^\circ - ^2P$	$\frac{1}{2} - \frac{1}{2}$	F19
Ni XVI	232.49			$3s^2 3p - 3s 3p^2$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{3}{2}$	F19
Ni XVI	237.87			$3s^2 3p - 3s 3p^2$	$g^2P^\circ - ^2P$	$\frac{3}{2} - \frac{1}{2}$	F19
Ni XVI	239.53			$3s^2 3p - 3s 3p^2$	$g^2P^\circ - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F19
Ni XVI	309.40			$3s^2 3p - 3s 3p^2$	$g^2P^\circ - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F19

NICKEL XVII (Ni^{16+}), $Z = 28$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential [4 597 000] cm^{-1} ; [570] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XVII	12.830	30		$2p^6 3s^2 - 2p^5 3s^2 3d$	$g^1 S - ^1 P^o$	0 - 1	S31
Ni XVII	30.91			$3s^2 - 3s 5p$	$g^1 S - ^1 P^o$	0 - 1	F14
Ni XVII	33.249	6		$3s 3p - 3s 5d$	$^3 P^o - ^3 D$	0 - 1	F33
Ni XVII	33.340	3		$3s 3p - 3s 5d$	$^3 P^o - ^3 D$	1 - 2	F33
Ni XVII	33.567	3		$3s 3p - 3s 5d$	$^3 P^o - ^3 D$	2 - 3	F33
Ni XVII	33.96			$3s 3d - 3s 6f$	$^3 D - ^3 F^o$	3 - 4	F14
Ni XVII	38.96			$3s 3d - 3s 5f$	$^1 D - ^1 F^o$	2 - 3	F14
Ni XVII	39.346	3		$3s 3d - 3s 5f$	$^3 D - ^3 F^o$	1 - 2	F33
Ni XVII	39.373	6		$3s 3d - 3s 5f$	$^3 D - ^3 F^o$	2 - 3	F33
Ni XVII	39.415	10		$3s 3d - 3s 5f$	$^3 D - ^3 F^o$	3 - 4	F33
Ni XVII	42.855	20		$3s^2 - 3s 4p$	$g^1 S - ^1 P^o$	0 - 1	F33
Ni XVII	44.850	6		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	0 - 1	F33
Ni XVII	44.995	10		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	1 - 2	F33
Ni XVII	45.018	1		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	1 - 1	F33
Ni XVII	45.382	20		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	2 - 3	F33
Ni XVII	45.424	6		$3s 3p - 3s 4d$	$^3 P^o - ^3 D$	2 - 2	F33
Ni XVII	52.000	6		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	0 - 1	F33
Ni XVII	52.224	10		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	1 - 1	F33
Ni XVII	52.802	6		$3s 3p - 3s 4s$	$^3 P^o - ^3 S$	2 - 1	F33
Ni XVII	54.52			$3s 3d - 3s 4f$	$^1 D - ^1 F^o$	2 - 3	F14
Ni XVII	55.14	6		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	1 - 2	F33
Ni XVII	55.18	10		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	2 - 3	F33
Ni XVII	55.25	20		$3s 3d - 3s 4f$	$^3 D - ^3 F^o$	3 - 4	F33
Ni XVII	249.180			$3s^2 - 3s 3p$	$g^1 S - ^1 P^o$	0 - 1	F19
Ni XVII	365.60	P		$3s^2 - 3s 3p$	$g^1 S - ^3 P^o$	0 - 1	K8

NICKEL XVIII (Ni^{17+}), $Z = 28$
 Ground State $1s^2 2s^2 2p^6 3s \ ^2S_{1/2}$ (11 electrons)
 Ionization Potential 4 897 400 cm^{-1} ; 607.2 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XVIII	14.10	-A		$2p^6 3s - 2p^5 3s^2$	$g^2 S - ^2 P^o$	$1/2 - 1/2$	F27
Ni XVIII	14.37	-A		$2p^6 3s - 2p^5 3s^2$	$g^2 S - ^2 P^o$	$1/2 - 3/2$	F27
Ni XVIII	24.881	1		$3p - 8d$	$^2 P^o - ^2 D$	$1/2 - 3/2$	F33
Ni XVIII	25.070	3		$3p - 8d$	$^2 P^o - ^2 D$	$3/2 - 5/2$	F33
Ni XVIII	26.020	6		$3s - 6p$	$g^2 S - ^2 P^o$	$1/2 - 3/2$	F33
Ni XVIII	26.046	3		$3s - 6p$	$g^2 S - ^2 P^o$	$1/2 - 1/2$	F33
Ni XVIII	26.218	10		$3p - 7d$	$^2 P^o - ^2 D$	$3/2 - 5/2$	F33
Ni XVIII	27.98			$3d - 8f$	$^3 D - ^3 F^o$	$3/2 - 5/2$	F33
Ni XVIII	27.982	20		$3p - 6d$	$^2 P^o - ^2 D$	$1/2 - 3/2$	F33
Ni XVIII	28.018	3		$3d - 8f$	$^3 D - ^3 F^o$	$5/2 - 7/2$	F33
Ni XVIII	28.220	35		$3p - 6d$	$^2 P^o - ^2 D$	$3/2 - 5/2$	F33
Ni XVIII	29.383	5		$3d - 7f$	$^3 D - ^3 F^o$	$3/2 - 5/2$	F33
Ni XVIII	29.422	3		$3d - 7f$	$^3 D - ^3 F^o$	$5/2 - 7/2$	F33
Ni XVIII	29.779	35		$3s - 5p$	$g^2 S - ^2 P^o$	$1/2 - 3/2$	F33
Ni XVIII	29.829	20		$3s - 5p$	$g^2 S - ^2 P^o$	$1/2 - 1/2$	F33
Ni XVIII	31.845	20		$3d - 6f$	$^3 D - ^3 F^o$	$3/2 - 5/2$	F33
Ni XVIII	31.890	20		$3d - 6f$	$^3 D - ^3 F^o$	$3/2 - 7/2$	F33
Ni XVIII	32.034	60		$3p - 5d$	$^2 P^o - ^2 D$	$1/2 - 3/2$	F33
Ni XVIII	32.340	90		$3p - 5d$	$^2 P^o - ^2 D$	$3/2 - 5/2$	F33
Ni XVIII	36.990	60		$3d - 5f$	$^3 D - ^3 F^o$	$3/2 - 5/2$	F33

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XVIII	37.049	60		3d - 5f	$^2D - ^4F^o$	$\frac{1}{2} - \frac{3}{2}$	F33
Ni XVIII	41.015	125		3s - 4p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	F33
Ni XVIII	41.218	90		3s - 4p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	F33
Ni XVIII	43.814	200		3p - 4d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F33
Ni XVIII	44.365	250		3p - 4d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F33
Ni XVIII	44.405	35		3p - 4d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	F33
Ni XVIII	50.253	20		3p - 4s	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	F33
Ni XVIII	51.042	35		3p - 4s	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	F33
Ni XVIII	52.615	200		3d - 4f	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	F33
Ni XVIII	52.720	250		3d - 4f	$^2D - ^2F^o$	$\frac{1}{2} - \frac{3}{2}$	F33
Ni XVIII	220.41	10		3p - 3d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F33
Ni XVIII	233.79	35		3p - 3d	$^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F33
Ni XVIII	236.36	3		3p - 3d	$^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F33
Ni XVIII	292.00	10		3s - 3p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	F33
Ni XVIII	320.56			3s - 3p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	W7

NICKEL XIX (Ni^{18+}), Z = 28Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)Ionization Potential 12 477 000 cm^{-1} ; 1546.9 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XIX	8.725	10		$2p^6 - 2p^5 6d$	$g^1S - ^1P^o$	0 - 1	S31
Ni XIX	8.838	20		$2p^6 - 2p^5 6d$	$g^1S - ^3D^o$	0 - 1	S31
Ni XIX	9.130	30		$2p^6 - 2p^5 5d$	$g^1S - ^1P^o$	0 - 1	S31
Ni XIX	9.236	30		$2p^6 - 2p^5 5d$	$g^1S - ^3D^o$	0 - 1	S31
Ni XIX	9.97	30		$2p^6 - 2o^5 4d$	$g^1S - ^1P^o$	0 - 1	S31
Ni XIX	10.102	30		$2p^6 - 2p^5 4d$	$g^1S - ^3D^o$	0 - 1	S31
Ni XIX	10.306	20		$2p^6 - 2p^5 4s$	$g^1S - ^1P^o$	0 - 1	S31
Ni XIX	10.417	20		$2p^6 - 2p^5 4s$	$g^1S - ^3P^o$	0 - 1	S31
Ni XIX	11.522	60		$2s^2 2p^6 - 2s 2p^5 3p$	$g^1S - ^1P^o$	0 - 1	S31, F29
Ni XIX	11.582	50		$2s^2 2p^6 - 2s 2p^5 3p$	$g^1S - ^3P^o$	0 - 1	S31, F29
Ni XIX	12.42	100		$2p^6 - 2p^5 3d$	$g^1S - ^1P^o$	0 - 1	S31, F29
Ni XIX	12.641	90		$2p^6 - 2p^5 3d$	$g^1S - ^3D^o$	0 - 1	S31, F29
Ni XIX	12.805	50		$2p^6 - 2p^5 3d$	$g^1S - ^3P^o$	0 - 1	S31, F29
Ni XIX	13.76 ¹	50		$2p^6 - 2p^5 3s$	$g^1S - ^1P^o$	0 - 1	S31, F29
Ni XIX	14.03	70		$2p^6 - 2p^5 3s$	$g^1S - ^3P^o$	0 - 1	S31, F29

NICKEL XX (Ni^{19+}), Z = 28Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}^o$ (9 electrons)Ionization Potential [13 220 000] cm^{-1} ; [1639] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XX	11.691	20		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$	S31
Ni XX	11.760	40		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S31
Ni XX	11.818	60		$2p^5 - 2p^4(^1S)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	S31
Ni XX	11.854	40		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31
Ni XX	11.946	60		$2p^5 - 2p^4(^1D)3d$	$g^2P^o - ^2P$? $\frac{3}{2} - \frac{1}{2}$	S31, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XX	11.963	20		$2p^5 - 2p^4(^2P)3d$	$g^2P^{\circ} - ^2D$? $\frac{3}{2} - \frac{5}{2}$	S31, K8
Ni XX	12.043	30		$2p^5 - 2p^4(^4P)3d$	$g^4P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S31
Ni XX	12.103	40		$2p^5 - 2p^4(^2P)3d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	S31
Ni XX	12.139	0		$2p^5 - 2p^4(^1D)3d$	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S31, K8
Ni XX	12.164	10		$2p^5 - 2p^4(^2P)3d$	$g^4P^{\circ} - ^4D$? $\frac{3}{2} - \frac{5}{2}$	S31, C10
Ni XX	12.250	20		$2p^5 - 2p^4(^2P)3d$	$g^4P^{\circ} - ^4P$? $\frac{1}{2} - \frac{1}{2}$	S31, K8
Ni XX	12.315	9		$2p^5 - 2p^4(^2P)3d$	$g^4P^{\circ} - ^4P$? $\frac{1}{2} - \frac{3}{2}$	S31, K8
Ni XX	12.915	30		$2p^5 - 2p^4(^1D)3s$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	S31
Ni XX	13.065	10		$2p^5 - 2p^4(^2P)3s$	$g^2P^{\circ} - ^2P$? $\frac{3}{2} - \frac{1}{2}$	S31, K8
Ni XX	13.120	10		$2p^5 - 2p^4(^2P)3s$	$g^2P^{\circ} - ^2P$? $\frac{3}{2} - \frac{3}{2}$	S31, K8
Ni XX	13.151	10		$2p^5 - 2p^4(^2P)3s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	S31
Ni XX	13.240	20		$2p^5 - 2p^4(^2P)3s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S31
Ni XX	13.303	10		$2p^5 - 2p^4(^2P)3s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	S31
Ni XX	13.37 ?			$2s2p^6 - 2s2p^5(^6P^{\circ})3s$	$^2S - ^4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	K8
Ni XX	83.82 P			$2s^22p^5 - 2s2p^6$	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K8
Ni XX	94.97 P			$2s^22p^5 - 2s2p^6$	$g^4P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K

NICKEL XXI (Ni^{20+}), $Z = 28$ Ground State $1s^22s^22p^4\ ^3P$, (8 electrons)Ionization Potential [14 091 000] cm^{-1} ; [1747] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XXI?	8.886	10					S31
Ni XXI?	8.993	20					S31
Ni XXI	10.902	20		$2s^22p^4 - 2s2p^4\ ^3j$	$^1D - ^1F^{\circ}$	2 - 3	S31
Ni XXI?	11.123	20					S31
Ni XXI	11.342	20		$2p^4 - 2p^3(^2P^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 3	S31
Ni XXI	11.403	20		$2p^4 - 2p^3(^1D^{\circ})3d$	$g^3P - ^3D^{\circ}$	2 - 3	S31
Ni XXI	11.457	20		$2p^4 - 2p^3(^4S^{\circ})3d$	$g^3P - ^3P^{\circ}$	2 - 3	S31
Ni XXI	12.467	30		$2p^4 - 2p^3(^4S^{\circ})3s$	$g^3P - ^3S^{\circ}$	2 - 1	S31
Ni XXI	12.552	30		$2p^4 - 2p^3(^4S^{\circ})3s$	$g^3P - ^3S^{\circ}$	1 - 1	S31
Ni XXI	12.581	30		$2p^4 - 2p^3(^4S^{\circ})3s$	$g^3P - ^3S^{\circ}$	0 - 1	S31

NICKEL XXII (Ni^{21+}), $Z = 28$ Ground State $1s^22s^22p^3\ ^4S_{3/2}$ (7 electrons)Ionization Potential [15 180 000] cm^{-1} ; [1882] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XXII?	8.798	10					S31
Ni XXII	10.820	20		$2p^3 - 2p^23d$	$^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S31
Ni XXII	11.203	30		$2p^3 - 2p^23d$	$^3D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S31

NICKEL XXIII (Ni^{22+}), $Z = 28$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential [15 156 000] cm^{-1} ; [2003] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	I - J	References
Ni XXIII?	10.680	10					S31
Ni XXIII?	10.762	20					S31
Ni XXIII	10.967	20		$2p^2 - 2p\ 3s$	$g^3P - ^1P^o$	0 - 1	S31
Ni XXIII?	11.002	20					S31
Ni XXIII	11.023	20		$2p^2 - 2p\ 3s$	$g^3P - ^3P^o$? 0 - 1	S31
Ni XXIII	11.0 '3	0		$2p^2 - 2p\ 3s$	$g^3P - ^1P^o$		S31
Ni XXIII	11.159	20		$2p^2 - 2p\ 3s$	$g^3P - ^1P^o$? 2 - 1	S31
Ni XXIII	11.262	30		$2p^2 - 2p\ 3s$	$^1D - ^3P^o$? 2 - 1	S31
Ni XXIII	11.298	40		$2p^2 - 2p\ 3s$	$^1S - ^1P^o$	0 - 1	S31

NICKEL XXIV (Ni^{23+}), $Z = 28$
 Ground State $1s^2 2s^2 2p \ ^2P_{1/2}^o$ (5 electrons)
 Ionization Potential [17 124 000] cm^{-1} ; [2123] eV

NICKEL XXV (Ni^{24+}), $Z = 28$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential [18 382 000] cm^{-1} ; [2279] eV

NICKEL XXVI (Ni^{25+}), $Z = 28$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [19 342 000] cm^{-1} ; [2398] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	I - J	References
Ni XXVI	157.5 P			$2s - 2p$	$g^2S - ^2P^o$	$1/2 - 3/2$	K8
Ni XXVI	221.6 P			$2s - 2p$	$g^2S - ^2P^o$	$1/2 - 1/2$	K8

NICKEL XXVII (Ni^{26+}) $Z = 28$ Ground State $1s^2 \ ^1S_0$ (2 electrons)Ionization Potential [82 980 000] cm^{-1} ; [10288] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XXVII	1.36			$1s^2 - 1s3p$	$g^1S - ^3P^0$	0 - 1	C11
Ni XXVII	1.60			$1s^2 - 1s2p$	$g^1S - ^3P^0$	0 - 1	C11
Ni XXVII	1.63 ?	f		$1s^2 - 1s2s$	$g^1S - ^3S$	0 - 1	K8

NICKEL XXVIII (Ni^{27+}), $Z = 28$ Ground State $1s \ ^2S_{1/2}$ (1 electron)Ionization Potential [86 908 000] cm^{-1} ; [10775] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ni XXVIII	1.54 P			$1s - 2p$	$g^2S - ^3P^0$	$\frac{1}{2} - \frac{3}{2}$	K8

COPPER, $Z = 29$

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu	8.931	0					
Cu	9.040	0					S31
Cu	9.060	0					S31
Cu	9.280	10					S31
Cu	9.309	10					S31
Cu	9.375	10					S31
Cu	9.448	10					S31
Cu	9.582	0					S31
Cu	9.640	0					S31
Cu	9.653	0					S31
Cu	9.752	0					S31
Cu	9.792	0					S31
Cu	9.892	0					S31
Cu	10.010	10					S31
Cu	10.037	10					S31
Cu	10.963	30					S31
Cu	11.229	10					S31
Cu	11.479	40					S31
Cu	11.678	30					S31
Cu	11.904	10					S31
Cu	12.003	10					S31
Cu	12.439	0					S31
Cu	109.215	120					K20
Cu	112.532	120					K20
Cu	120.594	150					K20
Cu	127.105	200					K20
Cu	128.123	250					K20
Cu	128.255	300					K20
Cu	129.398	100					K20
Cu	129.567	400					K20
Cu	129.697	200					K20
Cu	131.533	150					K20
Cu	131.590	350					K20
Cu	133.916	400					K20
Cu	134.550	600					K20
Cu	136.724	450					K20
Cu	136.936	400					K20
Cu	141.694	300					K20
Cu	142.158	200					K20
Cu	142.892	600					K20
Cu	143.033	500					K20
Cu	143.634	150					K20
Cu	144.728	250					K20
Cu	145.651	350					K20
Cu	145.671	100					K20
Cu	146.669	1000					K20
Cu	147.544	200					K20
Cu	148.846	800					K20
Cu	149.703	800					K20
Cu	154.785	400					K20
Cu	155.718	150					K20
Cu	156.557	200					K20
Cu	156.847	200					K20
Cu	157.359	400					K20
Cu	159.072	100					K20
Cu	159.462	100					K20
Cu	160.763	500					K20
Cu	161.551	300					K20
Cu	161.748	250					K20
Cu	162.078	200					K20

Cu

Cu

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu	162.651	100					
Cu	163.771	300					
Cu	163.598	250					K20
Cu	164.259	200					F20
Cu	165.127	300					K20
							K20
Cu	165.481	250					K20
Cu	166.308	120					
Cu	166.645	100					K20
Cu	168.111	150					K20
Cu	169.488	150					K20
							K20
Cu	169.765	150					
Cu	170.007	150					
Cu	172.036	400					K20
Cu	173.193	100					K20
Cu	175.484	300					K20
							K20
Cu	175.633	250					
Cu	176.232	150					
Cu	176.824	100					K20
Cu	177.466	200					K20
Cu	178.489	150					K20
							K20
Cu	179.223	150					
Cu	180.986	200					
Cu	186.296	150					K20
Cu	197.128	300					K20
Cu	197.598	300					K20
							K20
Cu	199.723	100					
Cu	201.329	150					
Cu	201.615	200					K20
Cu	202.065	200					K20
Cu	203.432	600					K20
							K20
Cu	204.056	150					
Cu	204.725	400					
Cu	205.610	300					K20
Cu	206.355	600					K20
Cu	206.842	350					K20
							K20
Cu	207.733	150					
Cu	207.925	350					
Cu	210.217	150					K20
Cu	210.612	150					K20
Cu	211.707	200					K20
							K20
Cu	215.611	500					
Cu	216.454	250					
Cu	217.743	200					K20
Cu	241.583	150					K20
Cu	248.153	100					K20
							K20
Cu	249.415	150					
Cu	249.908	100					
Cu	250.400	300					K20
Cu	251.670	200					K20
Cu	251.947	200					K20
							K20
Cu	252.223	150					
Cu	252.780	750					
Cu	253.465	150					K20
Cu	253.786	150					K20
Cu	254.510	500					K20
							K20
Cu	254.772	700					
Cu	255.417	350					
Cu	256.365	300					K20
Cu	256.898	400					K20
Cu	257.315	200					F20
							K20
Cu	257.626	200					
Cu	258.004	150					
Cu	258.265	450					K20
Cu	258.927	800					K20
Cu	259.871	250					K20
							K20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu	260.245	250					K20
Cu	261.606	300					K20
Cu	261.806	200					K20
Cu	262.442	290					K20
Cu	264.029	150					K20
Cu	266.061	200					K20
Cu	266.584	100					K20
Cu	267.562	250					K20
Cu	268.773	500					K20
Cu	269.044	400					K20
Cu	269.653	200					K20
Cu	270.740	200					K20
Cu	272.424	150					K20
Cu	272.807	100					K20
Cu	273.417	200					K20
Cu	274.601	150					K20
Cu	275.244	100					K20
Cu	277.761	100					K20
Cu	279.150	100					K20
Cu	281.492	500					K20
Cu	281.744	400					K20
Cu	293.257	100					K20
Cu	297.057	100					K20
Cu	298.901	200					K20
Cu	299.217	150					K20
Cu	304.434	100					K20
Cu	310.727	150					K20
Cu	312.505	200					K20
Cu	322.617	150					K20
Cu	323.816	600					K20
Cu	324.607	500					K20
Cu	325.038	200					K20
Cu	327.687	200					K20
Cu	328.575	200					K20
Cu	327.383	150					K20
Cu	328.412	500					K20
Cu	328.536	250					K20
Cu	328.831	200					K20
Cu	329.047	1000					K20
Cu	329.851	300					K20
Cu	332.405	100					K20
Cu	332.893	1000					K20
Cu	333.562	300					K20
Cu	334.204	300					K20
Cu	335.470	150					K20
Cu	335.919	250					K20
Cu	336.279	250					K20
Cu	341.483	250					K20
Cu	342.713	800					K20
Cu	345.368	900					K20
Cu	346.004	600					K20
Cu	348.413	150					K20
Cu	350.056	100					K20
Cu	353.031	150					K20
Cu	353.568	100					K20
Cu	357.052	100					K20
Cu	358.865	900					K20
Cu	359.873	500					K20
Cu	361.220	250					K20
Cu	361.838	150					K20
Cu	363.967	100					K20
Cu	370.622	100					K20
Cu	371.267	100					K20
Cu	377.355	100					K20
Cu	377.756	150					K20

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu	446.359	100					K20
Cu	454.791	100					K20
Cu	467.106	150					K20

COPPER I (Cu⁰⁺), Z = 29
 Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²S_{1/2} (29 electrons)
 Ionization Potential 62 317.2 cm⁻¹; 7.726 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu I?	1504.091	0					S17
Cu I?	1522.252	0h					S17
Cu I?	1523.371	1h					S17
Cu I?	1523.851	0h					S17
Cu I	1579.658	5		3d ⁹ 4s ² - 3d ⁹ 4s(1D)5p	² D - ² D°	$\frac{5}{2} - \frac{3}{2}$	S17
Cu I	1583.799	15	32	3d ⁹ 4s ² - 3d ⁹ 4s(1D)5p	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$	S17
Cu I	1585.871	5h	31	3d ⁹ 4s ² - 3d ⁹ 4s(1D)5p	² D - ² P°	$\frac{5}{2} - \frac{3}{2}$	S17
Cu I	1616.940	20h	31	3d ⁹ 4s ² - 3d ⁹ 4s(1D)5p	² D - ² P°	$\frac{3}{2} - \frac{1}{2}$	S17
Cu I	1621.316	20	32	3d ⁹ 4s ² - 3d ⁹ 4s(1D)5p	² D - ² F°	$\frac{3}{2} - \frac{5}{2}$	S17
Cu I	1632.326	5		3d ⁹ 4s ² - 3d ⁹ 4s(1D)5p	² D - ² D°	$\frac{3}{2} - \frac{3}{2}$	S17
Cu I	1640.474	5r	13	3d ¹⁰ 4s - 3d ¹⁰ 11p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	S17
Cu I	1647.030	0h		3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ² P°	$\frac{5}{2} - \frac{3}{2}$	S17
Cu I	1650.119	5r	12	3d ¹⁰ 4s - 3d ¹⁰ 10p	^g 2S - ² P°	$\frac{1}{2} - \frac{1}{2}$	S17
Cu I	1650.301	5r	12	3d ¹⁰ 4s - 3d ¹⁰ 10p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	S17
Cu I	1651.721	20r	30	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ² D°	$\frac{3}{2} - \frac{5}{2}$	S17
Cu I	1655.318	30r	29	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ² F°	$\frac{5}{2} - \frac{7}{2}$	S17
Cu I	1664.303	10r	11	3d ¹⁰ 4s - 3d ¹⁰ 9p	^g 2S - ² P°	$\frac{1}{2} - \frac{1}{2}$	S17
Cu I	1664.708	10r	11	3d ¹⁰ 4s - 3d ¹⁰ 9p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	S17
Cu I	1671.484	3	28	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ D°	$\frac{5}{2} - \frac{3}{2}$	S17
Cu I	1673.440	5	29	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ² F°	$\frac{3}{2} - \frac{5}{2}$	S17
Cu I	1684.674	20h	28	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ D°	$\frac{5}{2} - \frac{3}{2}$	S17
Cu I	1685.682	25r	10	3d ¹⁰ 4s - 3d ¹⁰ 8p	^g 2S - ² P°	$\frac{1}{2} - \frac{1}{2}$	S17
Cu I	1687.043	20r	10	3d ¹⁰ 4s - 3d ¹⁰ 8p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	S17
Cu I	1688.093	30	28	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ D°	$\frac{5}{2} - \frac{7}{2}$	S17
Cu I	1688.865	15	27	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ F°	$\frac{5}{2} - \frac{3}{2}$	S17
Cu I	1691.076	30	27	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ F°	$\frac{5}{2} - \frac{7}{2}$	S17
Cu I	1692.654	5h		3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ P°	$\frac{5}{2} - \frac{3}{2}$	S17
Cu I	1701.292	10	30	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ² D°	$\frac{3}{2} - \frac{5}{2}$	S17
Cu I	1703.843	30r	8	3d ¹⁰ 4s - 3d ¹⁰ 4s(1D)4p	^g 2S - ² D°	$\frac{1}{2} - \frac{3}{2}$	S17
Cu I	1707.391	5f		3d ¹⁰ 4s - 3d ¹⁰ 8s	² S - ² S	$\frac{1}{2} - \frac{1}{2}$	S17
Cu I	1709.396	2		3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ² D°	$\frac{3}{2} - \frac{5}{2}$	S17
Cu I	1713.364	50r	7	3d ¹⁰ 4s - 3d ¹⁰ 4s(1D)4p	^g 2S - ² P°	$\frac{1}{2} - \frac{1}{2}$	S17
Cu I	1725.664	50r	9	3d ¹⁰ 4s - 3d ¹⁰ 7p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	S17
Cu I	1730.576	10	28	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ D°	$\frac{3}{2} - \frac{5}{2}$	S17
Cu I	1731.32	2h		3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ P°	$\frac{3}{2} - \frac{1}{2}$	S17
Cu I	1732.674	20	29	3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ² F°	$\frac{3}{2} - \frac{5}{2}$	S17
Cu I	1741.574	50r	9	3d ¹⁰ 4s - 3d ¹⁰ 7p	^g 2S - ² P°	$\frac{1}{2} - \frac{1}{2}$	S17
Cu I	1749.202	2		3d ⁹ 4s ² - 3d ⁹ 4s(3D)5p	² D - ⁴ F°	$\frac{3}{2} - \frac{5}{2}$	S17
Cu I	1764.540	10f		3d ¹⁰ 4s - 3d ¹⁰ 7s	² S - ² S	$\frac{1}{2} - \frac{1}{2}$	S17
Cu I	1774.820	200r	7	3d ¹⁰ 4s - 3d ¹⁰ 4s(1D)4p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	S17
Cu I	1817.265	20	6	3d ¹⁰ 4s - 3d ¹⁰ 6p	^g 2S - ² P°	$\frac{1}{2} - \frac{1}{2}$	S17
Cu I	1825.345	100r	6	3d ¹⁰ 4s - 3d ¹⁰ 6p	^g 2S - ² P°	$\frac{1}{2} - \frac{3}{2}$	S17

COPPER II (Cu¹⁺), Z = 29
 Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰ 1S₀ (28 electrons)
 Ionization Potential 163 669.2 cm⁻¹; 20.292 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu II	675.6020	2		3d ¹⁰ - 3d ⁹ (² D)5f	g ¹ S - ³ F ^o	0 - 1	R21
Cu II	685.1406	8		3d ¹⁰ - 3d ⁹ (² D)5f	g ¹ S - ¹ P ^o	0 - 1	R21
Cu II	685.3963	2		3d ¹⁰ - 3d ⁹ (² D)5f	g ¹ S - ³ P ^o	0 - 1	R21
Cu II	709.3129	10	.2	3d ¹⁰ - 3d ⁹ (² D)6p	g ¹ S - ¹ P ^o	0 - 1	R21
Cu II	718.1787	10	1!	3d ¹⁰ - 3d ⁹ (² D)6p	g ¹ S - ³ P ^o	0 - 1	R21
Cu II	724.4887	15	10	3d ¹⁰ - 3d ⁹ (² D)4f	g ¹ S - ³ D ^o	0 - 1	R21
Cu II	735.5203	20	9	3d ¹⁰ - 3d ⁹ (² D)4f	g ¹ S - ¹ P ^o	0 - 1	R21
Cu II	736.0319	25	8	3d ¹⁰ - 3d ⁹ (² D)4f	g ¹ S - ³ P ^o	0 - 1	R21
Cu II	752.80	0					R21
Cu II	763.29	0					R21
Cu II	768.48	0					R21
Cu II	776.48	0					R21
Cu II	777.7435	0		3d ⁹ (² D)4s - 3d ⁹ (¹ D)6f	³ D - ³ P ^o	2 - 1	R21
Cu II	779.2949	8		3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ F ^o	3 - 2	R21
Cu II	784.9125	0		3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ F ^o	2 - 2	R21
Cu II	797.4552	10		3d ⁹ (² D)4s - 3d ⁹ (² D)7p	³ D - ³ P ^o	3 - 2	R21
Cu II	806.5472	3		3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	¹ D - v ³ F ^o	2 - 2	R21
Cu II	810.635	1					R21
Cu II	810.9984	15	5	3d ¹⁰ - 3d ⁹ (² D)5p	g ¹ S - ³ D ^o	0 - 1	R21
Cu II	811.29	1					R21
Cu II	813.8834	20	6	3d ¹⁰ - 3d ⁹ (² D)5p	g ¹ S - ¹ P ^o	0 - 1	R21
Cu II	822.500	1					R21
Cu II	823.768	2	43	3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ D ^o	2 - 1	R21
Cu II	823.8378	2		3d ⁹ (² D)4s - 3d ⁹ (² D)7p	¹ D - ³ D ^o	2 - 2	R21
Cu II	824.635	2					R21
Cu II	826.9961	30	4	3d ¹⁰ - 3d ⁹ (² D)5p	g ¹ S - ³ P ^o	0 - 1	R21
Cu II	836.0278	0		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ¹ D ^o	3 - 2	R21
Cu II	839.47	1					R21
Cu II	841.1346	2	47	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ F ^o	2 - 2	R21
Cu II	842.4964	2		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ¹ D ^o	2 - 2	R21
Cu II	844.6128	3	48	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ D ^o	2 - 1	R21
Cu II	844.9122	5		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ¹ F ^o	2 - 3	R21
Cu II	848.8075	15	48	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ D ^o	3 - 3	R21
Cu II	849.3594	3	47	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ F ^o	1 - 2	R21
Cu II	850.7480	2		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ¹ D ^o	1 - 2	R21
Cu II	851.3027	25	47	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ F ^o	3 - 4	R21
Cu II	851.7714	2	47	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ F ^o	3 - 3	R21
Cu II	852.9061	3	48	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ D ^o	1 - 1	R21
Cu II	853.5644	1		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ P ^o	1 - 0	R21
Cu II	855.4762	5	48	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ D ^o	2 - 3	R21
Cu II	855.7002	10	48	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ D ^o	2 - 2	R21
Cu II	858.4869	25	47	3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ F ^o	2 - 3	R21
Cu II	858.5667	25		3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ G ^o	3 - 3	R21
Cu II	859.1509	0		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ P ^o	2 - 1	R21
Cu II	860.7217	1	43	3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ D ^o	2 - 2	R21
Cu II	861.9936	40		3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ F ^o	3 - 4	R21
Cu II	862.8226	2		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ P ^o	2 - 2	R21
Cu II	864.1546	10		3d ⁹ (² D)4s - 3d ⁹ 4s(² P)4p	³ D - w ¹ D ^o	3 - 2	R21
Cu II	864.2138	10		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ D ^o	1 - 2	R21
Cu II	865.3902	40		3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ G ^o	2 - 3	R21
Cu II	866.4427	5		3d ⁹ (² D)4s - 3d ⁹ (² D)4f	³ D - ³ G ^o	2 - 3	R21
Cu II	867.7336	8		3d ⁹ (² D)4s - 3d ⁹ (² D)6p	³ D - ³ P ^o	1 - 1	R21
Cu II	869.0641	10		3d ⁹ (² D)4s - 3d ⁹ 4s(² F)4p	³ D - w ³ S ^o	2 - 1	R21
Cu II	869.3360	25	43	3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ J ^o	1 - 2	R21
Cu II	870.5389	8	42	3d ⁹ (² D)4s - 3d ⁹ 4s(² G)4p	³ D - u ³ F ^o	3 - 2	R21
Cu II	871.0676	8		3d ⁹ (² D)4s - 3d ⁹ 4s(² P)4p	³ D - w ¹ D ^o	2 - 2	R21
Cu II	873.2629	15	43	3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ F)4p	³ D - v ³ D ^o	3 - 3	R21
Cu II	876.7227	20		3d ⁹ (² D)4s - 3d ⁹ (² D)4f	³ D - ³ F ^o	3 - 3	R21
Cu II	877.0121	25		3d ⁹ (² D)4s - 3d ⁹ 4s(⁴ P)4p	³ D - x ⁵ S ^o	3 - 2	R21
Cu II	877.5548	20	42	3d ⁹ (² D)4s - 3d ⁹ 4s(² G)4p	³ D - u ³ F ^o	2 - 2	R21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J	References
Cu II	877.8471	15		$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3S^o$	1-1	R21
Cu II	878.6986	50	42	$3d^9(2D)4s - 3d^9 4s(2G)4p$	$2D - y^3F^o$	3-3	R21
Cu II	879.8912	2		$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^1D^o$	1-2	R21
Cu II	880.3230	5	43	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$2D - v^3D^o$	2-3	R21
Cu II	883.2800	5		$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^1P^o$	1-1	R21
Cu II	883.8390	5		$3d^9(2D)4s - 3d^9(2D)4f$	$2D - 2F^o$	2-3	R21
Cu II	884.1332	10	44	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3S^o$	2-2	R21
Cu II	884.4346	8	75	$3d^9(2D)4s - 3d^9(2D)6p$	$1D - 2F^o$	2-3	R21
Cu II	884.8262	5		$3d^9(2D)4s - 3d^9(2D)4f$	$2D - 2P^o$	2-1	R21
Cu II	885.8472	25	42	$3d^9(2D)4s - 3d^9 4s(2G)4p$	$2D - u^3F^o$	2-3	R21
Cu II	886.5111	10	42	$3d^9(2D)4s - 3d^9 4s(2G)4p$	$2D - u^3F^o$	1-2	R21
Cu II	886.9434	60	41	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3D^o$	3-2	R21
Cu II	890.5669	60	41	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3D^o$	2-1	R21
Cu II	892.4144	50	41	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3D^o$	3-3	R21
Cu II	893.6777	80	40	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3P^o$	3-2	R21
Cu II	894.2274	40	41	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3D^o$	2-2	R21
Cu II	896.7588	60	40	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3P^o$	2-1	R21
Cu II	896.9762	40	40	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3P^o$	1-0	R21
Cu II	897.7932	15	74	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$1D - w^1D^o$	2-2	R21
Cu II	899.7888	50	41	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3D^o$	2-3	R21
Cu II	899.7922	50	41	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3D^o$	1-1	R21
Cu II	901.0731	60	40	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3P^o$	2-2	R21
Cu II	903.5290	1	41	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3D^o$	1-2	R21
Cu II	906.1134	40	40	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3P^o$	1-1	R21
Cu II	910.5185	15	40	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$2D - w^3P^o$	1-2	R21
Cu II	911.6301	1		$3d^9(2D)4s - 3d^9(2D)4f$	$1D - 1P^o$	2-1	R21
Cu II	911.6793	1		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$1D - x^3S^o$	2-2	R21
Cu II	912.0248	0		$3d^9(2D)4s - 3d^9(2D)4f$	$1D - 2P^o$	2-2	R21
Cu II	912.4162	3		$3d^9(2D)4s - 3d^9(2D)4f$	$1D - 2P^o$	2-1	R21
Cu II	913.5018	0		$3d^9(2D)4s - 3d^9 4s(2G)4p$	$1D - u^3F^o$	2-3	R21
Cu II	914.2133	80	38	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3D^o$	3-4	R21
Cu II	917.3058	20	38	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3D^o$	3-2	R21
Cu II	922.0190	60	37	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - v^3P^o$	3-2	R21
Cu II	922.4161	20	73	$3d^9(2D)4s - 3d^9 4s(2P)4p$	$1D - w^3P^o$	2-2	R21
Cu II	924.2386	50	38	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3D^o$	2-3	R21
Cu II	925.0992	30	38	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3D^o$	2-2	R21
Cu II	925.1098	30		$3d^9(2D)4s - 3d^9 4s(2P)4p$	$1D - w^3P^o$	2-1	R21
Cu II	925.1263	30	38	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3D^o$	2-1	R21
Cu II	929.7020	2		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$1D - w^3P^o$	2-2	R21
Cu II	929.8930	5	37	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3P^o$	2-2	R21
Cu II	932.9387	60	33	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3D^o$	3-3	R21
Cu II	935.0577	60	38	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3D^o$	1-2	R21
Cu II	935.0855	60		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3D^o$	1-1	R21
Cu II	935.2325	40	33	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3D^o$	3-2	R21
Cu II	935.3434	20	37	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3P^o$	2-1	R21
Cu II	935.8977	60	35	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3F^o$	3-4	R21
Cu II	937.8175	5	35	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3F^o$	3-3	R21
Cu II	939.5232	10	35	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3F^o$	3-2	R21
Cu II	943.3348	60	33	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3D^o$	2-2	R21
Cu II	945.5249	60	37	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3P^o$	1-1	R21
Cu II	945.8769	40	33	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3D^o$	2-1	R21
Cu II	945.9648	50	35	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3F^o$	2-3	R21
Cu II	947.7003	2	35	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3F^o$	2-2	R21
Cu II	951.4079	5		$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3P^o$	1-0	R21
Cu II	954.3830	20		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$1D - x^3D^o$	2-3	R21
Cu II	955.3297	5		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$1D - 2D^o$	2-1	R21
Cu II	956.2903	25		$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3D^o$	1-1	R21
Cu II	958.1542	40	33	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$2D - y^3F^o$	1-2	R21
Cu II	960.4135	20	35	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$1D - y^3P^o$	2-2	R21
Cu II	966.2287	3	69	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$1D - y^3P^o$	2-1	R21
Cu II	967.8729	0		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3P^o$	3-2	R21
Cu II	968.0343	25		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3P^o$	3-3	R21
Cu II	972.2674	2		$3d^9(2D)4s - 3d^9 4s(2D)4p$	$1D - y^3D^o$	2-3	R21
Cu II	973.4995	2		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$2D - x^3P^o$	2-1	R21
Cu II	974.7589	20		$3d^9(2D)4s - 3d^9 4s(2D)4p$	$1D - y^3D^o$	2-2	R21

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu II	976.5532	10		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$3D - x^3P^o$	2-2	R21
Cu II	976.7176	10		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$3D - x^3P^o$	2-3	R21
Cu II	977.5674	25	67	$3d^9(2D)4s - 3d^9 4s(2D)4p$	$1D - y^3F^o$	2-3	R21
Cu II	979.4209	5		$3d^9(2D)4s - 3d^9 4s(2D)4p$	$1D - y^3F^o$	2-2	R21
Cu II	983.9802	1	32	$3d^9(2D)4s - 3d^9(2I)5p$	$3D - 1D^o$	3-2	R21
Cu II	984.5336	10		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$3D - x^3P^o$	1-1	R21
Cu II	987.6570	10		$3d^9(2D)4s - 3d^9 4s(4P)4p$	$3D - x^3P^o$	1-2	R21
Cu II	989.2365	8	31	$3d^9(2I)4s - 3d^9(2D)5p$	$3D - 1F^o$	3-3	R21
Cu II	992.9532	25	32	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 1D^o$	2-2	R21
Cu II	998.3060	8	31	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 1F^o$	2-3	R21
Cu II	999.7940	5		$3d^9(2I)4s - 3d^9(2D)5p$	$3D - 1P^o$	2-1	R21
Cu II	1001.0130	8	27	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3F^o$	2-2	R21
Cu II	1004.0554	30	30	$3d^9(2I)4s - 3d^9(2D)5p$	$3D - 3D^o$	3-3	R21
Cu II	1006.9841	1	30	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3D^o$	1-1	R21
Cu II	1008.5688	50	29	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^1F^o$	3-3	R21
Cu II	1008.7284	30	30	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3D^o$	2-2	R21
Cu II	1010.2690	30	68	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$1D - x^3P^o$	2-2	R21
Cu II	1010.4450	10	68	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$1D - x^3P^o$	2-3	R21
Cu II	1010.6395	3	28	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^1D^o$	3-2	R21
Cu II	1011.4358	2		$3d^9(2D)4s - 3d^9(2I)5p$	$3D - 1P^o$	1-1	R21
Cu II	1012.5971	25	27	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3F^o$	3-3	R21
Cu II	1012.6833	3	27	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3F^o$	1-2	R21
Cu II	1015.3999	1		$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3D^o$	2-3	R21
Cu II	1017.9980	15	29	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^1F^o$	2-3	R21
Cu II	1018.0642	15	26	$3d^9(2I)4s - 3d^9(2D)5p$	$3D - 3P^o$	1-0	R21
Cu II	1018.7073	50	26	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3P^o$	3-2	R21
Cu II	1019.6545	15	26	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3F^o$	2-1	R21
Cu II	1020.1076	15	28	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^1D^o$	2-2	R21
Cu II	1022.1921	5	27	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3F^o$	2-3	R21
Cu II	1027.8311	50	64	$3d^9(2D)4s - 3d^9(2I)5p$	$1D - 1D^o$	2-2	R21
Cu II	1028.3270	25	26	$3d^9(2D)4s - 3d^9(2I)5p$	$3D - 3P^o$	2-2	R21
Cu II	1029.7508	10	24	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3F^o$	3-2	R21
Cu II	1030.2535	20	25	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^1G^o$	3-4	R21
Cu II	1031.7662	8	26	$3d^9(2D)4s - 3d^9(2D)5p$	$3D - 3P^o$	1-1	R21
Cu II	1033.5677	10	63	$3d^9(2D)4s - 3d^9(2I)5p$	$1D - 1F^o$	2-3	R21
Cu II	1035.1628	8	62	$3d^9(2D)4s - 3d^9(2I)5p$	$1D - 1P^o$	2-1	R21
Cu II	1036.4695	60	58	$3d^9(2D)4s - 3d^9(2D)5p$	$1D - 3F^o$	2-2	R21
Cu II	1039.3477	60	24	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3F^o$	3-3	R21
Cu II	1039.5821	60	24	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3F^o$	2-2	R21
Cu II	1044.5162	80	24	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3F^o$	3-4	R21
Cu II	1047.5435	50	61	$3d^9(2D)4s - 3d^9(2I)5p$	$1D - 3D^o$	2-2	R21
Cu II	1047.7440	70	24	$3d^9(2I)4s - 3d^9 4s(2F)4p$	$3D - z^3F^o$	2-3	R21
Cu II	1049.7454	50	61	$3d^9(2D)4s - 3d^9(2D)5p$	$1D - 3D^o$	2-3	R21
Cu II	1050.1536	10	23	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3D^o$	2-1	R21
Cu II	1050.4028	10	23	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3D^o$	3-2	R21
Cu II	1052.1747	20	24	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3F^o$	1-2	R21
Cu II	1054.6901	60	60	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$1D - z^1F^o$	2-3	R21
Cu II	1055.7968	40	22	$3d^9(2I)4s - 3d^9 4s(2F)4p$	$3D - z^3G^o$	3-3	R21
Cu II	1056.9546	60	59	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$1D - z^1D^o$	2-2	R21
Cu II	1058.7988	40	23	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3D^o$	3-3	R21
Cu II	1059.0960	60	58	$3d^9(2D)4s - 3d^9(2D)5p$	$1D - 3F^o$	2-3	R21
Cu II	1060.6343	60	23	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3D^o$	2-2	R21
Cu II	1063.0052	60	23	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3D^o$	1-1	R21
Cu II	1065.7821	20	57	$3d^9(2D)4s - 3d^9(2D)5p$	$1D - 3P^o$	2-2	R21
Cu II	1066.1343	20	22	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3G^o$	2-3	R21
Cu II	1069.1954	50	23	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3D^o$	2-3	R21
Cu II	1070.3112	15	22	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3G^o$	3-4	R21
Cu II	1073.7454	30	23	$3d^9(2D)4s - 3d^9 4s(2F)4p$	$3D - z^3D^o$	1-2	R21
Cu II	1077.8759	1		$3d^9(2D)4s - 3d^9 4s(2F)4p$	$1D - z^3F^o$	2-2	R21
Cu II	1086.1102	5	21	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$3D - 3F^o$	3-3	R21
Cu II	1088.3953	20		$3d^9(2D)4s - 3d^9 4s(2F)4p$	$1D - z^3F^o$	2-3	R21
Cu II	1089.2447	3		$3d^9(2D)4s - 3d^9 4s(2F)4p$	$1D - z^3D^o$	2-1	R21
Cu II	1091.2916	5	21	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$3D - 3F^o$	2-2	R21
Cu II	1094.4025	30	21	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$3D - 3F^o$	3-4	R21
Cu II	1097.0529	25	21	$3d^9(2D)4s - 3d^9 4s(4P)4p$	$3D - 3F^o$	2-3	R21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	Reference
Cu II	1101.8362	1	21	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5F^{\circ}$	1 - 1	R21
Cu II	1105.1765	5	21	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5F^{\circ}$	1 - 2	R21
Cu II	1106.4471	3		$3d^9(2D)4s - 3d^9 4s(4F)4p$	$1D - 2^3G^{\circ}$	2 - 3	R21
Cu II	1109.7445	1		$3d^9(2D)4s - 3d^9 4s(4F)4p$	$1D - 2^3D^{\circ}$	2 - 3	R21
Cu II	1111.7577	0	20	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5G^{\circ}$	3 - 3	R21
Cu II	1112.407	5					R21
Cu II	1119.9470	15	20	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5G^{\circ}$	3 - 4	R21
Cu II	1123.2260	5	20	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5G^{\circ}$	2 - 3	R21
Cu II	1130.8853	1	20	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5G^{\circ}$	1 - 2	R21
Cu II	1130.8978	1		$3d^9(2D)4p - 3d^9(2D)9s$	$3P^{\circ} - 1D$	1 - 2	R21
Cu II	1142.6405	20	19	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5D^{\circ}$	2 - 2	R21
Cu II	1144.8556	30	19	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5D^{\circ}$	3 - 3	R21
Cu II	1147.7617	8	19	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5D^{\circ}$	1 - 1	R21
Cu II	1157.0206	5	19	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5D^{\circ}$	2 - 3	R21
Cu II	1157.8719	8	19	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5D^{\circ}$	1 - 2	R21
Cu II	1157.8807	8		$3d^9(2D)4p - 3d^9(2D)9s$	$3P^{\circ} - 3D$	1 - 2	R21
Cu II	1162.6010	3	19	$3d^9(2D)4s - 3d^9 4s(4F)4p$	$3D - 5D^{\circ}$	3 - 4	R21
Cu II	1185.8991	2		$3d^9(2D)4p - 3d^9(2D)8s$	$3F^{\circ} - 3D$	2 - 3	R21
Cu II	1192.261	2					R21
Cu II	1201.6258	2		$3d^9(2D)4p - 3d^9(2D)7d$	$3F^{\circ} - 3G$	3 - 4	R21
Cu II	1204.6158	1		$3d^9(2D)4p - 3d^9(2D)7d$	$3F^{\circ} - 3F$	4 - 4	R21
Cu II	1204.6356	1		$3d^9(2D)4p - 3d^9(2D)7d$	$3F^{\circ} - 3F$	4 - 3	R21
Cu II	1204.6531	1		$3d^9(2D)4s - 3d^9 4s(4F)4p$	$1D - 5D^{\circ}$	2 - 3	R21
Cu II	1205.1467	0		$3d^9(2D)4p - 3d^9(2D)7d$	$3F^{\circ} - 3D$	4 - 3	R21
Cu II	1205.1944	0		$3d^9(2D)4p - 3d^9(2D)7d$	$3D^{\circ} - 1F$	3 - 3	R21
Cu II	1205.2024	0		$3d^9(2D)4p - 3d^9(2D)9s$	$1D^{\circ} - 3D$	2 - 1	R21
Cu II	1205.9029	2		$3d^9(2D)4p - 3d^9(2D)7d$	$3F^{\circ} - 3G$	4 - 5	R21
Cu II	1206.7691	0		$3d^9(2D)4p - 3d^9(2D)8s$	$3P^{\circ} - 3D$	1 - 2	R21
Cu II	1214.5399	1		$3d^9(2D)4p - 3d^9(2D)9s$	$1F^{\circ} - 3D$	3 - 3	R21
Cu II	1214.5546	1		$3d^9(2D)4p - 3d^9(2D)8s$	$3F^{\circ} - 3D$	3 - 2	R21
Cu II	1219.3337	1		$3d^9(2D)4p - 3d^9(2D)8s$	$3F^{\circ} - 3D$	4 - 3	R21
Cu II	1235.8729	0		$3d^9(2D)4p - 3d^9(2D)8s$	$3F^{\circ} - 3D$	2 - 2	R21
Cu II	1240.0272	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 1D$	1 - 2	R21
Cu II	1241.9641	2		$3d^9(2D)4p - 3d^9(2D)7s$	$3P^{\circ} - 1D$	2 - 2	R21
Cu II	1243.0857	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 1P$	1 - 1	R21
Cu II	1248.7916	5		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 3D$	2 - 3	R21
Cu II	1250.0483	10	90	$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 3P$	2 - 2	R21
Cu II	1253.1809	5		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 3S$	2 - 1	R21
Cu II	1255.1571	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 3D$	0 - 1	R21
Cu II	1257.6833	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 1P$	0 - 1	R21
Cu II	1261.2154	0		$3d^9(2D)4p - 3d^9(2D)8s$	$3D^{\circ} - 3D$	2 - 2	R21
Cu II	1262.9249	3	90	$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 3P$	1 - 0	R21
Cu II	1265.5062	15	91	$3d^9(2D)4p - 3d^9(2D)7s$	$3P^{\circ} - 1D$	1 - 2	R21
Cu II	1266.3101	10	89	$3d^9(2D)4p - 3d^9(2D)7s$	$3P^{\circ} - 3D$	1 - 1	R21
Cu II	1268.6686	0		$3d^9(2D)4p - 3d^9(2D)8s$	$1F^{\circ} - 3D$	3 - 3	R21
Cu II	1269.4464	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^{\circ} - 3F$	2 - 2	R21
Cu II	1271.3178	2	90	$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 3D$	1 - 2	R21
Cu II	1272.0417	8	107	$3d^9(2D)4p - 3d^9(2D)6d$	$3F^{\circ} - 3G$	2 - 3	R21
Cu II	1273.7007	2	90	$3d^9(2D)4p - 3d^9(2D)6d$	$3P^{\circ} - 3P$	1 - 1	R21
Cu II	1274.0708	3		$3d^9(2D)4p - 3d^9(2D)7s$	$3F^{\circ} - 1D$	3 - 2	R21
Cu II	1274.4651	3		$3d^9(2D)4p - 3d^9(2D)7s$	$3P^{\circ} - 3D$	2 - 2	R21
Cu II	1275.5717	30	89	$3d^9(2D)4p - 3d^9(2D)7s$	$3P^{\circ} - 3D$	2 - 3	R21
Cu II	1279.9615	0		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^{\circ} - 3D$	3 - 2	R21
Cu II	1280.2682	5		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^{\circ} - 3F$	3 - 3	R21
Cu II	1281.2570	3		$3d^9(2D)4p - 3d^9(2D)6d$	$1F^{\circ} - 3D$	3 - 3	R21
Cu II	1281.4616	8		$3d^9(2D)4p - 3d^9(2D)7s$	$3P^{\circ} - 3D$	0 - 1	R21
Cu II	1282.4547	15	102	$3d^9(2D)4p - 3d^9(2D)6d$	$3F^{\circ} - 3G$	3 - 4	R21
Cu II	1283.8298	1		$3d^9 4s^2 - 3d^9(2D)7p$	$3P^{\circ} - 3F^{\circ}$	4 - 4	R21
Cu II	1284.8712	8		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^{\circ} - 3F$	4 - 4	R21
Cu II	1285.5186	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3D^{\circ} - 1F$	3 - 3	R21
Cu II	1285.9222	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^{\circ} - 3D$	4 - 3	R21
Cu II	1287.4683	15	102	$3d^9(2D)4p - 3d^9(2D)6d$	$3F^{\circ} - 3G$	4 - 5	R21
Cu II	1297.5498	2		$3d^9(2D)4p - 3d^9(2D)7s$	$3F^{\circ} - 1D$	2 - 2	R21
Cu II	1297.978	1					R21
Cu II	1298.3949	15	101	$3d^9(2D)4p - 3d^9(2D)7s$	$3F^{\circ} - 3D$	2 - 1	R21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu II	1298.9053	1		$3d^9(2D)4p - 3d^9(2D)6d$	$^2D^{\circ} - ^2G^{\circ}$	2-3	R21
Cu II	1299.2678	10	99	$3d^9(2D)4p - 3d^9(2D)7s$	$^2P^{\circ} - ^2D$	1-2	R21
Cu II	1303.6792	2		$3d^9(2D)4p - 3d^9(2D)6d$	$^2F^{\circ} - ^2D$	2-2	R21
Cu II	1303.9783	2		$3d^9(2D)4p - 3d^9(2D)6d$	$^2F^{\circ} - ^2F^{\circ}$	2-3	R21
Cu II	1305.5608	5		$3d^9(2D)4p - 3d^9(2D)6d$	$^2F^{\circ} - ^1G$	3-4	R21
Cu II	1308.2971	30	101	$3d^9(2D)4p - 3d^9(2D)7s$	$^2F^{\circ} - ^2D$	3-2	R21
Cu II	1309.4633	15	101	$3d^9(2D)4p - 3d^9(2D)7s$	$^2F^{\circ} - ^2D$	3-3	R21
Cu II	1311.7947	1		$3d^9 4s^2 - 3d^9(2D)7p$	$^2F^{\circ} - ^2D^{\circ}$	3-3	R21
Cu II	1314.1495	15	149	$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	3-2	P21
Cu II	1314.3366	30	101	$3d^9(2D)4p - 3d^9(2D)7s$	$^2F^{\circ} - ^2D$	4-3	R21
Cu II	1320.6858	10	148	$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^4F$	3-4	R21
Cu II	1321.7962	5		$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^2D$	3-3	R21
Cu II	1322.6326	6		$3d^9(2D)4p - 3d^9(2D)6d$	$^1P^{\circ} - ^1S$	1-0	R21
Cu II	1323.2042	3		$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^4P$	3-2	R21
Cu II	1323.7942	6	148	$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^2F$	1-2	R21
Cu II	1325.2421	1		$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^2D$	1-2	R21
Cu II	1325.5135	3		$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	2-2	R21
Cu II	1326.3954	10	147	$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	2-1	R21
Cu II	1328.4129	5		$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^4F$	2-3	R21
Cu II	1329.6696	1		$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^2D$	2-2	R21
Cu II	1331.8907	5		$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^2D$	2-2	R21
Cu II	1332.2228	5	148	$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^2F$	2-3	R21
Cu II	1333.0452	20	163	$3d^9(2D)4p - 3d^9(2D)7s$	$^2F^{\circ} - ^2D$	3-2	R21
Cu II	1334.5063	2		$3d^9(2D)4p - 3d^9(2D)6d$	$^2D - ^4P$	2-1	R21
Cu II	1334.6546	2		$3d^9(2D)4p - 3d^9(2D)6d$	$^2P - ^2D$	1-1	R21
Cu II	1337.5114	0		$3d^9(2D)4p - 3d^9(2D)6d$	$^1P^{\circ} - ^4P$	1-1	R21
Cu II	1339.4952	0		$3d^9(2D)4p - 3d^9(2D)6d$	$^2F^{\circ} - ^2D$	3-2	R21
Cu II	1339.7713	5		$3d^9(2D)4p - 3d^9(2D)6d$	$^2F^{\circ} - ^4F$	3-4	R21
Cu II	1340.5141	3		$3d^9(2D)4p - 3d^9(2D)6d$	$^2F^{\circ} - ^2D$	3-3	R21
Cu II	1350.5938	15	147	$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	3-2	R21
Cu II	1351.8366	25	147	$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	3-3	R21
Cu II	1355.0652	15	147	$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	1-1	R21
Cu II	1358.7730	30	3	$3d^{10} - 3d^9(2D)4p$	$g^1S - ^1P^{\circ}$	0-1	R21
Cu II	1359.9091	20	173	$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	2-2	R21
Cu II	1359.9562	5		$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	2-1	R21
Cu II	1362.5997	20	147	$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	2-2	R21
Cu II	1363.5031	5		$3d^9(2D)4p - 3d^9(2D)7s$	$^2F^{\circ} - ^2D$	1-2	R21
Cu II	1367.9509	25	2	$3d^{10} - 3d^9(2D)4p$	$g^1S - ^2D$	0-1	R21
Cu II	1370.2720	1		$3d^9(2D)4p - 3d^9(2D)6d$	$^1P^{\circ} - ^2D$	1-2	R21
Cu II	1370.5600	2		$3d^9(2D)4p - 3d^9(2D)7s$	$^2F^{\circ} - ^2D$	3-2	R21
Cu II	1371.451	2					R21
Cu II	1371.8399	20	162	$3d^9(2D)4p - 3d^9(2D)7s$	$^2F^{\circ} - ^2D$	3-3	R21
Cu II	1375.5019	3		$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^2F$	2-3	R21
Cu II	1377.477	3					R21
Cu II	1393.1275	10	147	$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	1-2	R21
Cu II	1398.6419	10	128	$3d^9 4s^2 - 3d^9(2D)6p$	$^2F^{\circ} - ^2F^{\circ}$	4-3	R21
Cu II	1399.3527	3		$3d^9(2D)4p - 3d^9(2D)7s$	$^2D - ^2D$	2-3	R21
Cu II	1402.7770	15	186	$3d^9(2D)4p - 3d^9(2D)7s$	$^1P^{\circ} - ^2D$	1-2	R21
Cu II	1407.1689	15	88	$3d^9(2D)4p - 3d^9(2D)5d$	$^2F^{\circ} - ^2D$	1-2	R21
Cu II	1408.8124	2		$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^2D$	1-1	R21
Cu II	1410.002	1					R21
Cu II	1410.570	2					R21
Cu II	1414.8980	10	87	$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^4P$	1-1	R21
Cu II	1418.4265	25	86	$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^2F^{\circ}$	2-3	R21
Cu II	1419.7455	2		$3d^9(2D)4p - 3d^9(2D)5d$	$^2F^{\circ} - ^1G$	3-4	R21
Cu II	1421.3737	5		$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^4P$	2-1	R21
Cu II	1421.7589	25	85	$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^4P$	2-2	R21
Cu II	1427.5912	10	86	$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^2D$	0-1	R21
Cu II	1427.8290	20	126	$3d^9 4s^2 - 3d^9(2D)6p$	$^2F^{\circ} - ^2D^{\circ}$	4-3	R21
Cu II	1428.3580	25	129	$3d^9 4s^2 - 3d^9(2D)6p$	$^2F^{\circ} - ^2D^{\circ}$	3-2	R21
Cu II	1430.2428	40	84	$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^2S$	2-1	R21
Cu II	1433.8404	10	87	$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^2F$	0-1	R21
Cu II	1434.7699	15	85	$3d^9(2D)4p - 3d^9(2D)5d$	$^2P^{\circ} - ^4P$	1-0	R21
Cu II	1434.9037	125	125	$3d^9 4s^2 - 3d^9(2D)6p$	$^2F^{\circ} - ^2F^{\circ}$	4-4	R21, K7
Cu II	1435.3155	10	128	$3d^9 4s^2 - 3d^9(2D)6p$	$^2F^{\circ} - ^2F^{\circ}$	3-3	R21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J	J	References
Cu II	1436.2359	25	125	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2F^{\circ}$	4	-3	R21, K7
Cu II	1442.1386	5	83	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2P - ^2D$	2	-2	R21, K7
Cu II	1443.5419	3	100	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2F^{\circ}$	2	-2	R21
Cu II	1444.1304	2		$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2P - ^2D$	2	-1	R21
Cu II	1445.9835	20	86	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2P - ^2D$	1	-2	R21
Cu II	1446.9006	1		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2D$	2	-2	R21
Cu II	1448.6383	1		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2D$	2	-1	R21
Cu II	1449.0580	20	125	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2F^{\circ}$	2	-2	R21
Cu II	1450.3035	40	98	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2G$	2	-3	R21
Cu II	1452.2935	20	85	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2P - ^2P$	1	-1	R21
Cu II	1452.6956	0		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2P - ^2P$	1	-2	R21
Cu II	1455.6624	3		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^2F - v^2G^{\circ}$	4	-3	R21
Cu II	1457.1759	10	99	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2P - ^2D$	3	-2	R21
Cu II	1458.0016	15	100	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2F^{\circ}$	3	-3	R21, K7
Cu II	1459.4117	25	126	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2D^{\circ}$	2	-1	R21
Cu II	1461.5539	15	84	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2P - ^2S$	1	-1	R21
Cu II	1463.7515	100	98	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2G$	3	-4	R21, K7
Cu II	1463.8381	25	100	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2F^{\circ}$	4	-4	R21, K7
Cu II	1465.5408	15	21	$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^2F - v^2F^{\circ}$	4	-4	R21
Cu II	1466.0702	20	126	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2D^{\circ}$	3	-3	R21, K7
Cu II	1466.5240	4	99	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2D$	4	-3	R21, K7
Cu II	1466.7284	5		$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2D$	3	-2	R21
Cu II	1469.6928	15	145	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2G$	3	-4	R21
Cu II	1470.6974	150	98	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2G$	4	-5	R21, K7
Cu II	1472.3950	15	1	$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^2P^{\circ}$	0	-1	R21, K7
Cu II	1473.5290	8	125	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2F^{\circ}$	3	-4	R21, K7
Cu II	1473.9783	25	83	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2P - ^2D$	1	-2	R21
Cu II	1474.9348	40	125	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2F^{\circ}$	2	-3	R21, K7
Cu II	1475.846	60						R21
Cu II	1476.0593	25		$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2P - ^2D$	1	-1	R21, K7
Cu II	1478.2363	2		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2F$	2	-2	R21
Cu II	1481.5438	10		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^2F - v^2D^{\circ}$	3	-2	R21, K7
Cu II	1485.3277	6	141	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2G$	2	-3	R21, K7
Cu II	1485.6102	2	97	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2F - ^2D$	3	-2	R21, K7
Cu II	1485.6778	6	82	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2P - ^2D$	2	-2	R21, K7
Cu II	1488.6372	900	82	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2P - ^2D$	2	-3	R21, K7
Cu II	1488.8311	10		$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2F - ^2F^{\circ}$	2	-3	R21, K7
Cu II	1492.1525	4	126	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2D^{\circ}$	2	-3	R21, K7
Cu II	1492.6817	5	185	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1P^{\circ} - ^2S$	1	-0	R21, K7
Cu II	1492.8743	40	126	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2D^{\circ}$	2	-2	R21, K7
Cu II	1493.3665	20	161	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2G$	3	-4	R21, K7
Cu II	1494.6526	5		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2F - ^2P$	2	-1	R21
Cu II	1495.4298	20		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^2F - v^2G^{\circ}$	3	-3	R21, K7
Cu II	1496.6867	50	82	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2P - ^2D$	0	-1	R21, K7
Cu II	1497.956	1						R21
Cu II	1498.5756	3		$3d^9 4s^2 - 3d^9(^2D)4f$	$^2F - ^2G^{\circ}$	3	-3	R21
Cu II	1499.5132	3	123	$3d^9 4s^2 - 3d^9(^2D)4f$	$^2F - ^2G^{\circ}$	3	-4	R21, K7
Cu II	1501.3363	5	125	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2F^{\circ}$	2	-3	R21, K7
Cu II	1503.3682	10	124	$3d^9 4s^2 - 3d^9(^2D)6p$	$^2F - ^2F^{\circ}$	2	-1	R21, K7
Cu II	1504.7571	30	119	$3d^9 4s^2 - 3d^9(^2D)4f$	$^2F - ^2G^{\circ}$	4	-5	R21, K7
Cu II	1505.3878	10	118	$3d^9 4s^2 - 3d^9(^2D)4f$	$^2F - ^2F^{\circ}$	4	-4	R21, K7
Cu II	1505.8572	5		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^2F - v^2F^{\circ}$	2	-4	R21
Cu II	1508.1846	15		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^2F - v^2D^{\circ}$	2	-2	R21, K7
Cu II	1508.6323	10	118	$3d^9 4s^2 - 3d^9(^2D)4f$	$^2F - ^2F^{\circ}$	4	-3	R21, K7
Cu II	1510.5058	30	144	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2F$	3	-4	R21, K7
Cu II	1512.1739	5	115	$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^2F - u^2F^{\circ}$	4	-4	R21, K7
Cu II	1512.4646	4		$3d^9 4s^2 - 3d^9 4s(^2F)4p$	$^2F - w^2D^{\circ}$	3	-2	R21, K7
Cu II	1513.3659	15	143	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2D$	3	-3	R21, K7
Cu II	1514.2339	4	144	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2F$	1	-2	R21, K7
Cu II	1514.4924	200	115	$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^2F - u^2F^{\circ}$	4	-3	R21, K7
Cu II	1516.9010	5		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2G$	3	-4	R21
Cu II	1517.1599	5	142	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2P$	3	-3	R21, K7
Cu II	1517.6310	10	97	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2F - ^2D$	2	-2	R21, K7
Cu II	1517.9300	4		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^2D - ^2D$	1	-2	R21, K7
Cu II	1519.4918	100	82	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^2P - ^2D$	1	-2	R21, K7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu II	1520.2371	200					
Cu II	1520.5396	15	172	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^3D$	2-1	R21, K7
Cu II	1522.5768	7	119	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^o - ^3F$	2-3	R21, K7
Cu II	1523.7412	3	171	$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^3F - v^3G^o$	2-3	R21, K7
Cu II	1524.8601	15	143	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^o - ^1D$	2-2	R21, K7
Cu II	1525.6312	10		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3D$	2-2	R21, K7
Cu II	1525.6409	10	114	$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3G^o$	3-3	R21
Cu II	1525.6686	10		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1P^o - ^3F$	1-2	R21
Cu II	1525.7645	15		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^o - ^3D$	2-1	R21
Cu II	1525.8381	8		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3F$	2-3	R21, K7
Cu II	1525.8381	8		$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^3G^o$	2-3	R21, K7
Cu II	1525.9276	5					
Cu II	1527.8126	5		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^1P$	1-1	R21
Cu II?	1528.782	2		$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^3F^o$	2-2	R21
Cu II	1528.8952	2					
Cu II	1531.8559	400	96	$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^1F^o$	2-3	S16
Cu II	1531.8559	400	96	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^3D$	3-2	R21
Cu II	1532.1306	90	115	$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3F^o$	3-2	R21, K7
Cu II	1533.9865	30		$3d^9 4s^2 - 3d^9 4s(^2P)4p$	$^3F - w^3S^o$	2-1	R21, K7
Cu II	1535.0023	150	96	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^3D$	3-3	R21, K7
Cu II	1535.5238	10	160	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1F^o - ^3F$	2-4	R21, K7
Cu II	1537.5590	400		$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3H^o$	4-4	R21, K7
Cu II	1538.4795	10	159	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1F^o - ^3D$	3-3	R21
Cu II	1540.2394	10		$3d^9 4s^2 - 3d^9 4s(^2P)4p$	$^3F - w^1D^o$	2-2	R21, K7
Cu II	1540.3887	100	140	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^1D$	3-2	R21, K7
Cu II	1540.5883	200	116	$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^3F - v^3D^o$	3-3	R21, K7
Cu II	1541.7072	1000	96	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^3D$	4-3	R21, K7
Cu II	1541.7560	15					
Cu II	1544.6771	150	119	$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^1D - v^3F^o$	2-2	R21, K7
Cu II	1547.9582	6	118	$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^3G^o$	3-4	R21, K7
Cu II	1549.6252	2		$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^3F^o$	3-4	R21, K7
Cu II	1550.2967	3		$3d^9 4s^2 - 3d^9(^2D)6f$	$^3P - ^3D^o$	0-0	R21
Cu II	1550.2967	3		$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^3D^o$	3-3	R21
Cu II	1550.6533	25	120	$3d^9 4s^2 - 3d^9 4s(^2P)4p$	$^3F - w^1P^o$	2-1	R21, K7
Cu II	1551.3890	90	118	$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^3F^o$	3-3	R21, K7
Cu II	1552.6464	300		$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3H^o$	4-5	R21, K7
Cu II	1553.8962	90	114	$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3G^o$	2-3	R21, K7
Cu II	1555.1344	200	115	$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3F^o$	3-4	R21, K7
Cu II	1555.7030	300	113	$3d^9 4s^2 - 3d^9 4s(^2P)4p$	$^3F - w^3D^o$	4-3	R21, K7
Cu II	1556.0255	3	140	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^1D$	2-2	R21, K7
Cu II	1557.5867	20	115	$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3F^o$	3-3	R21
Cu II	1558.3447	80	139	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	2-1	R21, K7
Cu II	1563.1927	5		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3D$	2-2	R21
Cu II	1565.9243	100	96	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^3D$	2-2	R21, K7
Cu II	1566.4148	150	158	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^1F^o - ^1D$	3-2	R21, K7
Cu II	1569.2123	4	96	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3F^o - ^3D$	2-2	R21, K7
Cu II	1569.4155	4	116	$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^3F - v^3D^o$	2-3	R21
Cu II	1570.3153	2		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^o - ^3F$	2-3	R21
Cu II	1570.5707	3					
Cu II	1573.1668	0		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3P$	1-1	R21
Cu II	1575.3533	5		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^o - ^3D$	2-3	P21
Cu II	1577.2670	0		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1P^o - ^3D$	1-2	R21
Cu II	1579.4918	6	117	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^4D^o - ^3P$	2-2	R21
Cu II	1580.0250	15		$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^3D^o$	2-3	R21, K7
Cu II	1580.6257	8	118	$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^3F^o$	2-2	R21
Cu II	1581.4066	0		$3d^9(^2D)4p - 3d^9(^2D)5d$	$^3D^o - ^3S$	2-3	R21, K7
Cu II	1581.4187	0		$3d^9 4s^2 - 3d^9(^2D)4f$	$^3F - ^1P^o$	1-1	R21
Cu II	1581.9953	15		$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3H^o$	2-1	R21
Cu II	1582.8458	3	183			3-4	R21, K7
Cu II	1583.6823	80	113	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1P^o - ^3P$	1-1	R21, K7
Cu II	1587.0035	1		$3d^9 4s^2 - 3d^9 4s(^2P)4p$	$^3F - w^3D^o$	3-2	R21, K7
Cu II	1587.0596	1		$3d^9 4s^2 - 3d^9(^2D)6f$	$^3P - ^1P^o$	2-1	R21
Cu II	1587.7151	0		$3d^9 4s^2 - 3d^9 4s(^2G)4p$	$^3F - u^3F^o$	2-3	R21
Cu II	1590.1649	80	139	$3d^9(^2D)4p - 3d^9(^2D)5d$	$^1D^o - ^3S$	2-1	R21
Cu II	1593.5556	500	139	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	3-2	R21, K7
Cu II	1596.7458	1		$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	3-3	R21, K7
Cu II	1598.4023	200	139	$3d^9 4s^2 - 3d^9(^2D)5f$	$^1D - ^3D^o$	2-1	R21
Cu II	1601.2097	1	113	$3d^9(^2D)4p - 3d^9(^2D)6s$	$^3D^o - ^3D$	1-1	R21, K7
Cu II	1601.2097	1	113	$3d^9 4s^2 - 3d^9 4s(^2P)4p$	$^3F - w^3D^o$	3-3	R21

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu II	1602.2729	6	113	$3d^9 4s^2 - 3d^8 4s(2P)4p$	$^3F - w^3D^o$	2 - 1	R21, K7
Cu II	1602.3880	150	170	$3d^9(2D)4p - 3d^8(2D)6s$	$^1D^o - ^1D$	2 - 2	R21, K7
Cu II	1604.8475	50	169	$3d^9(2D)4p - 3d^8(2D)6s$	$^1D^o - ^3D$	2 - 1	R21, K7
Cu II	1605.2813	200	112	$3d^9 4s^2 - 3d^8 4s(2P)4p$	$^3F - w^3P^o$	3 - 2	R21, K7
Cu II	1606.8341	360	139	$3d^9(2D)4p - 3d^8(2D)6s$	$^3D^o - ^2D$	2 - 2	R21, K7
Cu II	1608.6393	70	182	$3d^9(2D)4p - 3d^8(2D)6s$	$^1P^o - ^1D$	1 - 2	R21, K7
Cu II	1610.2964	5	139	$3d^9(2D)4p - 3d^8(2D)6s$	$^3D^o - ^3D$	2 - 3	R21, K7
Cu II	1611.1181	2	181	$3d^9(2D)4p - 3d^8(2D)6s$	$^1P^o - ^3D$	1 - 1	R21, K7
Cu II	1614.1668	1		$3d^9 4s^2 - 3d^8 4s(2P)4p$	$^3F - w^3D^o$	2 - 2	R21
Cu II	1617.9154	8	157	$3d^9(2D)4p - 3d^8(2D)6s$	$^1F^o - ^3D$	3 - 2	R21, K7
Cu II	1621.4256	300	157	$3d^9(2D)4p - 3d^8(2D)6s$	$^1F^o - ^3D$	3 - 3	R21, K7
Cu II	1622.4278	100	112	$3d^9 4s^2 - 3d^8 4s(2P)4p$	$^3F - w^3P^o$	2 - 1	R21, K7
Cu II	1623.1732	20	110	$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3D^o$	4 - 4	R21, K7
Cu II	1630.2681	20		$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3D^o$	4 - 3	R21, K7
Cu II	1636.6050	10	112	$3d^9 4s^2 - 3d^8 4s(2P)4p$	$^3F - w^3P^o$	2 - 2	R21
Cu II	1649.4575	25	139	$3d^9(2D)4p - 3d^8(2D)6s$	$^3D^o - ^3D$	1 - 2	R21
Cu II	1656.3219	20	169	$3d^9(2D)4p - 3d^8(2D)6s$	$^1D^o - ^2D$	2 - 2	R21
Cu II	1660.0009	25	169	$3d^9(2D)4p - 3d^8(2D)6s$	$^1D^o - ^3D$	2 - 3	R21, K7
Cu II	1663.0020	60	181	$3d^9(2D)4p - 3d^8(2D)6s$	$^1P^o - ^3D$	1 - 2	R21, K7
Cu II	1672.7757	10	110	$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3D^o$	3 - 4	R21
Cu II	1680.3118	1	110	$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3D^o$	3 - 3	R21
Cu II	1683.1549	40		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3D^o$	4 - 3	R21
Cu II	1683.1585	40		$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3D^o$	3 - 2	R21
Cu II	1683.1884	40		$3d^9 4s^2 - 3d^8(2D)5f$	$^3p - ^3D^o$	1 - 1	R21
Cu II	1699.0953	60		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3P^o$	3 - 2	R21
Cu II	1699.1000	30		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3F^o$	4 - 3	R21
Cu II	1714.6000	0		$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3D^o$	2 - 3	R21
Cu II	1717.7214	15	110	$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3D^o$	2 - 1	R21
Cu II	1734.2272	3		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3P^o$	2 - 2	R21
Cu II	1736.5514	10		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3D^o$	3 - 3	R21
Cu II	1744.5158	20		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3D^o$	3 - 2	R21
Cu II	1744.5269	20		$3d^9 4s^2 - 3d^8(2D)5f$	$^3p - ^3P^o$	1 - 2	R21
Cu II	1753.2811	15		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3P^o$	2 - 1	R21
Cu II	1759.5045	1		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3F^o$	3 - 2	R21
Cu II	1790.6603	5		$3d^9 4s^2 - 3d^8 4s(2D)4p$	$^3F - y^3D^o$	2 - 1	R21
Cu II	1800.9526	2		$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3P^o$	4 - 3	R21
Cu II	1807.8410	15		$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3P - v^3D^o$	0 - 1	R21
Cu II	1856.9291	0		$3d^9 4s^2 - 3d^8(2D)6p$	$^1D - ^3P^o$	2 - 1	R21
Cu II	1861.6229	0		$3d^9 4s^2 - 3d^8 4s(4P)4p$	$^3F - x^3P^o$	3 - 2	R21
Cu II	1882.2085	1		$3d^9 4s^2 - 3d^8(2D)6p$	$^3P - ^3F^o$	1 - 2	R21
Cu II	1920.6718	5		$3d^9(2D)4p - 3d^8(2D)4d$	$^3P^o - ^3F$	2 - 3	R21
Cu II	1922.1425	5		$3d^9 4s^2 - 3d^8(2D)5p$	$^3F - ^1D^o$	3 - 2	R21
Cu II	1928.45	1					R21
Cu II	1929.6081	25		$3d^9 4s^2 - 3d^8 4s(2P)4p$	$^1D - w^1P^o$	2 - 1	R21
Cu II	1929.7510	25	107	$3d^9 4s^2 - 3d^8(2D)5p$	$^3F - ^3D^o$	4 - 3	R21
Cu II	1944.5970	40		$3d^9(2D)4s - 3d^8(2D)4p$	$^3D - ^1D^o$	3 - 2	R21
Cu II	1946.4929	10	106	$3d^9 4s^2 - 3d^8 4s(2F)4p$	$^3F - z^1F^o$	4 - 3	R21
Cu II	1952.5758	5		$3d^9 4s^2 - 3d^8(2D)5p$	$^3F - ^3F^o$	3 - 2	R21
Cu II	1957.5176	20	105	$3d^9 4s^2 - 3d^8(2D)5p$	$^3F - ^3F^o$	4 - 4	R21
Cu II	1968.0118	2		$3d^9(2D)4p - 3d^8(2D)4d$	$^3P^o - ^1P$	2 - 1	R21
Cu II	1970.4946	15	18	$3d^9(2D)4s - 3d^8(2D)4p$	$^3D - ^1P^o$	2 - 1	R21
Cu II	1974.4681	0		$3d^9 4s^2 - 3d^8(2D)4f$	$^1D - ^3D^o$	2 - 3	R21
Cu II	1977.0270	15	107	$3d^9 4s^2 - 3d^8(2D)5p$	$^3F - ^3D^o$	2 - 1	R21
Cu II	1979.9565	200	17	$3d^9(2D)4s - 3d^8(2D)4p$	$^3D - ^1D^o$	2 - 2	R21
Cu II	1984.7643	1		$3d^9 4s^2 - 3d^8(2D)6p$	$^3P - ^3P^o$	2 - 2	R21
Cu II	1989.8554	90	15	$3d^9(2D)4s - 3d^8(2D)4p$	$^3D - ^3D^o$	2 - 1	R21
Cu II	1990.1804	1		$3d^9(2D)4p - 3d^8(2D)4d$	$^3P^o - ^1D$	1 - 2	R21
Cu II	1993.81	1					R21

COPPER III (Cu²⁺), Z = 29
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁹ 2D_{5/2} (27 electrons)
 Ionization Potential 297 100 cm⁻¹; 36.83 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu III	672.659	50	10	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	$\frac{5}{2} - \frac{5}{2}$	S19
Cu III	676.564	300	10	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	$\frac{5}{2} - \frac{5}{2}$	S19
Cu III	682.171	200	10	3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	$\frac{5}{2} - \frac{5}{2}$	S19
Cu III	686.903	15		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ² S ^o	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	687.987	100	9	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P ^o	$\frac{5}{2} - \frac{3}{2}$	S19
Cu III	690.250	75	8	3d ⁹ - 3d ⁸ (³ .)4p	ga ² D - x ² D ^o	$\frac{5}{2} - \frac{3}{2}$	S19
Cu III	691.557	100	9	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P ^o	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	693.510	50	8	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	$\frac{5}{2} - \frac{3}{2}$	S19
Cu III	697.930	20	9	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P ^o	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	700.182	20		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	$\frac{3}{2} - \frac{7}{2}$	S19
Cu III	700.271	150	8	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	701.692	15		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	702.112	20		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	703.622	15	8	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	711.834	3		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	711.834	3		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	712.040	5		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	712.473	15		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	713.262	10		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	715.530	200	7	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	719.506	150	6	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	719.506	150	6	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² F ^o	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	723.958	20		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	726.295	10		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	728.906	2		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	730.365	150	7	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	732.026	100	5	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	732.026	100	5	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	732.688	5	5	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	735.224	100	6	3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	743.303	20	5	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	743.970	30	5	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	777.125	200	3	3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ⁴ P ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	777.125	200	3	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	778.603	50	4	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	788.073	400	4	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	788.462	300	3	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	789.840	200	3	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	791.371	300	4	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	791.371	300	4	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	793.065	100	2	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² G ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	795.258	2	1	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	797.566	100	1	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	801.154	200	4	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	802.841	150	1	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	802.841	150	1	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	808.583	20	1	3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	810.124	0		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	816.313	0		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ G ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	829.343	5		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ G ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1152.155	1		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1219.290	3		3d ⁸ (³ F)4s - 3d ⁸ (¹ G)4p	a ² F - y ² G ^o	$\frac{7}{2} - \frac{5}{2}$	S7, K8
Cu III	1237.776	2		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	$\frac{3}{2} - \frac{7}{2}$	S19
Cu III	1238.325	0		3d ⁸ (³ F)4s - 3d ⁸ (¹ G)4p	a ² F - x ² F ^o	$\frac{7}{2} - \frac{7}{2}$	S19
Cu III	1244.377	5		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	$\frac{3}{2} - \frac{7}{2}$	S19
Cu III	1254.717	2		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	$\frac{7}{2} - \frac{3}{2}$	S19
Cu III	1254.717	2		3d ⁸ (³ F)4s - 3d ⁸ (¹ G)4p	a ² F - x ² F ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1259.937	5		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1261.315	1		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1271.234	3		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	$\frac{3}{2} - \frac{1}{2}$	S7, K8
Cu III	1271.839	1		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1295.700	0		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	a ⁴ F - y ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1312.400	5		3d ⁸ (³ F)4s - 3d ⁸ (³ P)4p	r - x ² D ^o	$\frac{7}{2} - \frac{3}{2}$	S19
Cu III?	1313.313	1		3d ⁸ (³ F)4p - 3d ⁸ (³ F)4d	z ⁴ D ^o - 4	$\frac{7}{2} - \frac{3}{2}$	S19
Cu III?	1316.145	3					S19
Cu III	1318.582	1					S19
Cu III?	1324.033	3		3d ⁸ (³ F)4s - 3d ⁸ (¹ D)4p	a ⁴ F - y ² F ^o	$\frac{3}{2} - \frac{7}{2}$	S19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu III	1326.379	2		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 9$	$7/2 - 9/2$	S19, K8
Cu III?	1327.178	3					S19
Cu III	1330.365	i		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2D^{\circ} - 3$	$7/2 - 7/2$	S19
Cu III?	1332.985	8					S19
Cu III	1337.572	3h		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2D^{\circ} - 5$	$7/2 - 7/2$	S19, K8
Cu III?	1338.386	1					S19
Cu III?	1338.858	1					S19
Cu III	1339.497	3		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2D^{\circ} - 1$	$7/2 - 9/2$	S19
Cu III?	1341.178	1h					S19
Cu III	1341.497	1		$3d^8(^2F)4s - 3d^8(^2P)4p$	$^2F - ^2P^{\circ}$	$7/2 - 9/2$	S19, K8
Cu III	1342.193	2h		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2D^{\circ} - e^4F$	$7/2 - 9/2$	S19
Cu III	1343.032	1		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 9$	$9/2 - 9/2$	S19
Cu III?	1343.730	3					S19
Cu III?	1344.363	1					S19
Cu III?	1345.506	1					S19
Cu III?	1346.062	3					S19
Cu III	1347.048	2h		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 7$	$7/2 - 9/2$	S19
Cu III	1348.077	0		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 6$	$9/2 - 7/2$	S19
Cu III?	1348.584	2					S19
Cu III?	1349.441	3					S19
Cu III	1351.271	2		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 5$	$9/2 - 7/2$	S19
Cu III	1353.964	1		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 10$	$9/2 - 7/2$	S19
Cu III	1356.424	3		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 4$	$9/2 - 7/2$	S19
Cu III?	1358.130	1					S19
Cu III	1358.440	1		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 8$	$9/2 - 9/2$	S19
Cu III	1359.833	0		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2D^{\circ} - e^4F$	$9/2 - 7/2$	S19
Cu III?	1360.922	2					S19
Cu III?	1365.862	1					S19
Cu III?	1366.400	2					S19
Cu III?	1367.646	3					S19
Cu III	1368.923	1		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2G^{\circ} - e^4F$	$7/2 - 9/2$	S19
Cu III	1369.612	3		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 6$	$7/2 - 7/2$	S19
Cu III	1369.988	0		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - e^4G$	$9/2 - 11/2$	S19
Cu III	1371.144	5		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - f^2F$	$9/2 - 7/2$	S19
Cu III	1372.899	3		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 5$	$7/2 - 7/2$	S19
Cu III?	1372.965	2					S19
Cu III	1373.305	2		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2F - f^2F$	$7/2 - 7/2$	S19, K8
Cu III	1374.033	2		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2G^{\circ} - e^4F$	$9/2 - 7/2$	S19
Cu III?	1374.298	2					S19
Cu III	1374.758	2		$3d^8(^2F)4s - 3d^8(^2D)4p$	$^2F - \gamma^2D$	$7/2 - 9/2$	S19
Cu III	1375.621	3		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 3$	$9/2 - 7/2$	S19
Cu III	1376.807	15		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - e^4G$	$11/2 - 11/2$	S19
Cu III	1377.182	1		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 8$	$9/2 - 7/2$	S7, K8
Cu III	1377.504	15		$3d^8(^2F)4s - 3d^8(^2P)4p$	$^2F - ^2P^{\circ}$	$7/2 - 9/2$	S19, K8
Cu III?	1377.559	1					S19
Cu III	1378.238	0		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 4$	$7/2 - 9/2$	S19
Cu III	1379.779	0		$3d^8(^2F)4p - 3d^8(^2P)4d$	$^2F - 8$	$7/2 - 7/2$	S19
Cu III?	1379.775	1					S19
Cu III?	1383.561	3					S19
Cu III?	1384.276	1					S19
Cu III	1384.324	3		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2F - e^2F$	$9/2 - 7/2$	S19
Cu III?	1384.840	3					S19
Cu III	1384.929	2		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2G^{\circ} - 10$	$7/2 - 7/2$	S19
Cu III	1385.380	6		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2F - 7$	$7/2 - 9/2$	S19
Cu III	1385.921	2		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2F - 9$	$9/2 - 9/2$	S19
Cu III	1386.714	0		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2G^{\circ} - e^4F$	$9/2 - 9/2$	S19
Cu III	1388.276	0		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2G^{\circ} - e^4F$	$9/2 - 9/2$	S19
Cu III	1389.528	3		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2F - 6$	$9/2 - 9/2$	S19
Cu III?	1390.306	5					S19
Cu III?	1391.667	1					S19
Cu III	1395.578	0		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2F - e^2F$	$9/2 - 9/2$	S7, K8
Cu III	1396.417	0		$3d^8(^2F)4p - 3d^8(^2F)5s$	$^2G^{\circ} - e^4F$	$7/2 - 7/2$	S19
Cu III	1398.397	3		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2F - 4$	$9/2 - 9/2$	S19
Cu III	1399.190	3		$3d^8(^2F)4p - 3d^8(^2F)4d$	$^2F - 10$	$7/2 - 7/2$	S19
Cu III?	1400.539	1					S19

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Cu III	1401.376	1		$3d^8(^3F)4p - 3d^8(^3F)4s$	$z^4F^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1401.602	3					S19
Cu III	1401.655	3		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^2G^{\circ} - e^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1402.250	3					S19
Cu III	1402.435	2		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^2G^{\circ} - e^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1402.917	0		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2G^{\circ} - f^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1403.181	5					S19
Cu III	1403.763	0		$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1405.115	1					S19
Cu III	1407.139	3		$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2F^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1407.196	2		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^4F^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1408.310	0		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2D^{\circ} - 9$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1408.536	?		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^4F^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1409.248	0		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2G^{\circ} - 8$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1412.553	3		$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S7, K8
Cu III	1412.724	3		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^4F^{\circ} - 5$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1412.794	3		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^4F^{\circ} - e^4G$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III?	1414.086	1					S19
Cu III	1414.431	2		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^4F^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1414.553	4		$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S7, K8
Cu III	1415.478	0		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2G^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1417.060	1		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^2F^{\circ} - e^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1417.124	1		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^4F^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1417.538	5		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2F^{\circ} - f^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1418.811	3		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2D^{\circ} - f^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1423.504	5					S19
Cu III	1424.020	3		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2F^{\circ} - 8$? $\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1425.079	1		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^4F^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1425.282	0		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2D^{\circ} - 8$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1428.081	3		$3d^8(^3F)4s - 3d^8(^1D)4p$	$a^2F - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1429.201	3		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^4F^{\circ} - 1$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1430.373	2		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2F^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1430.969	2		$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1431.671	5		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2D^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1431.901	2		$3d^8(^1D)4s - 3d^8(^1G)4p$	$b^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1432.275	2		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^4F^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1436.846	1					S19
Cu III	1436.994	8		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2G^{\circ} - 3$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1437.554	1					S19
Cu III	1437.645	2		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^4F^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1437.762	1		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^2D^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S7, K8
Cu III?	1438.983	1					S19
Cu III?	1439.275	1					S19
Cu III	1440.446	2		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2G^{\circ} - 6$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1441.102	1					S19
Cu III?	1441.635	2					S19
Cu III	1444.692	0		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2F^{\circ} - 9$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1448.512	1		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - x^4S^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	S19, K8
Cu III	1450.165	2		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^2F^{\circ} - e^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1451.478	0		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^2D^{\circ} - e^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1455.200	2		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^2F^{\circ} - e^2F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1459.568	0		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2F^{\circ} - 5$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1460.915	5		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2D^{\circ} - 5$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1469.259	0		$3d^8(^3F)4p - 3d^8(^3F)4d$	$z^2F^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1469.460	1					S19
Cu III	1481.243	10		$3d^8(^3F)4s - 3d^8(^3P)4p$	$a^4P - x^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1483.831	8		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1484.010	3		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1486.659	15		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - x^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1486.904	5		$3d^8(^3P)4s - 3d^8(^1G)4p$	$a^4P - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1487.566	0		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^2D^{\circ} - e^4F$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1501.173	0		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1502.107	0		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1525.895	2		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S7, K8
Cu III	1531.588	0		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu III	1541.970	20		$3d^0(1D)4s - 3d^0(3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1542.562	1		$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1543.180	1		$3d^0(3P)4s - 3d^0(3F)4p$	$a^4P - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1543.438	250	32	$3d^0(1G)4s - 3d^0(1G)4p$	$a^2G - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1544.062	1		$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1544.110	1	32	$3d^0(1G)4s - 3d^0(1G)4p$	$a^2G - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1548.867	150	32	$3d^0(1G)4s - 3d^0(1G)4p$	$a^2G - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1549.203	5		$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III?	1551.932	1					S19
Cu III	1561.790	2	14	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1565.194	3		$3d^0(3P)4s - 3d^0(3P)4p$	$a^4P - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1568.564	1	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S15
Cu III	1568.655	1		$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1569.027	0		$3d^0(1D)4s - 3d^0(3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1570.207	15		$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1571.54	2		$3d^0(1D)4s - 3d^0(3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1571.590	0	14	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1579.353	8	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1588.551	2	14	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1593.58	500	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S15
Cu III	1597.118	5	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1600.94	250	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1603.146	200	14	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1605.969	150	25	$3d^0(3P)4s - 3d^0(3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1606.730	150	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1606.837	5		$3d^0(1D)4s - 3d^0(1D)4p$	$b^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1607.542	55	25	$3d^0(3P)4s - 3d^0(3P)4p$	$a^2P - z^2S^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1609.599	25	25	$3d^0(3P)4s - 3d^0(3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1609.757	50	25	$3d^0(3P)4s - 3d^0(3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1610.571	40	25	$3d^0(3P)4s - 3d^0(3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1616.160	8	25	$3d^0(3P)4s - 3d^0(3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1616.607	150	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1618.408	3		$3d^0(1D)4s - 3d^0(1D)4p$	$b^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1620.776	0	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1621.723	2		$3d^0(3F)4s - 3d^0(3F)4p$	$a^2F - z^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1625.500	0		$3d^0(3P)4s - 3d^0(3P)4p$	$a^2P - z^2S^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S19
Cu III	1626.139	100	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1626.411	100	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1628.088	25		$3d^0(1D)4s - 3d^0(1D)4p$	$b^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1628.295	150	13	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1629.301	0	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1633.192	0		$3d^0(3P)4s - 3d^0(3P)4p$	$a^2P - y^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1638.956	150	22	$3d^0(1D)4s - 3d^0(1D)4p$	$b^2D - y^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1639.960	5		$3d^0(1D)4s - 3d^0(1D)4p$	$b^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1642.208	1000	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1651.758	8		$3d^0(3P)4s - 3d^0(3P)4p$	$a^2P - y^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S19
Cu III	1652.010	150	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1653.399	5		$3d^0(1D)4s - 3d^0(1D)4p$	$b^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1654.574	150	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1658.472	100	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1660.887	15		$3d^0(1D)4s - 3d^0(1D)4p$	$b^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1669.273	5		$3d^0(3P)4s - 3d^0(3P)4p$	$a^2P - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1670.146	250	19	$3d^0(3F)4s - 3d^0(3F)4p$	$a^2F - z^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1671.886	250	18	$3d^0(3F)4s - 3d^0(3F)4p$	$a^2F - z^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1674.602	250	18	$3d^0(3F)4s - 3d^0(3F)4p$	$a^2F - z^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1676.469	8		$3d^0(3P)4s - 3d^0(1D)4p$	$a^4P - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1677.373	100	31	$3d^0(1G)4s - 3d^0(1G)4p$	$a^2G - x^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1679.151	200	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1681.481	150	18	$3d^0(3F)4s - 3d^0(3F)4p$	$a^2F - z^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1682.044	5	24	$3d^0(3P)4s - 3d^0(1D)4p$	$a^4P - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1682.695	15	26	$3d^0(3P)4s - 3d^0(3F)4p$	$a^2P - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1684.642	250	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1685.214	150	22	$3d^0(1D)4s - 3d^0(1D)4p$	$b^2D - y^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1687.134	300	12	$3d^0(3F)4s - 3d^0(3F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	S19
Cu III	1688.618	50	27	$3d^0(3P)4s - 3d^0(3P)4p$	$a^2P - y^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S19

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu III	1689.051	100	24	$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$	S19
Cu III	1692.706	150	17	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^2G^o$	$\frac{7}{2} - \frac{7}{2}$	S19
Cu III	1696.202	8		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1699.581	0		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^o$	$\frac{1}{2} - \frac{1}{2}$	S19
Cu III	1701.023	200	31	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1702.102	200	11	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1702.190	150	26	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1702.349	15	26	$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - x^2D^o$	$\frac{1}{2} - \frac{3}{2}$	S19
Cu III	1702.994	250	11	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1704.072	5		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1705.333	150	21	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{5}{2}$	S19
Cu III	1705.633	200	30	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	$\frac{5}{2} - \frac{11}{2}$	S19
Cu III	1707.506	3		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	$\frac{1}{2} - \frac{3}{2}$	S19
Cu III	1708.958	100	21	$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1709.036	350	11	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1711.257	15		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1711.437	15		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1713.346	3	16	$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	S19
Cu III?	1716.189	0					S19
Cu III	1716.490	5		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III?	1717.134	3					S19
Cu III	1722.379	500	11	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1724.810	5		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1726.275	3		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4D^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1728.139	100	18	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1732.998	3		$3d^8(^1D)4s - 3d^8(^3P)4p$	$b^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1737.853	15	6	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	S19
Cu III	1737.145	15		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1738.548	5	30	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	$\frac{5}{2} - \frac{11}{2}$	S19
Cu III	1758.861	0		$3d^8(^3F)4p - 3d^8(^3F)5s$	$z^4P - c^4F$	$\frac{5}{2} - \frac{7}{2}$	S7, K8
Cu III	1739.508	150	30	$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^o$	$\frac{7}{2} - \frac{11}{2}$	S19
Cu III	1741.135	15		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	S19
Cu III	1741.378	250	17	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	S19
Cu III	1750.391	250	17	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1755.012	10		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	$\frac{3}{2} - \frac{5}{2}$	S19
Cu III	1760.586	5		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$	S19
Cu III	1761.155	10	16	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{5}{2} - \frac{5}{2}$	S19
Cu III	1762.557	15		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{1}{2}$	S19
Cu III	1763.935	0		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^4F - z^4D^o$	$\frac{3}{2} - \frac{7}{2}$	S19
Cu III	1766.219	1		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{1}{2}$	S19
Cu III	1768.869	100	16	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{7}{2} - \frac{7}{2}$	S19
Cu III	1772.478	1		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{5}{2} - \frac{5}{2}$	S19
Cu III	1773.697	0		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^2P - y^4D^o$	$\frac{1}{2} - \frac{3}{2}$	S19
Cu III	1776.135	10		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1780.062	3		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S19
Cu III	1783.799	10		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4P^o$	$\frac{1}{2} - \frac{3}{2}$	S19
Cu III	1783.935	3		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1787.902	0		$3d^8(^3P)4s - 3d^8(^3P)4p$	$a^4P - z^4P^o$	$\frac{5}{2} - \frac{3}{2}$	S19
Cu III	1798.761	3		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4F^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1799.000	0		$3d^8(^1D)4p - 3d^8(^3F)4d$	$y^2D - 5$	$\frac{5}{2} - \frac{7}{2}$	S7, K8
Cu III?	1820.339	3					S19
Cu III	1826.339	5		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2F - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	S19
Cu III	1840.917	100	15	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	$\frac{7}{2} - \frac{9}{2}$	S19
Cu III	1858.685	0		$3d^8(^1G)4s - 3d^8(^3P)4p$	$a^2G - y^4D^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1867.747	25	15	$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4G^o$	$\frac{5}{2} - \frac{7}{2}$	S19
Cu III	1882.250	1		$3d^8(^3P)4s - 3d^8(^1D)4p$	$a^2P - z^2P^o$	$\frac{1}{2} - \frac{1}{2}$	S19
Cu III	1928.715	1		$3d^8(^3F)4s - 3d^8(^3F)4p$	$a^2F - z^4D^o$	$\frac{7}{2} - \frac{7}{2}$	S19

COPPER IV (Cu³⁺), Z = 29
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁸ ³F₄ (26 electrons)
 Ionization Potential 445 124 cm⁻¹; 55.2 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu IV	135.846	30 -A		3d ⁸ -	¹ D - 6°	? 2-3	K20, K8
Cu IV	162.926	20 -A		3d ⁸ -	³ F - 4°	? 4-3	K20, K8
Cu IV	167.392	10 -A		3d ⁸ -	¹ D - 4°	? 2-3	K20, K8
Cu IV	179.630	15 -A		3d ⁷ (b ² D)4s -	³ D - 6°	? 1-2	K20, K8
Cu IV	184.938	7 -A		3d ⁸ -	¹ S - 3°	? 0-1	K20, K8
Cu IV	192.585	7 -A		3d ⁷ (⁴ F)4s -	³ F - 5°	? 4-3	K20, K8
Cu IV	196.585	30 -A		3d ⁷ (² P)4s -	³ F - 3°	? 2-3	K20, K8
Cu IV	205.278	60 -A		3d ⁷ (² H)4s -	³ H - 5°	? 4-3	K20, K8
Cu IV	207.282	20 -A		3d ⁷ (⁴ P)4s -	³ F - 4°	? 2-3	K20, K8
Cu IV	208.502	15 -A		3d ⁷ (⁴ F)4s -	³ F - 3°	? 1-1	K20, K8
Cu IV	211.109	50 -A		3d ⁷ (⁴ P)4s -	³ P - 4°	? 2-3	K20, K8
Cu IV	213.617	8 A		3d ⁷ (² G)4s -	³ G - 4°	? 3-3	K20, K8
Cu IV	216.063	50 -A		3d ⁷ (⁴ F)5s -	³ F - 6°	? 4-3	K20, K8
Cu IV	219.927	6 -A		3d ⁷ (⁴ P)4s -	³ P - 3°	? 1-1	K20, K8
Cu IV	225.497	25 A		3d ⁷ (b ² D)4s -	³ D - 5°	? 2-3	K20, K8
Cu IV	235.299	30		3d ⁸ -	³ F - 2°	? 4-4	K20, K8
Cu IV	236.343	5		3d ⁸ -	³ F - 2°	? 3-4	K20, K8
Cu IV	251.278	20		3d ⁸ -	¹ G - 2°	? 4-4	K20, K8
Cu IV	289.358	0 -A		3d ⁷ (⁴ F)5s -	³ F - 5°	? 2-3	K20, K8
Cu IV	310.380	20 -A		3d ⁷ (⁴ F)5s -	³ F - 4°	? 4-3	K20, K8
Cu IV	324.435	70 -A		3d ⁷ (⁴ F)5s -	³ F - 3°	? 2-1	K20, K8
Cu IV	329.805	30 -A			1 - 4°	? 2-3	K20, K8
Cu IV	339.038	10		3d ⁷ (⁴ F)4s -	³ F - 2°	? 3-4	K20, K8
Cu IV	342.432	20 -A			1 - 3°	? 2-1	K20, K8
Cu IV	350.421	8		3d ⁷ (⁴ P)4s -	³ P - 2°	? 3-4	K20, K8
Cu IV	355.977	5		3d ⁷ (² G)4s -	³ G - 2°	? 3-3	K20, K8
Cu IV	357.897	100		3d ⁷ (² G)4s -	³ G - 2°	? 3-3	K20, K8
Cu IV	393.172	3		3d ⁷ (² F)4s -	³ F - 2°	? 4-4	K20, K8
Cu IV	406.439	8		3d ⁸ - 3d ⁷ (b ² D)4p	³ F - ³ F°	? 1-0	K20, K8
Cu IV	438.265	10		3d ⁸ - 3d ⁷ (² F)4p	³ D - ³ D°	? 2-3	S7
Cu IV	438.930	14		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ F°	? 3-2	S7
Cu IV	439.599	10		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ F°	? 2-3	S7
Cu IV	442.753	10		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ F°	? 4-3	S7
Cu IV	443.677	26		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ F°	? 4-4	S7
Cu IV	444.212	14		3d ⁸ - 3d ⁷ (² F)4p	³ P - ³ D°	? 2-2	S7
Cu IV	444.745	13		3d ⁸ - 3d ⁷ (² F)4p	³ P - ³ D°	? 1-1	S7
Cu IV	444.996	36		3d ⁸ - 3d ⁷ (² F)4p	³ P - ³ D°	? 2-3	S7
Cu IV	445.391	15		3d ⁸ - 3d ⁷ (² F)4p	³ P - ³ D°	? 0-1	S7
Cu IV	445.612	12		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ F°	? 3-2	S7
Cu IV	446.264	18		3d ⁸ - 3d ⁷ (² F)4p	¹ G - ¹ F°	? 4-3	S7
Cu IV	446.412	37		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ F°	? 3-3	S7
Cu IV	446.995	25		3d ⁸ - 3d ⁷ (² P)4p	³ F - ³ P°	? 2-1	K20, K8
Cu IV	447.371	10		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ F°	? 3-4	S7
Cu IV	448.039	14		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ F°	? 2-2	S7
Cu IV	448.428	34		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ D°	? 4-3	S7
Cu IV	449.658	10		3d ⁸ - 3d ⁷ (² H)4p	³ F - ³ G°	? 4-4	S7
Cu IV	450.024	37		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ D°	? 3-2	S7
Cu IV	450.935	14		3d ⁸ - 3d ⁷ (² H)4p	³ F - ³ G°	? 3-3	S7
Cu IV	451.159	48		3d ⁸ - 3d ⁷ (² P)4p	³ F - ³ D°	? 4-3	S7
Cu IV	452.202	28		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ D°	? 3-3	S7
Cu IV	452.502	34		3d ⁸ - 3d ⁷ (² H)4p	³ F - ³ G°	? 4-5	S7
Cu IV	453.127	42		3d ⁸ - 3d ⁷ (a ² D)4p	³ F - ³ D°	? 2-1	S7
Cu IV	453.425	66		3d ⁸ - 3d ⁷ (² H)4p	³ F - ³ G°	? 3-4	S7
Cu IV	454.982	14		3d ⁸ - 3d ⁷ (² P)4p	³ F - ³ D°	? 3-3	S7
Cu IV	456.081	13		3d ⁸ - 3d ⁷ (² G)4p	³ F - ¹ F°	? 4-3	S7
Cu IV	456.734	20		3d ⁸ - 3d ⁷ (² G)4p	³ F - ³ G°	? 4-4	S7
Cu IV	457.759	26		3d ⁸ - 3d ⁷ (² P)4p	³ F - ³ P°	? 3-2	S7
Cu IV	458.222	12		3d ⁸ - 3d ⁷ (² P)4p	³ F - ³ P°	? 2-1	S7
Cu IV	458.423	31		3d ⁸ - 3d ⁷ (⁴ P)4p	³ F - ³ D°	? 4-3	S7
Cu IV	458.712	43		3d ⁸ - 3d ⁷ (² G)4p	³ F - ³ G°	? 4-5	S7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu IV	459.510	46		$3d^8 - 3d^7(^3F)4p$	$^1G - ^3F^{\circ}$	4 - 4	S7
Cu IV	459.995	42		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3F^{\circ}$	3 - 3	S7
Cu IV	460.651	39		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3G^{\circ}$	3 - 4	S7
Cu IV	461.115	27		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3F^{\circ}$	3 - 2	S7
Cu IV	461.321	46		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3G^{\circ}$	3 - 3	S7
Cu IV	462.275	19		$3d^8 - 3d^7(^4P)4p$	$g^3F - ^3D^{\circ}$	3 - 2	S7
Cu IV	462.387	23		$3d^8 - 3d^7(^4P)4p$	$g^3F - ^3D^{\circ}$	3 - 3	S7
Cu IV	462.545	10		$3d^8 - 3d^7(^4P)4p$	$g^3F - ^5P^{\circ}$?	3 - 3 K20, K8
Cu IV	463.714	60		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3F^{\circ}$	2 - 2	S7
Cu IV	463.922	43		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3G^{\circ}$	2 - 3	S7
Cu IV	464.642	62		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3F^{\circ}$	3 - 3	S7
Cu IV	464.823	67		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3F^{\circ}$	4 - 4	S7
Cu IV	465.185	27		$3d^8 - 3d^7(a^2D)4p$	$^1D - ^3P^{\circ}$	2 - 1	S7
Cu IV	466.593	28		$3d^8 - 3d^7(a^2D)4p$	$^1D - ^1F^{\circ}$	2 - 3	S7
Cu IV	467.282	34		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3F^{\circ}$	2 - 3	S7
Cu IV	468.499	23		$3d^8 - 3d^7(a^2D)4p$	$^1D - ^3P^{\circ}$	2 - 2	S7
Cu IV	468.880	27		$3d^8 - 3d^7(^3G)4p$	$g^3F - ^3F^{\circ}$	3 - 4	S7
Cu IV	472.332	54		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3P^{\circ}$	1 - 0	S7
Cu IV	472.767	29		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3P^{\circ}$	2 - 1	S7
Cu IV	473.664	20		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3P^{\circ}$	1 - 1	S7
Cu IV	474.176	20		$3d^8 - 3d^7(b^2D)4p$	$^1S - ^3P^{\circ}$?	0 - 1 K20 K8
Cu IV	474.397	20		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3P^{\circ}$	0 - 1	S7
Cu IV	475.370	19		$3d^8 - 3d^7(^4P)4p$	$g^3F - ^3D^{\circ}$	2 - 2	S7
Cu IV	475.486	31		$3d^8 - 3d^7(^3F)4p$	$^1D - ^3S^{\circ}$	2 - 1	S7
Cu IV	476.192	46		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3P^{\circ}$	2 - 2	S7
Cu IV	477.083	31		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3P^{\circ}$	1 - 2	S7
Cu IV	481.888	29		$3d^8 - 3d^7(a^2D)4p$	$^1D - ^3D^{\circ}$	2 - 1	S7
Cu IV	483.415	34		$3d^8 - 3d^7(^2P)4p$	$^3P - ^3S^{\circ}$	2 - 1	S7
Cu IV	483.678	30		$3d^8 - 3d^7(a^2D)4p$	$^1D - ^3D^{\circ}$	2 - 3	S7
Cu IV	484.353	36		$3d^8 - 3d^7(^2P)4p$	$^3P - ^3S^{\circ}$	1 - 1	S7
Cu IV	484.524	62		$3d^8 - 3d^7(^2P)4p$	$^3P - ^3P^{\circ}$	0 - 1	S7
Cu IV	485.051	34		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3F^{\circ}$	2 - 3	S7
Cu IV	486.851	10		$3d^8 - 3d^7(^2P)4p$	$^1D - ^3D^{\circ}$	2 - 3	S7
Cu IV	489.297	10		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3D^{\circ}$	2 - 2	S7
Cu IV	490.030	20		$3d^8 - 3d^7(^4P)4p$	$^1D - ^3P^{\circ}$	2 - 2	S7
Cu IV	490.257	18		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3D^{\circ}$	1 - 2	S7
Cu IV	490.999	10		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3D^{\circ}$	1 - 1	S7
Cu IV	491.829	67		$3d^8 - 3d^7(a^2D)4p$	$^3P - ^3D^{\circ}$	2 - 3	S7
Cu IV	492.229	53		$3d^8 - 3d^7(^2H)4p$	$^1G - ^1G^{\circ}$	4 - 4	S7
Cu IV	494.115	41		$3d^8 - 3d^7(^3G)4p$	$^1D - ^3G^{\circ}$	2 - 3	S7
Cu IV	495.242	10		$3d^8 - 3d^7(^4P)4p$	$^1D - ^3D^{\circ}$	2 - 2	S7
Cu IV	495.315	13		$3d^8 - 3d^7(^4P)4p$	$^1D - ^3D^{\circ}$	2 - 3	S7
Cu IV	496.983	64		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3D^{\circ}$	4 - 3	S7
Cu IV	498.457	28		$3d^8 - 3d^7(^4P)4p$	$^5P - ^3P^{\circ}$	2 - 2	S7
Cu IV	498.748	65		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3D^{\circ}$	3 - 2	S7
Cu IV	499.454	25		$3d^8 - 3d^7(^4P)4p$	$^3P - ^3P^{\circ}$	1 - 2	S7
Cu IV	499.836	55		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3D^{\circ}$	2 - 1	S7
Cu IV	501.650	10		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3D^{\circ}$	3 - 3	S7
Cu IV	501.799	10		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3D^{\circ}$	2 - 2	S7
Cu IV	501.999	41		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3G^{\circ}$	4 - 4	S7
Cu IV	502.665	20		$3d^8 - 3d^7(^3G)4p$	$^3P - ^3G^{\circ}$	2 - 3	S7
Cu IV	502.868	12		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3F^{\circ}$	3 - 2	S7
Cu IV	503.469	29		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3G^{\circ}$	3 - 3	S7
Cu IV	503.561	26		$3d^8 - 3d^7(^4P)4p$	$^3P - ^3D^{\circ}$	2 - 2	S7
Cu IV	503.924	40		$3d^8 - 3d^7(^4P)4p$	$^3P - ^3D^{\circ}$	2 - 3	S7
Cu IV	504.584	74		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3F^{\circ}$	4 - 4	S7
Cu IV	504.858	49		$3d^8 - 3d^7(^4P)4p$	$^3P - ^3D^{\circ}$	1 - 2	S7
Cu IV	505.4	8		$3d^8 - 3d^7(^4P)4p$	$^3P - ^5P^{\circ}$?	1 - 2 M12, K8
Cu IV	505.711	68		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3F^{\circ}$	3 - 3	S7
Cu IV	505.955	70		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3F^{\circ}$	2 - 2	S7
Cu IV	506.189	38		$3d^8 - 3d^7(^2P)4p$	$^3P - ^3P^{\circ}$	2 - 1	S7
Cu IV	506.567	62		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3G^{\circ}$	2 - 3	S7
Cu IV	506.748	74		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3G^{\circ}$	3 - 4	S7
Cu IV	506.767	77		$3d^8 - 3d^7(^4F)4p$	$g^3F - ^3G^{\circ}$	4 - 5	S7
Cu IV	507.367	31		$3d^8 - 3d^7(^2P)4p$	$^3P - ^3P^{\circ}$	2 - 2	S7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu IV	508.423	23		3d ⁸ - 3d ⁷ (² P)4p	² P - ² P°	1 - 2	S7
Cu IV	508.642	20		3d ⁸ - 3d ⁷ (² P)4p	² P - ² P°	1 - 0	S7
Cu IV	508.848	49		3d ⁸ - 3d ⁷ (⁴ F)4p	² F - ² F°	2 - 3	S7
Cu IV	509.372	51		3d ⁸ - 3d ⁷ (⁴ F)4p	² F - ² F°	3 - 4	S7
Cu IV	512.674	30		3d ⁸ - 3d ⁷ (² H)4p	¹ G - ² F°	4 - 5	S7
Cu IV	519.667	14		3d ⁸ - 3d ⁷ (⁴ F)4p	² F - ² G°	2 - 2	S7
Cu IV	524.787	17		3d ⁸ - 3d ⁷ (⁴ F)4p	² F - ² F°	4 - 4	S7
Cu IV	537.311	17		3d ⁸ - 3d ⁷ (⁴ F)4p	¹ D - ² D°	2 - 2	S7
Cu IV	540.647	24		3d ⁸ - 3d ⁷ (⁴ F)4p	¹ D - ² D°	2 - 3	S7
Cu IV	542.103	13		3d ⁸ - 3d ⁷ (⁴ F)4p	¹ D - ² F°	2 - 2	S7
Cu IV	542.810	14		3d ⁸ - 3d ⁷ (⁴ F)4p	¹ D - ² G°	2 - 3	S7
Cu IV	545.110	12		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² D°	2 - 1	S7
Cu IV	545.410	11		3d ⁸ - 3d ⁷ (⁴ F)4p	¹ D - ² F°	2 - 3	S7
Cu IV	546.319	26		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² D°	1 - 1	S7
Cu IV	547.294	24		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² D°	0 - 1	S7
Cu IV	547.451	23		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² D°	2 - 2	S7
Cu IV	548.650	28		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² D°	1 - 2	S7
Cu IV	550.915	32		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² D°	2 - 3	S7
Cu IV	553.144	17		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² G°	2 - 3	S7
Cu IV	553.645	12		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² F°	1 - 2	S7
Cu IV	555.858	17		3d ⁸ - 3d ⁷ (⁴ F)4p	² P - ² F°	2 - 3	S7
Cu IV	574.284	14		3d ⁸ - 3d ⁷ (⁴ F)4p	² G - ² D°	4 - 3	S7
Cu IV	576.660	14		3d ⁸ - 3d ⁷ (⁴ F)4p	¹ G - ² G°	4 - 3	S7
Cu IV	580.970	3		3d ⁸ - 3d ⁷ (⁴ F)4p	¹ G - ² G°	4 - 4	S7
Cu IV	584.444	12		3d ⁸ - 3d ⁷ (⁴ F)4p	¹ G - ² F°	4 - 4	S7
Cu IV	605.874	11		3d ⁸ - 3d ⁷ (² P)4p	¹ S - ¹ P°	0 - 1	S7
Cu IV	606.817	12		3d ⁸ - 3d ⁷ (² P)4p	¹ S - ² S°	0 - 1	S7
Cu IV	653.010	15		3d ⁸ - 3d ⁷ (⁴ P)4p	¹ S - ² S°	0 - 1	S7
Cu IV	675.879	16		3d ⁷ (⁴ F)4s - 3d ⁷ (b ² D)4p	² F - ² D°	4 - 3	S7
Cu IV	680.698	13		3d ⁷ (⁴ F)4s - 3d ⁷ (b ² D)4p	² F - ¹ D°	3 - 2	S7
Cu IV	685.810	21		3d ⁷ (⁴ F)4s - 3d ⁷ (b ² D)4p	² F - ² F°	3 - 2	S7
Cu IV	688.918	27		3d ⁷ (⁴ F)4s - 3d ⁷ (b ² D)4p	² F - ² F°	2 - 2	S7
Cu IV	818.988	12		3d ⁷ (⁴ F)4s - 3d ⁷ (² F)4p	² F - ² F°	3 - 3	S7
Cu IV	820.437	13		3d ⁷ (⁴ F)4s - 3d ⁷ (² F)4p	² F - ² G°	4 - 3	S7
Cu IV	823.416	1		3d ⁷ (⁴ F)4s - 3d ⁷ (² F)4p	² F - ² F°	2 - 3	S7
Cu IV	834.957	40		3d ⁷ (a ² D)4s - 3d ⁷ (b ² D)4p	¹ D - ¹ D°	2 - 2	S7
Cu IV	846.723	12		3d ⁷ (a ² D)4s - 3d ⁷ (b ² D)4p	² P - ² P°	2 - 2	S7
Cu IV	848.546	12		3d ⁷ (⁴ P)4s - 3d ⁷ (b ² D)4p	² P - ² P°	1 - 2	S7
Cu IV	862.12	14		3d ⁷ (a ² D)4s - 3d ⁷ (b ² D)4p	¹ D - ¹ F°	2 - 3	S7
Cu IV	867.440	18		3d ⁷ (a ² D)4s - 3d ⁷ (b ² D)4p	² D - ² F°	3 - 2	S7
Cu IV	868.649	13		3d ⁷ (a ² D)4s - 3d ⁷ (b ² D)4p	² D - ² F°	2 - 3	S7
Cu IV	881.589	11		3d ⁷ (a ² D)4s - 3d ⁷ (b ² D)4p	² D - ² P°	1 - 1	S7
Cu IV	918.652	11		3d ⁷ (⁴ F)4s - 3d ⁷ (a ² D)4p	² F - ² P°	2 - 1	S7
Cu IV	956.939	10		3d ⁷ (⁴ P)4s - 3d ⁷ (² F)4p	² P - ² F°	3 - 2	S7
Cu IV	959.725	10		3d ⁷ (⁴ F)4s - 3d ⁷ (² P)4p	² F - ² S°	2 - 1	S7
Cu IV	976.078	10		3d ⁷ (⁴ P)4s - 3d ⁷ (² F)4p	² P - ¹ D°	2 - 2	S7
Cu IV	978.262	10		3d ⁷ (⁴ F)4s - 3d ⁷ (a ² D)4p	² F - ¹ F°	4 - 3	S7
Cu IV	982.318	12		3d ⁷ (⁴ P)4s - 3d ⁷ (² F)4p	² P - ¹ D°	1 - 2	S7
Cu IV	983.205	10		3d ⁷ (⁴ F)4s - 3d ⁷ (a ² D)4p	² F - ² D°	2 - 2	S7
Cu IV	983.667	15		3d ⁷ (⁴ F)4s - 3d ⁷ (² H)4p	² F - ² G°	4 - 4	S7
Cu IV	985.702	10		3d ⁷ (² G)4s - 3d ⁷ (² F)4p	² G - ¹ G°	5 - 4	S7
Cu IV	1000.034	14		3d ⁷ (⁴ P)4s - 3d ⁷ (a ² D)4p	² F - ² P°	2 - 1	S7
Cu IV	1000.612	14		3d ⁷ (² G)4s - 3d ⁷ (² F)4p	² G - ¹ G°	3 - 4	S7
Cu IV	1000.821	15		3d ⁷ (⁴ F)4s - 3d ⁷ (² P)4p	² F - ² D°	2 - 1	S7
Cu IV	1006.427	10		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	² F° - ² F	3 - 3	S7
Cu IV	1007.159	10		3d ⁷ (⁴ F)4s - 3d ⁷ (² P)4p	² F - ² D°	2 - 3	S7
Cu IV	1014.923	17		3d ⁷ (⁴ F)4s - 3d ⁷ (² G)4p	² F - ² G°	5 - 5	S7
Cu IV	1018.462	16		3d ⁷ (² F)4s - 3d ⁷ (b ² D)4p	¹ F - ¹ F°	3 - 3	S7
Cu IV	1021.800	11		3d ⁷ (² G)4s - 3d ⁷ (² F)4p	² G - ² G°	4 - 3	S7
Cu IV	1039.589	57		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	² G° - ² F°	4 - 3	S7
Cu IV	1041.202	15		3d ⁷ (⁴ P)4s - 3d ⁷ (² F)4p	² P - ² D°	2 - 1	S7
Cu IV	1043.995	64		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	² G° - ² F	5 - 4	S7
Cu IV	1044.748	30		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ P)4p	² F - ² P°	2 - 1	S7
Cu IV	1045.288	22		3d ⁷ (² G)4s - 3d ⁷ (² F)4p	¹ G - ² G°	4 - 5	S7
Cu IV	1047.003	40		3d ⁷ (⁴ F)4p - 3d ⁷ (⁴ F)5s	² G° - ² F	2 - 3	S7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu IV	1048.803	16		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^3F - ^3D^o$	1 - 2	S7
Cu IV	1051.588	68		$3d^7(^4F)4p - 3d^7(^4F)5s$	$^3G^o - ^3F$	6 - 5	S7
Cu IV	1052.528	43		$3d^7(^4F)4p - 3d^7(^4F)5s$	$^3F - ^3F$	4 - 3	S7
Cu IV	1055.408	21		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^3F - ^3D^o$	5 - 4	S7
Cu IV	1056.417	17		$3d^7(^4F)4s - 3d^7(^2D)4p$	$^3F - ^3D^o$	4 - 3	S7
Cu IV	1056.662	14		$3d^7(^4P)4s - 3d^7(^2D)4p$	$^3F - ^3F^o$	2 - 3	S7
Cu IV	1061.581	61		$3d^7(^4F)4p - 3d^7(^4F)5s$	$^3G^o - ^3F$	5 - 4	S7
Cu IV	1064.014	58		$3d^7(^4F)4p - 3d^7(^4F)5s$	$^3G^o - ^3F$	4 - 3	S7
Cu IV	1065.824	55		$3d^7(^4F)4p - 3d^7(^4F)5s$	$^3G^o - ^3F$	3 - 2	S7
Cu IV	1056.365	20		$3d^7(^4F)4s - 3d^7(^2H)4p$	$^3F - ^3D^o$	4 5	S7
Cu IV	1067.056	14		$3d^7(^4P)4s - 3d^7(^2F)4p$	$^3P - ^3G^o$	2 - 3	S7
Cu IV	1068.859	17		$3d^7(^4F)4s - 3d^7(^2H)4p$	$^3F - ^3G^o$	3 - 3	S7
Cu IV	1070.291	18		$3d^7(^4F)4s - 3d^7(^2G)4p$	$^3F - ^3F^o$	3 - 4	S7
Cu IV	1071.730	14		$3d^7(^4F)4s - 3d^7(^2P)4p$	$^3F - ^3D^o$	4 - 3	S7
Cu IV	1074.163	21		$3d^7(^4F)4p - 3d^7(^4F)5s$	$^3D^o - ^3F$	3 - 2	S7
Cu IV	1077.090	22		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^3F - ^3D^o$	4 - 3	S7
Cu IV	1079.894	40		$3d^7(^4F)4p - 3d^7(^4F)5s$	$^3G^o - ^3F$	5 - 4	S7
Cu IV	1080.830	12		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^3F - ^3D^o$	3 - 4	S7
Cu IV	1082.253	14		$3d^7(^4F)4s - 3d^7(^2H)4p$	$^3F - ^3G^o$	2 - 3	S7
Cu IV	1090.090	20		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^3F - ^3D^o$	3 - 2	S7
Cu IV	1092.029	10		$3d^7(^2D)4s - 3d^7(^2F)4p$	$^3D - ^3F^o$	3 - 3	S7
Cu IV	1093.165	10		$3d^7(^4P)4s - 3d^7(^2P)4p$	$^3F - ^3D^o$	2 - 2	S7
Cu IV	1096.680	11		$3d^7(^4P)4s - 3d^7(^2D)4p$	$^3P - ^3P^o$	1 - 0	S7
Cu IV	1098.151	13		$3d^7(^4P)4s - 3d^7(^2P)4p$	$^3F - ^3D^o$	2 - 1	S7
Cu IV	1098.409	13		$3d^7(^4F)4p - 3d^7(^4F)5s$	$^3G^o - ^3F$	3 - 4	S7
Cu IV	1102.198	27		$3d^7(^2D)4s - 3d^7(^2F)4p$	$^3D - ^3F^o$	2 - 2	S7
Cu IV	1103.489	14		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^3F - ^3D^o$	1 - 2	S7
Cu IV	1127.830	10		$3d^7(^4F)4s - 3d^7(^2G)4p$	$^3F - ^3F^o$	3 - 2	S7
Cu IV	1129.076	12		$3d^7(^4F)4s - 3d^7(^2G)4p$	$^3F - ^3G^o$	3 - 3	S7
Cu IV	1134.976	10		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^3F - ^3D^o$	3 - 2	S7
Cu IV	1142.743	16		$3d^7(^4P)4s - 3d^7(^2G)4p$	$^3F - ^3F^o$	2 - 2	S7
Cu IV	1145.290	10		$3d^7(^4F)4s - 3d^7(^2G)4p$	$^3F - ^3H^o$	4 - 4	S7
Cu IV	1149.166	18		$3d^7(^4F)4s - 3d^7(^2G)4p$	$^3F - ^3F^o$	3 - 3	S7
Cu IV	1157.603	18		$3d^7(^4F)4s - 3d^7(^2G)4p$	$^3F - ^3H^o$	4 - 5	S7
Cu IV	1164.664	12		$3d^7(^4P)4s - 3d^7(^2G)4p$	$^3F - ^3F^o$	2 - 3	S7
Cu IV	1165.308	10		$3d^7(^2G)4s - 3d^7(^2D)4p$	$^3G - ^3F^o$	4 - 3	S7
Cu IV	1170.576	11		$3d^7(^2D)4s - 3d^7(^2F)4p$	$^3D - ^3G^o$	2 - 3	S7
Cu IV	1173.259	32		$3d^7(^2D)4s - 3d^7(^2F)4p$	$^3D - ^3D^o$	2 - 2	S7
Cu IV	1182.576	20		$3d^7(^2G)4s - 3d^7(^2H)4p$	$^3G - ^3H^o$	4 - 5	S7
Cu IV	1193.475	15		$3d^7(^4P)4s - 3d^7(^2D)4p$	$^3P - ^3D^o$	2 - 1	S7
Cu IV	1203.261	13		$3d^7(^2G)4s - 3d^7(^2H)4p$	$^3G - ^3H^o$	3 - 4	S7
Cu IV	1214.347	15		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3F - ^3D^o$	2 - 1	S7
Cu IV	1214.871	18		$3d^7(^4P)4s - 3d^7(^2D)4p$	$^3P - ^3P^o$	2 - 1	S7
Cu IV	1216.910	21		$3d^7(^2P)4s - 3d^7(^2D)4p$	$^3P - ^3P^o$	0 - 1	S7
Cu IV	1218.430	12		$3d^7(^4P)4s - 3d^7(^2P)4p$	$^3P - ^3D^o$	1 - 2	S7
Cu IV	1224.244	28		$3d^7(^2G)4s - 3d^7(^2D)4p$	$^3G - ^3F^o$	4 - 3	S7
Cu IV	1230.062	15		$3d^7(^4P)4s - 3d^7(^2P)4p$	$^3P - ^3D^o$	1 - 2	S7
Cu IV	1239.316	13		$3d^7(^2G)4s - 3d^7(^2D)4p$	$^3G - ^3F^o$	3 - 2	S7
Cu IV	1240.160	23		$3d^7(^2G)4s - 3d^7(^2D)4p$	$^3G - ^3F^o$	4 - 4	S7
Cu IV	1242.541	21		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^3D^o$	4 - 3	S7
Cu IV	1245.071	16		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^3D^o$	1 - 1	S7
Cu IV	1245.691	30		$3d^7(^2G)4s - 3d^7(^2D)4p$	$^3G - ^3F^o$	3 - 3	S7
Cu IV	1250.003	13		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^3D^o$	2 - 2	S7
Cu IV	1253.061	15		$3d^7(^2G)4s - 3d^7(^2H)4p$	$^3G - ^3H^o$	4 - 4	S7
Cu IV	1259.676	23		$3d^7(^2D)4s - 3d^7(^2D)4p$	$^3D - ^3D^o$	3 - 3	S7
Cu IV	1259.352	18		$3d^7(^2D)4s - 3d^7(^2D)4p$	$^3D - ^3P^o$	1 - 0	S7
Cu IV	1261.132	11		$3d^7(^2P)4s - 3d^7(^2P)4p$	$^3P - ^3P^o$	2 - 1	S7
Cu IV	1265.172	11		$3d^7(^2P)4s - 3d^7(^2P)4p$	$^3P - ^3S^o$	2 - 1	S7
Cu IV	1266.879	29		$3d^7(^2D)4s - 3d^7(^2D)4p$	$^3D - ^3D^o$	1 - 1	S7
Cu IV	1268.546	36		$3d^7(^2D)4s - 3d^7(^2D)4p$	$^3D - ^3D^o$	2 - 2	S7
Cu IV	1268.748	32		$3d^7(^2D)4s - 3d^7(^2D)4p$	$^3D - ^3P^o$	1 - 1	S7
Cu IV	1269.342	27		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^3D^o$	2 - 1	S7
Cu IV	1272.858	12		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^3P^o$	3 - 2	S7
Cu IV	1273.352	12		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^3D^o$	3 - 3	S7
Cu IV	1273.720	15		$3d^7(^2D)4s - 3d^7(^2D)4p$	$^3D - ^3D^o$	2 - 1	S7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu IV	1274.721	82		3d ⁷ (h ² D)4s - 3d ⁷ (h ² D)4p	³ D - ³ D°	3-2	S7
Cu IV	1274.843	158		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ⁵ P°	3-3	S7
Cu IV	1276.641	104		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ⁵ P°	3-2	S7
Cu IV	1276.766	19		3d ⁷ (² G)4s - 3d ⁷ (² H)4p	³ G - ³ G°	5-4	S7
Cu IV	1277.849	11		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	³ H - ¹ G°	5-4	S7
Cu IV	1278.187	29		3d ⁷ (⁴ P)4s - 3d ⁷ (² P)4p	³ P - ³ S°	0-1	S7
Cu IV	1278.848	11		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ³ H°	2-2	S7
Cu IV	1280.353	113		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ⁵ P°	2-1	S7
Cu IV	1280.889	59		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ³ P°	2-3	S7
Cu IV	1282.702	12		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ⁵ P°	2-2	S7
Cu IV	1284.702	52		3d ⁷ (a ² D)4s - 3d ⁷ (a ² D)4p	³ D - ³ P°	2-1	S7
Cu IV	1286.119	12		3d ⁷ (² P)4s - 3d ⁷ (a ² D)4p	¹ P - ¹ P°	1-1	S7
Cu IV	1290.969	72		3d ⁷ (a ² D)4s - 3d ⁷ (a ² D)4p	³ D - ³ P°	3-2	S7
Cu IV	1291.084	58		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ³ H°	1-1	S7
Cu IV	1293.476	173		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ⁵ P°	1-2	S7
Cu IV	1293.780	13		3d ⁷ (a ² D)4s - 3d ⁷ (a ² D)4p	³ D - ³ P°	1-2	S7
Cu IV	1294.142	104		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	¹ H - ¹ H°	5-5	S7
Cu IV	1296.752	14		3d ⁷ (² G)4s - 3d ⁷ (² P)4p	³ G - ¹ D°	3-2	S7
Cu IV	1296.878	11		3d ⁷ (⁴ P)4s - 3d ⁷ (² G)4p	⁵ P - ³ F°	2-3	S7
Cu IV	1300.577	16		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	³ P - ³ S°	1-1	S7
Cu IV	1301.999	11		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	³ H - ³ H°	6-5	S7
Cu IV	1305.168	18		3d ⁷ (⁴ P)4s - 3d ⁷ (² P)4p	⁵ P - ³ P°	1-1	S7
Cu IV	1305.468	10		3d ⁷ (² P)4s - 3d ⁷ (a ² D)4p	³ P - ³ F°	1-2	S7
Cu IV	1305.617	11		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	⁵ F - ³ G°	4-5	S7
Cu IV	1306.256	90		3d ⁷ (² P)4s - 3d ⁷ (a ² D)4p	³ P - ³ D°	2-2	S7
Cu IV	1307.600	128		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	⁵ F - ³ F°	3-4	S7
Cu IV	1308.822	205		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ³ P°	1-0	S7
Cu IV	1309.427	212		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	³ H - ³ H°	6-6	S7
Cu IV	1310.319	23		3d ⁷ (a ² D)4s - 3d ⁷ (a ² D)4p	³ D - ³ P°	2-2	S7
Cu IV	1311.505	15		3d ⁷ (² P)4s - 3d ⁷ (a ² D)4p	³ P - ³ D°	2-1	S7
Cu IV	1311.855	56		3d ⁷ (² G)4s - 3d ⁷ (² H)4p	³ G - ³ G°	4-5	S7
Cu IV	1312.715	221		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	³ H - ³ H°	5-5	S7
Cu IV	1312.790	169		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	¹ F - ¹ F°	3-3	S7
Cu IV	1312.948	15		3d ⁷ (h ² D)4s - 3d ⁷ (h ² D)4p	³ D - ³ H°	2-1	S7
Cu IV	1318.140	280		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	³ H - ³ H°	4-4	S7
Cu IV	1319.433	129		3d ⁷ (h ² D)4s - 3d ⁷ (h ² D)4p	¹ D - ¹ D°	2-2	S7
Cu IV	1320.206	11		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	³ H - ³ H°	5-6	S7
Cu IV	1321.168	101		3d ⁷ (a ² D)4s - 3d ⁷ (a ² D)4p	¹ D - ¹ P°	2-1	S7
Cu IV	1325.524	16		3d ⁷ (⁴ P)4s - 3d ⁷ (a ² D)4p	³ P - ³ D°	0-1	S7
Cu IV	1327.622	11		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	³ H - ³ H°	4-5	S7
Cu IV	1335.043	106		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	³ F - ³ D°	2-1	S7
Cu IV	1335.554	87		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	³ G - ³ G°	5-4	S7
Cu IV	1337.364	76		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	³ F - ³ D°	2-2	S7
Cu IV	1339.179	45		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	⁵ F - ⁵ G°	5-5	S7
Cu IV	1340.102	240		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ⁵ D°	3-4	S7
Cu IV	1342.092	61		3d ⁷ (⁴ P)4s - 3d ⁷ (² F)4p	³ P - ³ D°	1-1	S7
Cu IV	1342.741	190		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	³ F - ³ D°	3-2	S7
Cu IV	1343.992	40		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	³ P - ³ D°	2-2	S7
Cu IV	1344.994	63		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	³ F - ² F°	3-4	S7
Cu IV	1345.665	360		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	⁵ F - ⁵ G°	5-6	S7
Cu IV	1347.811	212		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	³ G - ³ G°	4-4	S7
Cu IV	1348.569	147		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	³ G - ¹ H°	5-5	S7
Cu IV	1348.880	171		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	³ P - ³ D°	2-3	S7
Cu IV	1349.598	38		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	⁵ F - ⁵ G°	4-4	S7
Cu IV	1349.860	27		3d ⁷ (³ F)4s - 3d ⁷ (² F)4p	³ F - ³ D°	3-3	S7
Cu IV	1350.165	166		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	³ F - ² F°	2-2	S7
Cu IV	1350.390	191		3d ⁷ (² H)4s - 3d ⁷ (² H)4p	¹ H - ¹ G°	5-4	S7
Cu IV	1350.424	191		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	³ F - ³ F°	4-4	S7
Cu IV	1351.925	221		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ⁵ D°	3-3	S7
Cu IV	1352.585	217		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	³ G - ³ G°	5-5	S7
Cu IV	1352.957	166		3d ⁷ (² F)4s - 3d ⁷ (² F)4p	³ F - ⁵ G°	4-5	S7
Cu IV	1353.576	58		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	³ G - ³ G°	4-3	S7
Cu IV	1353.720	82		3d ⁷ (a ² D)4s - 3d ⁷ (a ² D)4p	³ D - ³ F°	1-2	S7
Cu IV	1354.318	98		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	⁵ P - ⁵ D°	3-2	S7
Cu IV	1354.692	161		3d ⁷ (h ² D)4s - 3d ⁷ (h ² D)4p	¹ D - ³ D°	2-1	S7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J, J	References
Cu IV	1354.928	26		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^4F - ^4G^o$	3 - 2	S7
Cu IV	1355.391	136		$3d^7(^3F)4s - 3d^7(^3F)4p$	$^3F - ^3D^o$	4 - 3	S7
Cu IV	1355.617	17		$3d^7(^4F)4s - 3d^7(^3F)4p$	$^3F - ^3F^o$	3 - 2	S7
Cu IV	1357.313	61		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^1F^o$	3 - 3	S7
Cu IV	1358.732	220		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^1P - ^5D^o$	2 - 3	S7
Cu IV	1358.770	226		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^5D^o$	2 - 1	S7
Cu IV	1359.616	70		$3d^7(^4F)4s - 3d^7(^2P)4p$	$^3P - ^3P^o$	1 - 1	S7
Cu IV	1359.929	41		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^4F - ^4G^o$	3 - 3	S7
Cu IV	1361.146	196		$3d^7(^3F)4s - 3d^7(^3F)4p$	$^3F - ^3F^o$	3 - 3	S7
Cu IV	1362.052	276		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^4F - ^4G^o$	4 - 5	S7
Cu IV	1362.808	128		$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^1D - ^1F^o$	2 - 3	S7
Cu IV	1363.061	196		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2G^o$	3 - 4	S7
Cu IV	1365.189	177		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2G^o$	4 - 5	S7
Cu IV	1366.802	30		$3d^7(^2F)4s - 3d^7(^2F)4p$	$^2F - ^2F^o$	4 - 3	S7
Cu IV	1366.960	259		$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^2F^o$	3 - 4	S7
Cu IV	1367.143	133		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2F^o$	3 - 2	S7
Cu IV	1367.562	178		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^4F - ^4G^o$	3 - 4	S7
Cu IV	1368.972	162		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2G^o$	3 - 3	S7
Cu IV	1369.451	171		$3d^7(^4P)4s - 3d^7(^2P)4p$	$^3P - ^3D^o$	2 - 2	S7
Cu IV	1369.847	75		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^3P^o$	0 - 1	S7
Cu IV	1370.829	23		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^5D^o$	1 - 1	S7
Cu IV	1372.142	216		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^4G^o$	2 - 3	S7
Cu IV	1372.372	192		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^3D^o$	4 - 3	S7
Cu IV	1373.278	157		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^5D^o$	1 - 2	S7
Cu IV	1373.748	172		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^5D^o$	3 - 2	S7
Cu IV	1373.812	172		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^5D^o$	4 - 3	S7
Cu IV	1374.564	136		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^5D^o$	2 - 1	S7
Cu IV	1374.655	113		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^5D^o$	1 - 0	S7
Cu IV	1375.783	160		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^4G^o$	1 - 2	S7
Cu IV	1376.339	128		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^5D^o$	5 - 4	S7
Cu IV	1377.800	172		$3d^7(^2F)4s - 3d^7(^2F)4p$	$^2F - ^2G^o$	2 - 3	S7
Cu IV	1378.109	44		$3d^7(^2H)4s - 3d^7(a^2D)4p$	$^3H - ^2F^o$	4 - 4	S7
Cu IV	1378.488	210		$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^2F^o$	3 - 4	S7
Cu IV	1379.640	169		$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^2F^o$	2 - 3	S7
Cu IV	1380.020	170		$3d^7(^2G)4s - 3d^7(^4P)4p$	$^2G - ^5P^o$	3 - 3	S7
Cu IV	1380.818	227		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^3P^o$	2 - 1	S7
Cu IV	1382.123	52		$3d^7(^2G)4s - 3d^7(^4P)4p$	$^2G - ^3P^o$	3 - 2	S7
Cu IV	1382.545	230		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2F^o$	4 - 3	S7
Cu IV	1383.130	209		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^3D^o$	3 - 2	S7
Cu IV	1383.350	20		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^5D^o$	1 - 1	S7
Cu IV	1383.570	11		$3d^7(^2F)4s - 3d^7(^2F)4p$	$^2F - ^2G^o$	3 - 3	S7
Cu IV	1384.053	165		$3d^7(^2P)4s - 3d^7(^2P)4p$	$^3P - ^3D^o$	1 - 2	S7
Cu IV	1386.248	31		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^2G^o$	4 - 3	S7
Cu IV	1386.289	34		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^5D^o$	2 - 2	S7
Cu IV	1388.827	246		$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^1D - ^1F^o$	2 - 3	S7
Cu IV	1390.433	154		$3d^7(^4P)4s - 3d^7(^4F)4p$	$^3F - ^3D^o$	2 - 1	S7
Cu IV	1392.133	350		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2H^o$	5 - 6	S7
Cu IV	1392.424	147		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^5D^o$	3 - 3	S7
Cu IV	1395.038	91		$3d^7(^2P)4s - 3d^7(^2P)4p$	$^1P - ^1P^o$	1 - 1	S7
Cu IV	1395.251	206		$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3D^o$	1 - 2	S7
Cu IV	1396.175	10		$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^2F^o$	3 - 3	S7
Cu IV	1397.110	65		$3d^7(^2P)4s - 3d^7(^2P)4p$	$^3P - ^3D^o$	0 - 1	S7
Cu IV	1398.620	74		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2F^o$	3 - 3	S7
Cu IV	1399.036	85		$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^1D - ^1P^o$	2 - 1	S7
Cu IV	1399.643	201		$3d^7(b^2D)4s - 3d^7(b^2D)4p$	$^3D - ^2F^o$	1 - 2	S7
Cu IV	1400.341	171		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^3P - ^3P^o$	2 - 2	S7
Cu IV	1400.527	14		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^4F - ^5D^o$	4 - 4	S7
Cu IV	1401.273	127		$3d^7(a^2D)4s - 3d^7(a^2D)4p$	$^3D - ^3D^o$	1 - 1	S7
Cu IV	1403.403	218		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^2F^o$	4 - 3	S7
Cu IV	1404.247	12		$3d^7(^2P)4s - 3d^7(^2G)4p$	$^3P - ^2F^o$	2 - 2	S7
Cu IV	1405.493	196		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^3D^o$	3 - 3	S7
Cu IV	1405.659	164		$3d^7(^4P)4s - 3d^7(^4F)4p$	$^3F - ^3D^o$	2 - 2	S7
Cu IV	1406.194	10		$3d^7(^2P)4s - 3d^7(^2G)4p$	$^3P - ^2G^o$	2 - 3	S7
Cu IV	1406.733	11		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^4F - ^5F^o$	5 - 4	S7
Cu IV	1407.605	253		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^4F - ^5F^o$	5 - 5	S7

Ekment	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu IV	1408.016	62		$3d^7(b^3D)4s - 3d^7(b^3D)4p$	$^3D - ^3F^{\circ}$	2-2	S7
Cu IV	1408.770	162		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^3P - ^3D^{\circ}$	1-1	S7
Cu IV	1410.336	76		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^3H^{\circ}$	4-4	S7
Cu IV	1410.582	357		$3d^7(^2H)4s - 3d^7(^2H)4p$	$^2H - ^3I^{\circ}$	6-7	S7
Cu IV	1411.264	13		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2G^{\circ}$	4-4	S7
Cu IV	1411.558	244		$3d^7(a^3D)4s - 3d^7(a^3D)4p$	$^1D - ^1D^{\circ}$	2-2	S7
Cu IV	1413.066	247		$3d^7(a^3D)4s - 3d^7(a^3D)4p$	$^3D - ^3D^{\circ}$	3-3	S7
Cu IV	1413.564	10		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^5F - ^5F^{\circ}$	3-2	S7
Cu IV	1415.261	197		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^3F - ^3F^{\circ}$	3-2	S7
Cu IV	1416.167	29		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^5F - ^5F^{\circ}$	2-1	S7
Cu IV	1417.654	172		$3d^7(^2F)4s - 3d^7(^2F)4p$	$^1F - ^1G^{\circ}$	3-4	S7
Cu IV	1419.788	53		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^2P - ^2E^{\circ}$	0-1	S7
Cu IV	1420.014	262		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2G^{\circ}$	3-3	S7
Cu IV	1420.485	175		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^2P - ^2D^{\circ}$	1-2	S7
Cu IV	1420.807	77		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2F^{\circ}$	4-4	S7
Cu IV	1421.072	246		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^1G - ^1F^{\circ}$	4-3	S7
Cu IV	1421.364	12		$3d^7(^4P)4s - 3d^7(^2G)4p$	$^2P - ^1F^{\circ}$	2-3	S7
Cu IV	1425.445	281		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	1-1	S7
Cu IV	1426.642	251		$3d^7(b^3D)4s - 3d^7(b^3D)4p$	$^2D - ^2P^{\circ}$	1-0	S7
Cu IV	1426.841	268		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	2-2	S7
Cu IV	1427.002	266		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2H^{\circ}$	3-4	S7
Cu IV	1428.748	54		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^2F - ^2D^{\circ}$	2-3	S7
Cu IV	1429.034	177		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^2G - ^2H^{\circ}$	4-5	S7
Cu IV	1429.504	247		$3d^7(^2H)4s - 3d^7(^2H)4p$	$^2H - ^2I^{\circ}$	6-6	S7
Cu IV	1429.552	256		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	3-3	S7
Cu IV	1431.925	107		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	4-4	S7
Cu IV	1431.963	153		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	4-4	S7
Cu IV	1432.964	11		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	4-5	S7
Cu IV	1433.369	162		$3d^7(b^3D)4s - 3d^7(b^3D)4p$	$^2D - ^2P^{\circ}$	1-1	S7
Cu IV	1433.776	35		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^1G - ^2G^{\circ}$	4-3	S7
Cu IV	1434.197	54		$3d^7(^2P)4s - 3d^7(^2P)4p$	$^2P - ^2P^{\circ}$	2-1	S7
Cu IV	1436.086	322		$3d^7(^2H)4s - 3d^7(^2H)4p$	$^2H - ^2G^{\circ}$	6-5	S7
Cu IV	1436.267	83		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	1-2	S7
Cu IV	1436.375	117		$3d^7(a^3D)4s - 3d^7(^2P)4p$	$^1D - ^1P^{\circ}$	2-1	S7
Cu IV	1438.093	312		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	3-3	S7
Cu IV	1438.846	282		$3d^7(^4P)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	2-2	S7
Cu IV	1440.576	16		$3d^7(a^3D)4s - 3d^7(^2F)4p$	$^2D - ^2D^{\circ}$	3-3	S7
Cu IV	1442.227	130		$3d^7(b^3D)4s - 3d^7(b^3D)4p$	$^2D - ^2P^{\circ}$	2-1	S7
Cu IV	1442.410	295		$3d^7(^2H)4s - 3d^7(^2H)4p$	$^2H - ^2I^{\circ}$	5-6	S7
Cu IV	1442.590	48		$3d^7(a^3D)4s - 3d^7(^2P)4p$	$^2D - ^1D^{\circ}$	2-2	S7
Cu IV	1443.042	268		$3d^7(^2H)4s - 3d^7(^2H)4p$	$^2H - ^2I^{\circ}$	4-5	S7
Cu IV	1443.163	203		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	2-3	S7
Cu IV	1443.510	46		$3d^7(^2P)4s - 3d^7(^2P)4p$	$^2P - ^2P^{\circ}$	2-2	S7
Cu IV	1443.771	199		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2G^{\circ}$	2-3	S7
Cu IV	1444.001	18		$3d^7(^2G)4s - 3d^7(^4P)4p$	$^1G - ^2D^{\circ}$	4-3	S7
Cu IV	1444.330	210		$3d^7(^4F)4s - 3d^7(^4P)4p$	$^2P - ^2D^{\circ}$	2-3	S7
Cu IV	1446.255	20		$3d^7(^4P)4s - 3d^7(^4P)4p$	$^2P - ^2P^{\circ}$	2-3	S7
Cu IV	1446.315	276		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2G^{\circ}$	3-4	S7
Cu IV	1446.695	23		$3d^7(^2F)4s - 3d^7(^2F)4p$	$^1F - ^2F^{\circ}$	3-2	S7
Cu IV	1446.836	19		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^1G - ^2G^{\circ}$	4-5	S7
Cu IV	1449.071	11		$3d^7(^2H)4s - 3d^7(^2H)4p$	$^2H - ^2G^{\circ}$	5-5	S7
Cu IV	1449.100	350		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2G^{\circ}$	4-5	S7
Cu IV	1452.242	13		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	3-4	S7
Cu IV	1454.650	207		$3d^7(b^3D)4s - 3d^7(b^3D)4p$	$^2D - ^2P^{\circ}$	3-2	S7
Cu IV	1458.086	306		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^1G - ^1G^{\circ}$	4-4	S7
Cu IV	1459.883	311		$3d^7(^2H)4s - 3d^7(^2H)4p$	$^2H - ^2I^{\circ}$	5-6	S7
Cu IV	1462.437	16		$3d^7(^4P)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	2-3	S7
Cu IV	1466.353	132		$3d^7(^2G)4s - 3d^7(^2G)4p$	$^1G - ^2F^{\circ}$	4-3	S7
Cu IV	1467.291	12		$3d^7(^2H)4s - 3d^7(^2H)4p$	$^2H - ^2G^{\circ}$	4-5	S7
Cu IV	1467.423	11		$3d^7(^2F)4s - 3d^7(^2F)4p$	$^1F - ^2G^{\circ}$	3-4	S7
Cu IV	1468.062	11		$3d^7(^4F)4s - 3d^7(^4F)4p$	$^2F - ^2F^{\circ}$	3-4	S7
Cu IV	1472.421	40		$3d^7(a^3D)4s - 3d^7(^2F)4p$	$^2D - ^2P^{\circ}$	1-2	S7
Cu IV	1473.640	10		$3d^7(^2G)4s - 3d^7(^4F)4p$	$^2G - ^2D^{\circ}$	3-2	S7
Cu IV	1479.940	56		$3d^7(^2P)4s - 3d^7(^2P)4p$	$^1P - ^1D^{\circ}$	1-2	S7
Cu IV	1482.779	157		$3d^7(^2F)4s - 3d^7(^2F)4p$	$^1F - ^1D^{\circ}$	3-2	S7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu IV	1489.774	32		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	³ P - ³ S°	1 - 1	S7
Cu IV	1492.044	220		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	³ P - ³ P°	1 - 0	S7
Cu IV	1500.258	11		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	³ H - ² G°	6 - 5	S7
Cu IV	1502.114	221		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	³ P - ³ S°	0 - 1	S7
Cu IV	1502.955	88		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	³ P - ³ P°	0 - 1	S7
Cu IV	1504.167	30		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ² G°	4 - 4	S7
Cu IV	1506.103	11		3d ⁷ (a ² D)4s - 3d ⁷ (² G)4p	³ D - ² G°	3 - 3	S7
Cu IV	1507.022	11		3d ⁷ (a ² D)4s - 3d ⁷ (⁴ P)4p	³ D - ³ D°	1 - 1	S7
Cu IV	1509.415	19		3d ⁷ (² G)4s - 3d ⁷ (² G)4p	¹ G - ³ F°	4 - 4	S7
Cu IV	1515.293	298		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	³ P - ³ S°	2 - 1	S7
Cu IV	1517.345	22		3d ⁷ (a ² D)4s - 3d ⁷ (⁴ P)4p	³ D - ³ D°	3 - 3	S7
Cu IV	1517.918	31		3d ⁷ (a ² D)4s - 3d ⁷ (² G)4p	³ D - ¹ F°	2 - 3	S7
Cu IV	1522.587	11		3d ⁷ (a ² D)4s - 3d ⁷ (⁴ P)4p	³ D - ³ P°	1 - 1	S7
Cu IV	1522.773	13		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	³ P - ³ D°	1 - 2	S7
Cu IV	1526.559	15		3d ⁷ (a ² D)4s - 3d ⁷ (² P)4p	¹ D - ¹ D°	2 - 2	S7
Cu IV	1529.088	11		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	³ H - ¹ H°	4 - 5	S7
Cu IV	1532.594	45		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	³ P - ³ D°	0 - 1	S7
Cu IV	1534.277	10		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ² G°	3 - 3	S7
Cu IV	1535.307	39		3d ⁷ (² P)4s - 3d ⁷ (² P)4p	¹ P - ¹ S°	1 - 0	S7
Cu IV	1536.308	11		3d ⁷ (a ² D)4s - 3d ⁷ (² P)4p	¹ D - ³ D°	2 - 1	S7
Cu IV	1544.141	206		3d ⁷ (a ² D)4s - 3d ⁷ (⁴ P)4p	³ D - ³ D°	2 - 3	S7
Cu IV	1544.847	12		3d ⁷ (a ² D)4s - 3d ⁷ (² P)4p	¹ D - ³ D°	2 - 2	S7
Cu IV	1545.762	15		3d ⁷ (b ² D)4s - 3d ⁷ (b ² D)4p	¹ D - ² P°	2 - 1	S7
Cu IV	1549.288	94		3d ⁷ (a ² D)4p - 3d ⁷ (⁴ F)5s	³ F° - ³ F	4 - 4	S7
Cu IV	1549.459	14		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	³ P - ³ D°	2 - 2	S7
Cu IV	1551.924	11		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ³ D°	3 - 2	S7
Cu IV	1555.521	10		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ F - ² G°	2 - 2	S7
Cu IV	1558.271	312		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	³ P - ² S°	2 - 2	S7
Cu IV	1562.049	10		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ F - ² G°	2 - 3	S7
Cu IV	1565.168	162		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ F - ³ D°	2 - 1	S7
Cu IV	1567.735	11		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ³ D°	4 - 4	S7
Cu IV	1574.186	12		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	³ P - ³ S°	1 - 2	S7
Cu IV	1576.895	50		3d ⁷ (a ² D)4s - 3d ⁷ (² P)4p	³ D - ² P°	2 - 2	S7
Cu IV	1580.354	11		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ F - ³ D°	2 - 2	S7
Cu IV	1586.252	12		3d ⁷ (² P)4s - 3d ⁷ (⁴ P)4p	¹ P - ³ D°	1 - 2	S7
Cu IV	1591.549	11		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	³ H - ³ H°	4 - 4	S7
Cu IV	1592.170	12		3d ⁷ (² P)4s - 3d ⁷ (⁴ P)4p	¹ P - ³ P°	1 - 2	S7
Cu IV	1593.090	20		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	¹ H - ² G°	5 - 4	S7
Cu IV	1593.374	15		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	³ H - ³ H°	5 - 5	S7
Cu IV	1602.960	39		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ³ F°	3 - 2	S7
Cu IV	1604.898	12		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	³ H - ³ F°	4 - 4	S7
Cu IV	1607.300	23		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ³ F°	4 - 4	S7
Cu IV	1608.451	13		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ³ F°	4 - 5	S7
Cu IV	1611.130	14		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ³ D°	3 - 4	S7
Cu IV	1613.127	11		3d ⁷ (a ² D)4s - 3d ⁷ (⁴ P)4p	³ D - ³ D°	3 - 4	S7
Cu IV	1617.373	13		3d ⁷ (² H)4s - 3d ⁷ (² G)4p	¹ H - ² G°	5 - 5	S7
Cu IV	1619.313	19		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ F - ³ F°	2 - 1	S7
Cu IV	1622.735	16		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ P - ³ D°	1 - 2	S7
Cu IV	1623.562	12		3d ⁷ (⁴ F)4s - 3d ⁷ (⁴ F)4p	³ F - ³ F°	3 - 3	S7
Cu IV	1632.948	12		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ P - ³ D°	2 - 3	S7
Cu IV	1633.257	121		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ F - ³ F°	2 - 2	S7
Cu IV	1642.614	19		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ P - ² G°	3 - 3	S7
Cu IV	1654.655	190		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ F - ³ F°	2 - 3	S7
Cu IV	1661.259	10		3d ⁷ (a ² D)4s - 3d ⁷ (⁴ P)4p	³ D - ³ D°	2 - 3	S7
Cu IV	1677.908	21		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ P - ² G°	3 - 4	S7
Cu IV	1702.253	20		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ P)4p	¹ P - ³ D°	1 - 0	S7
Cu IV	1791.457	10		3d ⁷ (² P)4s - 3d ⁷ (a ² D)4p	³ F - ³ F°	2 - 3	S7
Cu IV	1813.608	30		3d ⁷ (² G)4s - 3d ⁷ (⁴ F)4p	² G - ³ F°	3 - 2	S7
Cu IV	1822.024	10		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ P - ² G°	1 - 2	S7
Cu IV	1836.484	10		3d ⁷ (² G)4s - 3d ⁷ (⁴ F)4p	² G - ² G°	4 - 4	S7
Cu IV	1851.250	11		3d ⁷ (² G)4s - 3d ⁷ (⁴ F)4p	² G - ³ F°	3 - 3	S7
Cu IV	1854.679	26		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ P - ³ D°	3 - 5	S7
Cu IV	1862.324	16		3d ⁷ (² P)4s - 3d ⁷ (⁴ F)4p	³ P - ³ D°	2 - 3	S7
Cu IV	1870.535	10		3d ⁷ (⁴ P)4s - 3d ⁷ (⁴ F)4p	³ P - ³ D°	2 - 2	S7
Cu IV	1876.812	10		3d ⁷ (² F)4s - 3d ⁷ (² H)4p	³ F - ² G°	3 - 3	S7

Element	Wave/length	Intensity	Multiplet	Configuration	Term	J - J	References
Cu IV	1929.757	14		$3d^7(^4P)4s - 3d^7(^4F)4p$	$^3P - ^3F^{\circ}$	2-2	S7
Cu IV	1960.335	12		$3d^7(^3F)4s - 3d^7(^3P)4p$	$^3F - ^3D^{\circ}$	4-3	S7
Cu IV	1970.822	11		$3d^7(a^3D)4s - 3d^7(^4F)4p$	$^3D - ^3D^{\circ}$	1-1	S7

COPPER V (Cu^{4+}), $Z = 29$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 \ ^4F_{9/2}$ (25 electrons)Ionization Potential [686 000] cm^{-1} ; [85] eVCOPPER VI (Cu^{5+}), $Z = 29$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 \ ^5D_4$ (24 electrons)Ionization Potential [895 000] cm^{-1} ; [111] eVCOPPER VII (Cu^{6+}), $Z = 29$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)Ionization Potential [1 137 000] cm^{-1} ; [141] eV

Element	Wavelength	intensity	Multiplet	Configuration	Term	J - J	References
Cu VII	200.665	1000		$3d^5 - 3d^4 4p$	$g^6S - ^6P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	K21, K20
Cu VII	200.851	750		$3d^5 - 3d^4 4p$	$g^6S - ^6P^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	K21, K20
Cu VII	200.948	500		$3d^5 - 3d^4 4p$	$g^6S - ^6P^{\circ}$	$\frac{7}{2} - \frac{9}{2}$	K21, K20

COPPER VIII (Cu⁷⁺), Z = 29
 Ground State 1s²2s²2p³3s²3p⁶3d⁴ ⁵D₀ (22 electrons)
 Ionization Potential [1 371 000] cm⁻¹; [170] eV

COPPER IX (Cu⁸⁺), Z = 29
 Ground State 1s²2s²2p⁶3s²3p⁶3d³ ⁴F_{3/2} (21 electrons)
 Ionization Potential [1 678 000] cm⁻¹; [201] eV

COPPER X (Cu⁹⁺), Z = 29
 Ground State 1s²2s²2p⁶3s²3p⁶3d² ³F₂ (20 electrons)
 Ionization Potential [1 887 000] cm⁻¹; [234] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu X	86.160	100		3d ² - 3d4f	g ³ F - ³ G ^o	2 - 3	E37
Cu X	86.204	100		3d ² - 3d4f	g ³ F - ³ G ^o	3 - 4	E37
Cu X	86.336	140		3d ² - 3d4f	g ³ F - ³ G ^o	4 - 5	E37
Cu X	86.422	10		3d ² - 3d4f	g ³ F - ³ G ^o	4 - 4	E37
Cu X	86.720	10		3d ² - 3d4f	g ³ F - ³ F ^o	2 - 3	E37
Cu X	86.776	90		3d ² - 3d4f	g ³ F - ³ F ^o	2 - 2	E37
Cu X	86.792	10		3d ² - 3d4f	g ³ F - ³ F ^o	3 - 4	E37
Cu X	86.907	90		3d ² - 3d4f	g ³ F - ³ F ^o	3 - 3	E37
Cu X	86.964	1		3d ² - 3d4f	g ³ F - ³ F ^o	3 - 2	E37
Cu X	87.018	90		3d ² - 3d4f	g ³ F - ³ F ^o	4 - 4	E37
Cu X	87.135	1		3d ² - 3d4f	g ³ F - ³ F ^o	4 - 3	E37
Cu X	87.516	50		3d ² - 3d4f	¹ D - ³ D ^o	2 - 3	E37
Cu X	87.703	100		3d ² - 3d4f	¹ D - ¹ F ^o	2 - 3	E37
Cu X	87.932	100		3d ² - 3d4f	¹ D - ¹ D ^o	2 - 2	E37
Cu X	87.983	40		3d ² - 3d4f	³ P - ³ D ^o	0 - 1	E37
Cu X	88.020	60		3d ² - 3d4f	³ P - ³ D ^o	1 - 2	E37
Cu X	88.032	120		3d ² - 3d4f	³ P - ³ D ^o	2 - 3	E37

COPPER XI (Cu¹⁰⁺), Z = 29
 Ground state 1s²2s²2p⁶3s²3p⁶3d²D_{3/2} (19 electrons)
 Ionization Potential 2 146 000 cm⁻¹; 266 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XI	56.915	1					
Cu XI	57.047	1		3d - 6f			
Cu XI	63.038	40		3d - 6f	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	63.192	40		3d - 5f	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	70.550	40		3d - 5f	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	70.654	30					E37
Cu XI	70.895	1					
Cu XI	71.045	1					E37
Cu XI	71.536	20					E37
Cu XI	71.612	10					E37
Cu XI	71.707	10					E37
Cu XI	71.823	10					E37
Cu XI	71.847	10					E37
Cu XI	71.951	1					E37
Cu XI	72.098	30					E37
Cu XI	72.369	2					E37
Cu XI	72.580	15		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	72.792	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	72.956	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	73.516	1		3p ⁶ 3d - 3p ⁵ 3d(¹ F ^o)4s	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	73.735	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	$g^2D - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	73.982	2		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	$g^2D - 4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	74.633	15		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	74.856	1		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	75.325	25		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	75.472	2		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	75.866	2		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	$g^2D - 4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	76.022	1		3p ⁶ 3d - 3p ⁵ 3d(³ F ^o)4s	$g^2D - 4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	76.256	5		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	$g^2D - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	76.406	10		3p ⁶ 3d - 3p ⁵ 3d(³ P ^o)4s	$g^2D - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	78.542	120					E37
Cu XI	78.786	130		3d - 4f			
Cu XI	134.933	400		3d - 4f	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	135.006	5		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	135.335	1		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	135.669	5		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	135.747	500		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	136.073	90		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	136.572	15		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	147.748	60		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	149.460	40		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	150.356	1		3p ⁶ 3d - 3p ⁵ 3d ²	$g^2D - 2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	G17

COPPER XI (Cu¹⁰⁺), Z = 29
 Ground State 1s²2s²2p⁶3s²3p⁶3d²D_{3/2} (19 electrons)
 Ionization Potential 2 146 000 cm⁻¹; 266 eV

Element	Wavelength	Intensity	Multiplet	Configuraon	Term	J - J	References
Cu XI	56.915	1		3d - 6f	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	57.047	1		3d - 6f	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	63.038	40		3d - 5f	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	63.192	40		3d - 5f	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	70.550	40					E37
Cu XI	70.654	30					E37
Cu XI	70.895	1					E37
Cu XI	71.045	1					E37
Cu XI	71.536	20					E37
Cu XI	71.612	10					E37
Cu XI	71.707	10					E37
Cu XI	71.823	10					E37
Cu XI	71.847	10					E37
Cu XI	71.951	1					E37
Cu XI	72.098	30					E37
Cu XI	72.369	2		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	$\frac{3}{2} - \frac{3}{2}$	R.
Cu XI	72.580	15		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	72.792	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ² D ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	72.956	5		3p ⁶ 3d - 3p ⁵ 3d(¹ F ^o)4s	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	73.516	1		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	73.735	5		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	73.982	2		3p ⁶ 3d - 3p ⁵ 3d(³ D ^o)4s	g ² D - ⁴ D ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	74.633	15		3p ⁶ 3d - 3p ⁵ 3d(² F ^o)4s	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	74.856	1		3p ⁶ 3d - 3p ⁵ 3d(² F ^o)4s	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	75.325	25		3p ⁶ 3d - 3p ⁵ 3d(² F ^o)4s	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	75.472	2		3p ⁶ 3d - 3p ⁵ 3d(² F ^o)4s	g ² D - ⁴ F ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	75.866	2		3p ⁶ 3d - 3p ⁵ 3d(² F ^o)4s	g ² D - ⁴ F ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	76.022	1		3p ⁶ 3d - 3p ⁵ 3d(² P ^o)4s	g ² D - ² P ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	76.256	5		3p ⁶ 3d - 3p ⁵ 3d(² P ^o)4s	g ² D - ² P ^o	$\frac{3}{2} - \frac{3}{2}$	H8
Cu XI	76.406	10					E37
Cu XI	78.542	120		3d - 4f	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	78.786	130		3d - 4f	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	E37
Cu XI	134.933	40G		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	135.006	5		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	135.335	1		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² P ^o	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	135.669	5		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	135.747	500		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² D ^o	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	136.073	90		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² P ^o	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	136.572	15		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² P ^o	$\frac{3}{2} - \frac{1}{2}$	G17
Cu XI	147.748	60		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² P ^o	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	149.460	40		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	G17
Cu XI	150.256	1		3p ⁶ 3d - 3p ⁵ 3d ²	g ² D - ² F ^o	$\frac{3}{2} - \frac{3}{2}$	G17

COPPER XII (Cu^{11+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1S_0$ (18 electrons)
 Ionization Potential [2 984 400] cm^{-1} ; [370] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XII	55.466	1		$3p^6 - 3p^6(^2P^o)4d$	$g^1S - (\frac{1}{2}, \frac{3}{2})^o$	0 - 1	E37
Cu XII	56.333	1		$3p^6 - 3p^6(^2P^o)4d$	$g^1S - (\frac{3}{2}, \frac{1}{2})^o$	0 - 1	E37
Cu XII	67.882	30		$3p^6 - 3p^6(^2P^o)4s$	$g^1S - \frac{1}{2} [\frac{1}{2}]^o$	0 - 1	E37
Cu XII	69.128	30		$3p^6 - 3p^6(^2P^o)4s$	$g^1S - \frac{3}{2} [\frac{3}{2}]^o$	0 - 1	E37
Cu XII	139.210	100		$3p^6 - 3p^6(^2P^o)3d$	$g^1S - ^1P^o$	0 - 1	E37

COPPER XIII (Cu^{12+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 \ ^2P_{1/2}^o$ (17 electrons)
 Ionization Potential [3 234 400] cm^{-1} ; [401] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XIII	138.481	0		$3p^5 - 3p^5(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$	G17
Cu XIII	142.930	5		$3p^5 - 3p^5(^2P)3d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$	G17
Cu XIII	143.334	2		$3p^5 - 3p^5(^2P)3d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	G17
Cu XIII	144.186	2		$3p^5 - 3p^5(^2P)3d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	G17

COPPER XIV (Cu^{13+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
 Ionization Potential [3 508 600] cm^{-1} ; [435] eV

COPPER XV (Cu^{14+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [3 863 000] cm^{-1} ; [479] eV

COPPER XVI (Cu^{16+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [4 170 000] cm^{-1} ; [517] eV

COPPER XVII (Cu^{16+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}$ (13 electrons)
 Ionization Potential [4 468 500] cm^{-1} ; [554] eV

COPPER XVIII (Cu^{17+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential [5 098 000] cm^{-1} ; [632] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XVIII	11.774	20		$2p^6 3s^2 - 2p^5 3s^2 3d$	$g^1S - ^1P^o$	0-1	S31
Cu XVIII	30.019	10		$3s 3p - 3s 5d$	$^3P^o - ^3D$	0-1	F33
Cu XVIII	30.104	20		$3s 3p - 3s 5d$	$^3P^o - ^3D$	1-2	F33
Cu XVIII	30.325	35		$3s 3p - 3s 5d$	$^3P^o - ^3D$	2-3	F33
Cu XVIII	35.238	6		$3s 3d - 3s 5f$	$^3D - ^3F^o$	1-2	F33
Cu XVIII	35.256	6		$3s 3d - 3s 5f$	$^3D - ^3F^o$	2-3	F33
Cu XVIII	35.294	10		$3s 3d - 3s 5f$	$^3D - ^3F^o$	3-4	F33
Cu XVIII	38.876	35		$3s^2 - 3s 4p$	$g^1S - ^1P^o$	0-1	F33
Cu XVIII	40.613	6		$3s 3p - 3s 4d$	$^3P^o - ^3D$	0-1	F33
Cu XVIII	40.749	35		$3s 3p - 3s 4d$	$^3P^o - ^3D$	1-2	F33
Cu XVIII	40.769	10		$3s 3p - 3s 4d$	$^3P^o - ^3D$	1-1	F33
Cu XVIII	41.134	60		$3s 3p - 3s 4d$	$^3P^o - ^3D$	2-3	F33
Cu XVIII	41.173	10		$3s 3p - 3s 4d$	$^3P^o - ^3D$	2-2	F33
Cu XVIII	46.781	3		$3s 3p - 3s 4s$	$^3P^o - ^3S$	0-1	F33
Cu XVIII	47.012	6		$3s 3p - 3s 4s$	$^3P^o - ^3S$	1-1	F33
Cu XVIII	47.585	10		$3s 3p - 3s 4s$	$^3P^o - ^3S$	2-1	F33
Cu XVIII	49.452	10		$3s 3d - 3s 4f$	$^3D - ^3F^o$	1-2	F33
Cu XVIII	49.490	20		$3s 3d - 3s 4f$	$^3D - ^3F^o$	2-3	F33
Cu XVIII	49.558	20		$3s 3d - 3s 4f$	$^3D - ^3F^o$	3-4	F33
Cu XVIII	238.87	P		$3s^2 - 3s 3p$	$g^1S - ^1P^o$	0-1	K8
Cu XVIII	344.59	P		$3s^2 - 3s 3p$	$g^1S - ^1P^o$	0-1	K8

COPPER XIX (Cu^{18+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)
 Ionization Potential $5\,410\,900\text{ cm}^{-1}$; 671 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XIX	13.11	-A		$2p^6 3s - 2p^5 3s^2$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F27
Cu XIX	22.475	1		$3p - 8d$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	22.661	1		$3p - 8d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F37
Cu XIX	23.503	10		$3p - 7d$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	23.599	10		$3s - 6p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	23.621	1		$3s - 6p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F33
Cu XIX	23.704	10		$3p - 7d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	25.142			$3d - 8f$	$^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	25.175	1		$3d - 8f$	$^2 D - ^2 F^\circ$	$\frac{5}{2} - \frac{7}{2}$	F33
Cu XIX	25.295	20		$3p - 6d$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	25.525	60		$3p - 6d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	26.416	20		$3d - 7f$	$^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	26.452	20		$3d - 7f$	$^2 D - ^2 F^\circ$	$\frac{5}{2} - \frac{7}{2}$	F33
Cu XIX	27.025	66		$3s - 5p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	27.076	35		$3s - 5p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F33
Cu XIX	28.626	20		$3d - 6f$	$^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	28.671	35		$3d - 6f$	$^2 D - ^2 F^\circ$	$\frac{5}{2} - \frac{7}{2}$	F33
Cu XIX	28.978	125		$3p - 5d$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F35
Cu XIX	29.277	200		$3p - 5d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	33.260	35		$3d - 5f$	$^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	33.317	66		$3d - 5f$	$^2 D - ^2 F^\circ$	$\frac{5}{2} - \frac{7}{2}$	F33
Cu XIX	37.290	250		$3s - 4p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	37.492	90		$3s - 4p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F33
Cu XIX	39.728	200		$3p - 4d$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	40.270	90		$3p - 4d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	40.312	35		$3p - 4d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F33
Cu XIX	45.329	10		$3p - 4s$	$^2 P^\circ - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	F33
Cu XIX	46.086	60		$3p - 4s$	$^2 P^\circ - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	F33
Cu XIX	47.329	200		$3d - 4f$	$^2 D - ^2 F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	47.437	250		$3d - 4f$	$^2 D - ^2 F^\circ$	$\frac{5}{2} - \frac{7}{2}$	F33
Cu XIX	207.31	20		$3p - 3d$	$^2 P^\circ - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	221.37	35		$3p - 3d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{5}{2}$	F33
Cu XIX	224.22	3		$3p - 3d$	$^2 P^\circ - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	F33
Cu XIX	273.34	16		$3s - 3p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F33
Cu XIX	302.51	P		$3s - 3p$	$g^2 S - ^2 P^\circ$	$\frac{1}{2} - \frac{1}{2}$	F33

COPPER XX (Cu^{19+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^6 ^1 S_0$ (10 electrons)
 Ionization Potential $13\,695\,000\text{ cm}^{-1}$; 1697.9 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XX	8.056	10		$2p^3 - 2p^2 6d$	$g^1 S - ^3 D^\circ$	0 - 1	S31
Cu XX	8.320	10		$2p^6 - 2p^5 5d$	$g^1 S - ^1 P^\circ$	0 - 1	S31
Cu XX	9.437	10		$2p^6 - 2p^5 5d$	$g^1 S - ^3 D^\circ$	0 - 1	S31
Cu XX	9.11	20		$2p^6 - 2p^5 4d$	$g^1 S - ^1 P^\circ$	0 - 1	S31
Cu XX	9.270	20		$2p^6 - 2p^5 4d$	$g^1 S - ^3 D^\circ$	0 - 1	S31
Cu XX	9.429	10		$2p^6 - 2p^5 4s$	$g^1 S - ^1 P^\circ$	0 - 1	S31
Cu XX	9.527	10		$2p^6 - 2p^5 4s$	$g^1 S - ^3 P^\circ$	0 - 1	S31
Cu XX	10.587	50		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^1 P^\circ$	0 - 1	S31
Cu XX	10.641	40		$2s^2 2p^6 - 2s 2p^6 3p$	$g^1 S - ^3 P^\circ$	0 - 1	S31
Cu XX	11.38	100		$2p^6 - 2p^5 3d$	$g^1 S - ^1 P^\circ$	0 - 1	S31

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XX	11 593	100		$2p^6 - 2p^5 3d$	$g^1 S - ^2 D^o$	0 - 1	S31
Cu XX	11 732	60		$2p^6 - 2p^5 3d$	$g^1 S - ^2 P^o$	0 - 1	S31
Cu XX	12 558	80		$2p^6 - 2p^5 3s$	$g^1 S - ^1 P^o$	0 - 1	S31
Cu XX	12.82	40		$2p^6 - 2p^5 3s$	$g^1 S - ^2 P^o$	0 - 1	S31

COPPER XXI (Cu²⁰⁺), Z = 29
Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}^o$ (9 electrons)
Ionization Potential [14 462 000] cm⁻¹; [1793] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XXI	8.379	10		$2p^5 - 2p^4(^1S)4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	8.450	10		$2p^5 - 2p^4(^1S)4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	S31, K8
Cu XXI	8.524	10		$2p^5 - 2p^4(^1D)4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	8.577	10		$2p^5 - 2p^4(^3P)4d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	8.647	10		$2p^5 - 2p^4(^1D)4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	S31
Cu XXI	8.690	10		$2p^5 - 2p^4(^3P)4d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	8.743	10		$2p^5 - 2p^4(^3P)4d$	$g^2 P^o - ^2 F$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	8.790	10		$2p^5 - 2p^4(^3P)4d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	S31, K8
Cu XXI	8.876	0		$2p^5 - 2p^4(^1S)4s$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	S31
Cu XXI	10.769	10		$2p^5 - 2p^4(^1S)3d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	10.847	40		$2p^5 - 2p^4(^1S)3d$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	S31, K8
Cu XXI	10.874	30		$2p^5 - 2p^4(^1D)3d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	S31, K8
Cu XXI	10.933	30		$2p^5 - 2p^4(^1D)3$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$	S31, K8
Cu XXI	10.995	40		$2p^5 - 2p^4(^3P)3d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	11.055	20		$2p^5 - 2p^4(^1D)3d$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	11.110	30		$2p^5 - 2p^4(^3P)3d$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	11.152	10		$2p^5 - 2p^4(^1D)3d$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$	S31, K8
Cu XXI	11.175	10		$2p^5 - 2p^4(^3P)3d$	$g^2 P^o - ^1 D$	$\frac{3}{2} - \frac{3}{2}$	S31, K8
Cu XXI	11.280	10		$2p^5 - 2p^4(^3P)3d$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	S31, K8
Cu XXI	11.814	20		$2p^5 - 2p^4(^1D)3s$	$g^2 P^o - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	11.924	10		$2p^5 - 2p^4(^3P)3s$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{1}{2}$	S31, K8
Cu XXI	11.942	10		$2p^5 - 2p^4(^3P)3s$	$g^2 P^o - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	S31, K8
Cu XXI	12.045	10		$2p^5 - 2p^4(^1D)3s$	$g^2 P^o - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	S31, K8
Cu XXI	12.125	20		$2p^5 - 2p^4(^3P)3s$	$g^2 P^o - ^4 P$	$\frac{3}{2} - \frac{3}{2}$	S31
Cu XXI	12.171	20		$2p^5 - 2p^4(^3P)3s$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{1}{2}$	S31, K8
Cu XXI	12.204	10		$2p^5 - 2p^4(^3P)3s$	$g^2 P^o - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	S31, K8
Cu XXI	12.24	P		$2s 2p^6 - 2s 2p^5(^3P^o) 3s$	$^2 S - ^2 P^o$	$\frac{1}{2} - \frac{3}{2}$	K8
Cu XXI	12.328	10		$2p^5 - 2p^4(^3P)3s$	$g^2 P^o - ^4 P$	$\frac{1}{2} - \frac{1}{2}$	S31
Cu XXI	79.05	P		$2s^2 2p^5 - 2s 2p^6$	$g^2 P^o - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	K8
Cu XXI	90.81	P		$2s^2 2p^5 - 2s 2p^6$	$g^2 P^o - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	K8

COPPER XXII (Cu²¹⁺), Z = 29
Ground State 1s²2s²2p⁴ ³P₂ (8 electrons)
Ionization Potential [15 365 000] cm⁻¹; [1605] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XXII?	8.158	10					S31
Cu XXII?	8.260	10					S31
Cu XXII	10.057	10		2s ² 2p ⁴ - 2s2p ⁴ 3p	¹ D - ¹ F°	2 - 3	S31
Cu XXII?	10.229	0					S31
Cu XXII	10.450	10		2p ⁴ - 2p ² (³ P°)3d	³ P° - ³ D°	2 - 3	S31, K8
Cu XXII	10.506	10		2p ⁴ - 2p ² (³ D°)3d	³ P° - ³ D°	2 - 3	S31, K8
Cu XXII	10.546	10		2p ⁴ - 2p ² (⁴ S°)3d	³ P° - ³ D°	2 - 3	S31, K8
Cu XXII	10.717	10		2p ⁴ - 2p ² (⁴ S°)3d	¹ D - ³ L°	? 2 - 2	S31, K8
Cu XXII	10.799	30		2p ⁴ - 2p ² (³ D°)3d	¹ S - ³ D°	? 0 - 1	S31, K8
Cu XXII	11.429	4°		2p ⁴ - 2p ² (⁴ S°)3s	³ P° - ³ S°	2 - 1	S31
Cu XXII	11.518	50		2p ⁴ - 2p ² (⁴ S°)3s	³ P° - ³ S°	1 - 1	S31
Cu XXII	11.576	40		2p ⁴ - 2p ² (⁴ S°)3s	³ P° - ³ S°	0 - 1	S31

COPPER XXIII (Cu²²⁺), Z = 29
Ground State 1s²2s²2p³ ⁴S_{3/2} (7 electrons)
Ionization Potential [16 494 000] cm⁻¹; [2045] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XXIII	9.670	0		2p ² - 2p ² 3d	⁴ S° - ² P	3/2 - 3/2	S31, K8
Cu XXIII?	9.772	0					S31
Cu XXIII	9.982	10		2p ² - 2p ² 3d	² P° - ² P	? 3/2 - 3/2	S31, K8
Cu XXIII	10.123	10		2p ² - 2p ² 3d	⁴ S° - ² D	? 3/2 - 3/2	S31, K8
Cu XXIII	10.311	10		2p ² - 2p ² 3d	² D° - ² D	3/2 - 3/2	S31, K8

COPPER XXIV (Cu²³⁺), Z = 29
Ground State 1s²2s²2p² ¹Γ₀ (6 electrons)
Ionization Potential [17 527 000] cm⁻¹; [2173] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XXIV?	9.802	0					S31
Cu XXIV?	9.906	0					S31
Cu XXIV	9.961	10		2p ² - 2p3s	³ P° - ³ P°	? 0 - 1	S31, K8
Cu XXIV	10.103	10		2p ² - 2p3s	³ P° - ¹ P°	0 - 1	S31
Cu XXIV	16.170	0		2p ² - 2p3s	¹ D - ³ P°	2 - 2	S31
Cu XXIV	10.267	10		2p ² - 2p3s	¹ S - ³ P°	? 0 - 1	S31, K8
Cu XXIV	10.359	10		2p ² - 2p3s	³ P° - ³ P°	? 2 - 1	S31, K8
Cu XXIV	10.400	10		2p ² - 2p3s	¹ S - ¹ P°	0 - 1	S31

COPPER XXV (Cu^{24+}), $Z = 29$
 Ground State $1s^2 2s^2 2p^3 P_{1/2}^o$ (5 electrons)
 Ionization Potential [18 535 000] cm^{-1} ; [2298] eV

COPPER XXVI (Cu^{25+}), $Z = 29$
 Ground State $1s^2 2s^2 {}^1S_0$ (4 electrons)
 Ionization Potential [19 842 000] cm^{-1} ; [2460] eV

COPPER XXVII (Cu^{26+}), $Z = 29$
 Ground State $1s^2 2s^2 {}^2S_{1/2}$ (3 electrons)
 Ionization Potential [20 850 000] cm^{-1} ; [2585] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	Reference
Cu XXVII	145.5	P		$2s - 2p$	$g^2S - {}^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K8
Cu XXVII	211.0	P		$2s \quad 2p$	$g^2S - {}^2P^o$	$\frac{1}{2} - \frac{1}{2}$	K8

COPPER XXVIII (Cu^{27+}), $Z = 29$
 Ground State $1s^2 {}^1S_0$ (2 electrons)
 Ionization Potential [89 223 000] cm^{-1} ; [11062] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XXVIII	1.27			$1s^2 - 1s 3p$	$g^1S - {}^3P^o$	0 - 1	C11
Cu XXVIII	1.49			$1s^2 - 1s 2p$	$g^1S - {}^3P^o$	0 - 1	C11
Cu XXVIII	1.52	?	f	$1s^2 - 1s 2s$	$g^1S - {}^3S$	0 - 1	K8

COPPER XXIX (Cu^{29+}), $Z = 29$
 Ground State $1s^2 S_{1/2}$ (1 electron)
 Ionization Potential [93 288 000] cm^{-1} ; [11566] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Cu XXIX	1.44 P			$1s - 2p$	$g^2S - ^2P^2$	$\frac{1}{2} - \frac{3}{2}$	K8

ZINC. Z = 30

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn	512.656	20					
Zn	512.812	15					C18
Zn	518.550	20					C18
Zn	524.323	15					C18
Zn	532.310	12					C18
Zn	542.762	10					C18
Zn	544.195	15					C18
Zn	564.305	10					C18
Zn	574.967	20					C18
Zn	582.852	20					C18
Zn	825.330	10					C18
Zn	903.194	15					C18
Zn	926.083	10					C18
Zn	926.892	10					C18
Zn	949.063	12					C18
Zn	975.438	10					C18
Zn	977.536	12					C18
Zn	980.623	10					C18
Zn	982.253	10					C18
Zn	987.445	10					C18
Zn	990.443	15					C18
Zn	998.496	10					C18
Zn	999.413	10					C18
Zn	1000.885	12					C18
Zn	1001.932	20					C18
Zn	1003.523	12					C18
Zn	1004.598	12					C18
Zn	1006.347	10					C18
Zn	1009.049	12					C18
Zn	1009.648	10					C18
Zn	1016.017	10					C18
Zn	1017.431	12					C18
Zn	1018.107	10					C18
Zn	1018.456	10					C18
Zn	1023.423	10					C18
Zn	1042.980	10					C18
Zn	1046.867	10					C18
Zn	1079.655	10					C18
Zn	1088.711	10					C18
Zn	1117.393	10					C18
Zn	1138.175	10					C18
Zn	1142.865	10					C18
Zn	1146.190	50					C18
Zn	1146.465	15					C18
Zn	1147.006	10					C18
Zn	1148.062	12					C18
Zn	1152.957	10					C18
Zn	1163.315	15					C18
Zn	1173.854	50					C18
Zn	1176.846	10					C18
Zn	1178.929	60					C18
Zn	1181.539	20					C18
Zn	1183.824	12					C18
Zn	1187.404	50					C18
Zn	1195.019	12					C18
Zn	1195.366	60					C18
Zn	1196.009	35					C18
Zn	1197.098	10					C18
Zn	1199.415	60					C18
Zn	1199.748	15					C18

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Gk Ge As Se Br Kr

Zn

Zn

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn	1200.339	10					
Zn	1204.964	10					C18
Zn	1208.034	20					C18
Zn	1212.471	40					C18
Zn	1219.671	12					C18 C18
Zn	1219.901	12					C18
Zn	1229.253	20					C18
Zn	1255.679	15					C18
Zn	1259.843	10					C18
Zn	1281.573	20					C18 C18
Zn	1298.783	10					C18
Zn	1315.262	5					C18
Zn	1356.608	10					C18
Zn	1366.390	10					C18
Zn	1412.410	60					C18 C18
Zn	1412.818	12					C18
Zn	1425.709	10					C18
Zn	1434.219	10					C18
Zn	1435.914	20					C18
Zn	1454.804	10					C18
Zn	1457.922	10					C18
Zn	1466.682	30					C18
Zn	1470.472	15					C18
Zn	1486.884	25					C18
Zn	1487.996	10					C18 C18
Zn	1489.492	10					C18
Zn	1497.396	40					C18
Zn	1504.754	12					C18
Zn	1517.117	15					C18
Zn	1517.209	20					C18 C18
Zn	1517.314	25					C18
Zn	1520.780	30					C18
Zn	1525.406	10					C18
Zn	1526.845	30					C18
Zn	1532.019	20					C18 C18
Zn	1532.188	15					C18
Zn	1534.371	15					C18
Zn	1536.405	10					C18
Zn	1541.599	15					C18
Zn	1542.517	20					C18 C18
Zn	1543.868	10					C18
Zn	1552.564	20					C18
Zn	1554.199	15					C18
Zn	1554.724	20					C18
Zn	1556.100	10					C18 C18
Zn	1558.505	10					C18
Zn	1563.035	10					C18
Zn	1566.039	15					C18
Zn	1566.822	10					C18
Zn	1567.840	25					C18 C18
Zn	1568.913	10					C18
Zn	1569.307	10					C18
Zn	1570.065	15					C18
Zn	1572.703	20					C18
Zn	1573.011	90					C18 C18
Zn	1575.810	10					C18
Zn	1578.395	10					C18
Zn	1579.446	15					C18
Zn	1580.220	20					C18
Zn	1580.353	25					C18 C18
Zn	1585.214	10					C18
Zn	1587.998	15					C18
Zn	1588.989	15					C18
Zn	1595.044	40					C18
Zn	1595.308	10					C18 C18

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn	1596.076	10					C18
Zn	1597.183	25					C18
Zn	1601.695	15					C18
Zn	1604.500	12					C18
Zn	1606.255	20					C18
Zn	1608.680	30					C18
Zn	1609.725	15					C18
Zn	1611.340	12					C18
Zn	1612.937	15					C18
Zn	1614.235	25					C18
Zn	1614.468	30					C18
Zn	1614.629	10					C18
Zn	1622.829	15					C18
Zn	1628.470	20					C18
Zn	1637.529	25					C18
Zn	1649.055	15					C18
Zn	1664.265	50					C18
Zn	1665.072	20					C18
Zn	1705.833	10					C18
Zn	1707.449	10					C18
Zn	1755.761	10					C18
Zn	1771.987	10					D4, C18
Zn	1828.925	75					C18
Zn	1843.100	10					C18
Zn	1848.481	20					C18
Zn	1850.894	60					C18
Zn	1855.670	10					C18
Zn	1864.154	100					C18
Zn	1866.355	100					C18
Zn	1892.866	75					C18
Zn	1920.951	10					C18
Zn	1938.775	12					C18
Zn	1950.769	10					C18

ZINC I (Zn^{0+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 \ ^1S_0$ (30 electrons)Ionization Potential $75\ 768.10\ cm^{-1}$; $9.394\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn I	1362.541	60		$4s^2 - 4s\ 9p$	$^1S - ^3P^o$	0 - 1	J1, C18
Zn I	1379.337			$4s^2 - 4s\ 8p$	$^1S - ^3P^o$	0 - 1	J1
Zn I	1404.119	20		$4s^2 - 4s\ 7p$	$^1S - ^1P^o$	0 - 1	J1, C18
Zn I	1408.808			$4s^2 - 4s\ 7p$	$^1S - ^3P^o$	0 - 1	J1
Zn I	1457.572	20	4	$4s^2 - 4s\ 6p$	$^1S - ^1P^o$	0 - 1	J1, C18
Zn I	1468.845	3		$4s^2 - 4s\ 6p$	$^1S - ^3P^o$	0 - 1	J1, C18
Zn I	1589.561	30	3	$4s^2 - 4s\ 5p$	$^1S - ^1P^o$	0 - 1	J1, C18
Zn I	1632.001	10	2	$4s^2 - 4s\ 5p$	$^1S - ^3P^o$	0 - 1	J1, C18

ZINC II (Zn¹⁺), Z = 30
 Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²S_{1/2} (29 electrons)
 Ionization Potential 144 892.6 cm⁻¹; 17.964 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn II	732.605	1		3d ¹⁰ 4s - 3d ¹⁰ 9p	g ² S - 2P°	1/2 - 3/2	M5
Zn II	742.720	3		3d ¹⁰ 4s - 3d ⁹ 4s(1D)4p	g ² S - 2D°	1/2 - 3/2	C19
Zn II	747.358	5		3d ¹⁰ 4s - 3d ⁹ 4s(1D)4p	g ² S - 2P°	1/2 - 1/2	C19
Zn II	767.050	5		3d ¹⁰ 4s - 3d ⁹ 4s(1D)4p	g ² S - 2P°	1/2 - 3/2	C19
Zn II	778.112	5		4s - 7p	g ² S - 2P°	1/2 - 1/2	C19
Zn II	779.163	10		4s - 7p	g ² S - 2P°	1/2 - 3/2	C19
Zn II	833.600	10		4s - 6p	g ² S - 2P°	1/2 - 3/2	C19
Zn II	834.11	6		4s - 6p	g ² S - 2P°	?	S18, K8
Zn II	876.84	4		3d ¹⁰ 4s - 3d ⁹ 4s(3D)4p	g ² S - 2D°	1/2 - 3/2	S18, K8
Zn II	881.060	15		3d ¹⁰ 4s - 3d ⁹ 4s(3D)4p	g ² S - 2P°	1/2 - 3/2	C19
Zn II	888.620	6		3d ¹⁰ 4s - 3d ⁹ 4s(3D)4p	g ² S - 4D°	1/2 - 1/2	C19
Zn II	892.914	10		3d ¹⁰ 4s - 3d ⁹ 4s(3D)4p	g ² S - 4D°	1/2 - 3/2	C19
Zn II	923.969	0		3d ¹⁰ 4s - 3d ⁹ 4s(3D)4p	g ² S - 4P°	1/2 - 3/2	C19
Zn II	938.719	1		3d ¹⁰ 4s - 3d ⁹ 4s(3D)4p	g ² S - 4P°	1/2 - 1/2	C19
Zn II	949.455	10		3d ¹⁰ 4s - 3d ⁹ 4s(3D)4p	g ² S - 4P°	1/2 - 3/2	C19
Zn II	984.139	10	2	4s - 5p	g ² S - 2P°	1/2 - 3/2	C19
Zn II	986.516	8	2	4s - 5p	g ² S - 2P°	1/2 - 1/2	C19
Zn II	1115.657	8h		4p - 9d	2P° - 2D	1/2 - 3/2	C19
Zn II	1126.611	2h		4p - 9d	2P° - 2D	3/2 - 3/2	C19
Zn II	1128.300	2h		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	4P° - 4D	3/2 - 1/2	C19
Zn II	1141.955	5b		4p - 8d	2P° - 2D	1/2 - 3/2	C19
Zn II	1142.904	2h		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	4P° - 4D	3/2 - 7/2	C19
Zn II	1153.398	5		4p - 8d	2P° - 2D	3/2 - 5/2	C19
Zn II	1171.943	5		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	4P° - 4D	3/2 - 3/2	C19
Zn II	1184.528	8 -A		3d ⁹ 4s4p - 3d ⁹ 4s(3D)6s	4F° - 4D	3/2 - 7/2	M5
Zn II	1184.858	40		4p - 7d	2P° - 2D	1/2 - 3/2	C19
Zn II	1185.610	1 -A		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	4F° - 4D	7/2 - 7/2	C19
Zn II	1193.231	60					C19
Zn II	1197.149	40		4p - 7d	2P° - 2D	3/2 - 5/2	C19
Zn II	1211.841	25		4p - 8s	2P° - 2S	3/2 - 1/2	C19
Zn II	1228.261	0 -A		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	4D° - 4D	1/2 - 1/2	C19
Zn II	1240.625	3 -A		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	4D° - 4D	3/2 - 3/2	C19
Zn II	1241.874	0 -A		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	2F° - 4D	3/2 - 7/2	C19
Zn II	1244.848	2 -A		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	4D° - 4D	7/2 - 7/2	C19
Zn II	1258.581	0 -A		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	4D° - 4D	3/2 - 7/2	C19
Zn II	1263.412	40		4p - 6d	2P° - 2D	1/2 - 3/2	C19
Zn II	1277.306	60		4p - 6d	2P° - 2D	3/2 - 3/2	C19
Zn II	1277.523	40		4p - 6d	2P° - 2D	3/2 - 3/2	C19
Zn II	1292.00	3		4p - 7s	2P° - 2S	?	S18, K8
Zn II	1306.741	5		4p - 7s	2P° - 2S	3/2 - 1/2	C19
Zn II	1309.521	1 -A		3d ⁹ 4s(3D)4p - 3d ⁹ 4s(3D)6s	2D° - 4D	3/2 - 7/2	C19
Zn II	1355.332	25		3d ⁹ 4s ² - 3d ¹⁰ 9p	2D - 2P°	3/2 - 3/2	M5
Zn II	1366.682	60b		3d ⁹ 4s ² - 3d ¹⁰ 7f	2D - 2F°	3/2 - 7/2	C17
Zn II	1390.372	40		3d ⁹ 4s ² - 3d ⁹ 4s(1D)4p	2D - 2D°	3/2 - 3/2	C19
Zn II	1407.189	2		3d ⁹ 4s ² - 3d ¹⁰ 9p	2D - 2P°	3/2 - 3/2	M5
Zn II?	1407.259	7					M5
Zn II	1410.443	100		3d ⁹ 4s ² - 3d ¹⁰ 8p	2D - 2P°	3/2 - 3/2	M5
Zn II	1419.416	3		3d ⁹ 4s ² - 3d ¹⁰ 7f	2D - 2F°	3/2 - 3/2	C19
Zn II	1419.982	200		3d ⁹ 4s ² - 3d ⁹ 4s4p	2D - 2F°	3/2 - 3/2	M5
Zn II	1430.285	15		3d ⁹ 4s ² - 3d ¹⁰ 6f	2D - 2F°	3/2 - 7/2	M5
Zn II	1430.992	150		3d ⁹ 4s ² - 3d ¹⁰ 6f	2D - 2F°	3/2 - 3/2	M5
Zn II	1439.091	500		4p - 5d	2P° - 2D	1/2 - 3/2	M5
Zn II	1442.962	5 -A		3d ⁹ 4s4p -	4F° - 12	3/2 - 7/2	C19
Zn II	1445.042	700		3d ⁹ 4s ² - 3d ⁹ 4s4p	2D - 2D°	3/2 - 3/2	M5
Zn II	1450.234	5 -A		3d ⁹ 4s4p -	4P° - 17	3/2 - 5/2	C19
Zn II	1450.778	700		3d ⁹ 4s ² - 3d ⁹ 4s4p	2D - 2D°	3/2 - 3/2	M5
Zn II	1456.907	500		4p - 5d	2P° - 2D	3/2 - 5/2	M5
Zn II	1457.422	100		4p - 5d	2P° - 2D	3/2 - 3/2	M5
Zn II	1458.455	20 -A		3d ⁹ 4s4p -	4P° - 10	3/2 - 7/2	C19
Zn II	1460.616	12 -A		3d ⁹ 4s4p -	4P° - 9	3/2 - 3/2	C19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J J	References
Zn II	1462.743	150		$3d^9 4s^2 - 3d^9 4s 4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M5
Zn II	1466.697	15		$3d^9 4s^2 - 3d^{10} 8p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1467.867	4 -A		$3d^9 4s 4p -$	$^4P^o - 8$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1470.222	2 -A		$3d^9 4s 4p -$	$^4P^o - 14$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1471.862	50 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 7$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1477.016	400		$3d^9 4s^2 - 3d^{10} 4p$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1477.938	5 -A		$3d^9 4s 4p -$	$^4P^o - 16$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1478.216	300		$3d^9 4s^2 - 3d^9 4s 4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1482.129	80 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 6$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1486.065	700		$3d^9 4s^2 - 3d^9 4s 4p$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1488.926	120		$3d^9 4s^2 - 3d^{10} 6f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1492.121	30 -A		$3d^9 4s 4p -$	$^4P^o - 11$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1492.369	2 -A		$3d^9 4s 4p -$	$^4F^o - 17$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1493.133	300		$3d^9 4s^2 - 3d^{10} 8p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	M5
Zn II	1496.901	5 -A		$3d^9 4s 4p -$	$^4P^o - 9$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1497.410	80 -A		$3d^9 4s 4p -$	$^4F^o - 21$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1499.052	20 -A		$3d^9 4s 4p -$	$^4F^o - 21$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1499.077	20 -A		$3d^9 4s 4p -$	$^4F^o - 20$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II?	1503.109	20					M5
Zn II	1503.653	25 -A		$3d^9 4s 4p -$	$^4P^o - 8$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1504.034	5 -A		$3d^9 4s 4p -$	$^4F^o - 14$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1508.645	70 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 4$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1510.045	5 -A		$3d^9 4s 4p -$	$^4F^o - 12$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1510.363	150		$3d^9 4s^2 - 3d^9 4s 4p$	$^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1511.694	12 -A		$3d^9 4s 4p -$	$^4F^o - 12$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II?	1511.718	15					M5
Zn II	1513.522	20 -A		$3d^9 4s 4p -$	$^4F^o - 14$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II?	1514.479	25					M5
Zn II	1514.763	120	5	$4p - 6s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	M5
Zn II	1516.045	35 -A		$3d^9 4s 4p -$	$^4F^o - 16$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1518.631	3 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 6$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1520.022	2 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 5$	$\frac{3}{2} - \frac{1}{2}$	M5
Zn II	1520.527	50 -A		$3d^9 4s 4p -$	$^4F^o - 13$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1520.998	15 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 3$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1521.276	40 -A		$3d^9 4s 4p -$	$^4F^o - 12$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1523.241	2 -A		$3d^9 4s(^3D)4p - 3d^9 4s(^3D)4d$	$^4P^o - 2$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1523.903	150		$3d^9 4s^2 - 3d^{10} 7p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1526.969	15 -A		$3d^9 4s 4p -$	$^4F^o - 11$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1527.002	20					C19
Zn II?	1527.125	25					M5
Zn II?	1527.236	20					M5
Zn II	1527.915	100 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 1$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II?	1528.550	40					M5
Zn II?	1528.759	9					M5
Zn II	1530.620	25 -A		$3d^9 4s 4p -$	$^4F^o - 20$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1531.088	30 -A		$3d^9 4s 4p -$	$^4F^o - 9$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1531.394	3 -A		$3d^9 4s 4p -$	$^4P^o - 8$	$\frac{1}{2} - \frac{3}{2}$	M5
Zn II	1535.081	200	5	$4p - 6s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	M5
Zn II	1535.823	30 -A		$3d^9 4s 4p -$	$^4F^o - 14$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1536.726	20 -A		$3d^9 4s 4p -$	$^4F^o - 11$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1538.464	2 -A		$3d^9 4s 4p -$	$^4F^o - 16$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1540.120	50		$3d^9 4s^2 - 3d^9 4s 4p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1540.895	80 -A		$3d^9 4s 4p -$	$^4F^o - 9$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1541.707	40 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4F^o - 7$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1543.037	50 -A		$3d^9 4s 4p -$	$^4F^o - 13$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1543.428	40 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4F^o - 7$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II?	1544.922	50					M5
Zn II	1546.460	10 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 4$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II?	1546.650	100					M5
Zn II?	1546.991	25					C19
Zn II?	1547.800	20					M5
Zn II	1548.434	20 -A		$3d^9 4s 4p - 3d^9 4s(^3D)4d$	$^4P^o - 5$	$\frac{1}{2} - \frac{1}{2}$	M5
Zn II	1548.957	3 -A		$3d^9 4s 4p -$	$^4F^o - 8$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1550.936	80		$3d^9 4s^2 - 3d^{10} 5f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II?	1551.651	75					C19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn II?	1554.225	6					
Zn II	1554.740	6 -A					
Zn II?	1555.764	100		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 6	7/2 - 5/2	M5
Zn II	1559.466	10 -A					
Zn II	1559.709	15b -A		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ P° - 3	3/2 - 1/2	M5
				3d ⁹ 4s4p -	⁴ F° - 11	3/2 - 1/2	C19
Zn II	1561.778	5 -A					
Zn II	1564.369	6 -A		3d ⁹ 4s(³ D)4p - 3d ⁹ 4s(³ D)4d	⁴ P° - 2	? 3/2 - 1/2	C19
Zn II?	1566.736	10		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)5s	⁴ P° - ³ D	3/2 - 1/2	M5
Zn II	1572.198	15b -A					
Zn II?	1572.991	40		3d ⁹ 4s4p -	³ F° - 17	? 3/2 - 1/2	C19
							M5
Zn II	1574.381	6 -A					
Zn II?	1576.905	15		3d ⁹ 4s4p -	³ F° - 16	? 3/2 - 1/2	C19
Zn II?	1580.443	10					
Zn II	1583.933	15 -A					
Zn II	1585.368	100		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 4	7/2 - 5/2	M5
				3d ⁹ 4s ³ - 3d ¹⁰ 7p	³ D - ³ P°	3/2 - 1/2	M5
Zn II	1588.754	3 -A					
Zn II	1589.777	50		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 6	3/2 - 1/2	M5
Zn II	1590.133	25 -A		3d ⁹ 4s ² - 3d ¹⁰ 7p	³ D - ³ P°	3/2 - 1/2	M5
Zn II	1591.724	2 -A		3d ⁹ 4s4p -	³ F° - 20	3/2 - 1/2	M5
Zn II	1594.448	-A		3d ⁹ 4s(³ D)4p - 3d ⁹ 4s(³ D)4d	⁴ P° - 2	? 1/2 - 3/2	C19
				3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 4	3/2 - 1/2	M5
Zn II	1595.027	100 -A					
Zn II	1595.732	20 -A		3d ⁹ 4s4p -	⁴ D° - 21	7/2 - 5/2	M5
Zn II	1597.556	15 -A		3d ⁹ 4s4p -	³ F° - 14	3/2 - 1/2	M5
Zn II	1597.801	5 -A		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 3	7/2 - 5/2	M5
Zn II	1599.146	3b -A		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)6s	³ F° - ³ D	? 7/2 - 5/2	M5
				3d ⁹ 4s4p -	⁴ D° - 17	? 3/2 - 1/2	C19
Zn II	1603.315	100 -A					
Zn II	1603.508	3 -A		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 1	3/2 - 1/2	M5
Zn II	1604.347	20 -A		3d ⁹ 4s4p -	³ F° - 13	3/2 - 1/2	M5
Zn II	1605.196	10 -A		3d ⁹ 4s4p -	³ F° - 12	3/2 - 1/2	M5
Zn II?	1606.082	60		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 1	7/2 - 5/2	M5
Zn II	1608.555	10 -A					
Zn II?	1608.819	70		3d ⁹ 4s4p -	⁴ D° - 13	7/2 - 5/2	M5
Zn II	1609.390	10 -A					
Zn II	1610.743	30 -A		3d ⁹ 4s4p -	⁴ D° - 12	7/2 - 5/2	M5
Zn II?	1611.501	5		3d ⁹ 4s(³ D)4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 2	? 3/2 - 1/2	C19
Zn II?	1611.866	25					
Zn II?	1613.938	25					
Zn II	1614.364	10 -A					
Zn II?	1614.432	8		3d ⁹ 4s4p -	⁴ D° - 15	? 3/2 - 1/2	C19
Zn II	1615.949	1 -A		3d ⁹ 4s4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 1	? 3/2 - 1/2	M5
Zn II	1616.364	30 -A					
Zn II	1617.675	40 -A		3d ⁹ 4s(³ D)4p -	³ F° - 17	? 7/2 - 5/2	C19
Zn II	1618.020	40		3d ⁹ 4s4p -	⁴ D° - 20	3/2 - 1/2	M5
Zn II	1619.269	80 -A		3d ⁹ 4s ² - 3d ¹⁰ 5f	³ D - ³ F°	3/2 - 1/2	M5
Zn II	1621.552	40b -A		3d ⁹ 4s(³ D)4p - 3d ⁹ 4s(³ D)4d	⁴ F° - 4	? 3/2 - 1/2	C19, K8
				3d ⁹ 4s(³ D)4p -	³ F° - 11	3/2 - 1/2	C19
Zn II	1621.951	15 -A					
Zn II	1623.479	40 -A		3d ⁹ 4s(³ D)4p -	⁴ D° - 16	? 1/2 - 3/2	C19
Zn II	1624.020	30 -A		3d ⁹ 4s4p -	³ F° - 10	3/2 - 1/2	C19
Zn II	1626.200	3 -A		3d ⁹ 4s(³ D)4p - 3d ⁹ 4s(³ D)5s	⁴ P° - ³ D	3/2 - 1/2	C19
Zn II	1630.119	25 -A		3d ⁹ 4s(³ D)4p -	³ F° - 9	3/2 - 1/2	C19
				3d ⁹ 4s(³ D)4p -	⁴ D° - 14	3/2 - 1/2	C19
Zn II	1631.364	20 -A					
Zn II	1631.539	12 -A		3d ⁹ 4s(³ D)4p -	⁴ D° - 9	7/2 - 5/2	C19
Zn II	1632.390	15 -A		3d ⁹ 4s(³ D)4p -	⁴ D° - 13	3/2 - 1/2	C19
Zn II	1635.180	20 -A		3d ⁹ 4s(³ D)4p -	⁴ D° - 12	3/2 - 1/2	C19
Zn II	1635.277	20 -A		3d ⁹ 4s(³ D)4p -	³ F° - 8	3/2 - 1/2	C19
				3d ⁹ 4s4p -	³ F° - 21	? 7/2 - 5/2	C19
Zn II	1638.239	20 -A					
Zn II	1641.257	2b -A		3d ⁹ 4s(³ D)4p -	⁴ D° - 13	3/2 - 1/2	C19
Zn II	1645.389	50 -A		3d ⁹ 4s(³ D)4p -	³ F° - 14	? 7/2 - 5/2	C19
Zn II	1647.571	8 -A		3d ⁹ 4s(³ D)4p - 3d ⁹ 4s(³ D)4d	⁴ D° - 7	? 7/2 - 5/2	C19
Zn II	1647.754	5 -A		3d ⁹ 4s(³ D)4p -	³ P° - 16	? 1/2 - 3/2	C19
				3d ⁹ 4s(³ D)4p -	³ P° - 16	? 3/2 - 1/2	C19
Zn II	1650.211	20 -A					
Zn II	1652.241	10 -A		3d ⁹ 4s(³ D)4p -	⁴ D° - 11	3/2 - 1/2	C19
Zn II	1652.931	5 -A		3d ⁹ 4s(³ D)4p -	⁴ D° - 10	? 3/2 - 1/2	C19
Zn II	1655.020	30 -A		3d ⁹ 4s(³ D)4p - 3d ⁹ 4s(³ D)4d	³ F° - 6	3/2 - 1/2	C19
Zn II	1658.245	60 -A		3d ⁹ 4s(³ D)4p -	⁴ D° - 9	3/2 - 1/2	C19
				3d ⁹ 4s(³ D)4p - 3d ⁹ 4s(³ D)4d	⁴ D° - 6	7/2 - 5/2	C19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn II	1660.247	4 -A		3d ⁹ 4s(2D)4p -	2D° - 17	? 3/2 - 5/2	C19
Zn II	1661.306	2 -A		3d ⁹ 4s(2D)4p -	2P° - 15	? 1/2 - 3/2	C19
Zn II	1661.495	4 -A		3d ⁹ 4s(2D)4p -	2P° - 15	? 3/2 - 5/2	C19
Zn II	1662.695	15 -A		3d ⁹ 4s(2D)4p -	2D° - 16	? 3/2 - 5/2	C19
Zn II	1664.326	0 -A		3d ⁹ 4s(2D)4p -	4D° - 8	? 3/2 - 5/2	C19
Zn II	1667.911	5 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)5s	4P° - 2D	3/2 - 5/2	C19
Zn II	1668.585	1 -A		3d ⁹ 4s(2D)4p -	2F° - 11	? 3/2 - 5/2	C19
Zn II	1669.453	2 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 7	? 3/2 - 5/2	C19
Zn II	1670.617	2b -A		3d ⁹ 4s(2D)4p -	2F° - 10	? 3/2 - 5/2	C19
Zn II	1671.313	20 -A		3d ⁹ 4s(2D)4p -	4D° - 8	? 3/2 - 5/2	C19
Zn II	1676.697	2b -A		3d ⁹ 4s(2D)4p -	2D° - 15	? 3/2 - 5/2	C19
Zn II	1679.667	5 -A		3d ⁹ 4s(2D)4p -	2P° - 13	3/2 - 5/2	C19
Zn II	1682.698	5 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 6	3/2 - 5/2	C19
Zn II	1684.802	3 -A		3d ⁹ 4s4p -	2D° - 16	? 3/2 - 5/2	C19
Zn II	1685.942	5b -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2F° - 4	3/2 - 5/2	C19
Zn II	1686.502	25 -A		3d ⁹ 4s(2D)4p -	2D° - 14	? 3/2 - 5/2	C19
Zn II	1688.240	15b -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2D° - 7	? 3/2 - 5/2	C19
Zn II	1689.818	25b -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 6	3/2 - 5/2	C19
Zn II	1691.470	1 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 4	3/2 - 5/2	C19
Zn II	1691.592	1 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 5	3/2 - 5/2	C19
Zn II	1699.471	3 -A		3d ⁹ 4s(2D)4p -	2P° - 11	3/2 - 5/2	C19
Zn II	1701.398	4 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2F° - 3	? 3/2 - 5/2	C19
Zn II	1701.766	12 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2F° - 6	3/2 - 5/2	C19
Zn II	1702.210	10b -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)5s	4P° - 4D	3/2 - 5/2	C19
Zn II	1702.836	2 -A		3d ⁹ 4s4p -	2D° - 20	3/2 - 5/2	M5
Zn II	1704.178	2b -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2F° - 2	? 3/2 - 5/2	C19
Zn II	1704.577	0 -A		3d ⁹ 4s(2D)4p -	2P° - 9	3/2 - 5/2	C19
Zn II	1707.191	20b -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 5	1/2 - 3/2	C19
Zn II	1709.243	0 -A		3d ⁹ 4s(2D)4p -	2D° - 14	? 3/2 - 5/2	C19
Zn II	1710.052	10 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2F° - 1	? 3/2 - 5/2	C19
Zn II	1713.251	50 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)5s	4P° - 4D	3/2 - 5/2	C19
Zn II	1714.270	0 -A		3d ⁹ 4s(2D)4p -	2P° - 8	1/2 - 3/2	C19
Zn II	1714.457	15b -A		3d ⁹ 4s(2D)4p -	2P° - 8	3/2 - 5/2	C19
Zn II	1715.388	1 -A		3d ⁹ 4s(2D)4p -	2D° - 11	? 3/2 - 5/2	C19
Zn II	1715.763	60 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 1	? 3/2 - 5/2	C19
Zn II	1716.935	1 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 4	3/2 - 5/2	C19
Zn II	1718.182	1 -A		3d ⁹ 4s4p -	2D° - 13	3/2 - 5/2	M5
Zn II	1719.136	2 -A		3d ⁹ 4s(2D)4p -	2D° - 12	? 3/2 - 5/2	C19
Zn II	1723.901	2 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)5s	4F° - 2D	3/2 - 5/2	C19
Zn II	1724.364	2 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 4	3/2 - 5/2	C19
Zn II	1730.619	2 -A		3d ⁹ 4s(2D)4p -	2D° - 8	3/2 - 5/2	C19
Zn II	1732.953	25 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 3	? 3/2 - 5/2	C19
Zn II	1735.607	80 -A		3d ⁹ 4s4p - 3d ⁹ 4s(2D)5s	4P° - 4D	3/2 - 5/2	M5
Zn II	1735.847	15 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 2	? 3/2 - 5/2	C19
Zn II	1736.825	0h -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2F° - 4	3/2 - 5/2	C19
Zn II	1736.889	60 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)5s	4P° - 4D	3/2 - 5/2	C19
Zn II	1737.895	50 -A		3d ⁹ 4s4p - 3d ⁹ 4s(2D)5s	4P° - 4D	1/2 - 3/2	M5
Zn II	1738.915	1 -A		3d ⁹ 4s4p -	2D° - 11	? 3/2 - 5/2	C19, K8
Zn II	1740.536	1 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 3	? 3/2 - 5/2	C19
Zn II	1741.930	18 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	4D° - 1	3/2 - 5/2	C19
Zn II?	1742.285	20					C19
Zn II	1747.118	75		3d ⁹ 4s ² - 3d ¹⁰ 6p	2D - 2P°	3/2 - 5/2	C19
Zn II	1752.358	3 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2D° - 5	3/2 - 5/2	C19
Zn II	1755.847	10 -A		3d ⁹ 4s4p - 3d ⁹ 4s(2D)5s	2F° - 2D	3/2 - 5/2	M5
Zn II	1756.665	2 -A		3d ¹⁰ 4f -	2F° - 16	? 3/2 - 5/2	C19
Zn II?	1762.151	20					M5
Zn II	1762.191	10 -A		3d ⁹ 4s4p - 3d ⁹ 4s(2D)5s	4P° - 4D	3/2 - 5/2	M5
Zn II?	1762.223	10					M5
Zn II?	1762.243	10					M5
Zn II	1762.395	25 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2F° - 1	? 3/2 - 5/2	C19
Zn II	1774.040	75 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)5s	4P° - 4D	1/2 - 3/2	C19
Zn II	1775.024	3 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2D° - 6	? 3/2 - 5/2	C19
Zn II	1787.384	0 -A		3d ⁹ 4s(2D)4p - 3d ⁹ 4s(2D)4d	2P° - 3	3/2 - 5/2	C19
Zn II	1789.509	8 -A		3d ⁹ 4s4p - 3d ⁹ 4s(2D)5s	4D° - 2D	3/2 - 5/2	M5
Zn II	1790.759	80 -A		3d ⁹ 4s4p - 3d ⁹ 4s(2D)5s	4F° - 4D	3/2 - 5/2	M5

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn II?	1796.701	15					
Zn II	1797.643	100 -A					C19
Zn II?	1808.915	10		$3d^9 4s 4p - 3d^9 4s(^3D) 5s$	$^4F^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1811.008	80 -A					C19
Zn II	1811.105	15 -A		$3d^9 4s 4p - 3d^9 4s(^3D) 5s$ $3d^9 4s 4p - 3d^9 4s(^3D) 5s$	$^4F^{\circ} - ^4D$ $^2F^{\circ} - ^2D$	$\frac{7}{2} - \frac{5}{2}$ $\frac{7}{2} - \frac{5}{2}$	M5 M5
Zn II	1813.170	1 -A					
Zn II?	1816.480	80		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 4d$	$^2D^{\circ} - 4$? $\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1831.376	80 -A					C19
Zn II	1833.481	40		$3d^9 4s(^3L) 4p - 3d^9 4s(^2D) 5s$	$^2F^{\circ} - ^2D$	$\frac{5}{2} - \frac{3}{2}$	C19
Zn II	1833.573	50 -A		$3d^9 4s^2 - 3d^{10} 4f$ $3d^9 4s 4p - 3d^9 4s(^2D) 5s$	$^3D - ^3F^{\circ}$ $^4F^{\circ} - ^4D$	$\frac{5}{2} - \frac{7}{2}$ $\frac{5}{2} - \frac{7}{2}$	M5 M5
Zn II	1834.268	40 -A					
Zn II	1836.007	70 -A		$3d^9 4s^2 - 3d^{10} 6p$	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1836.654	75		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$	$^4F^{\circ} - ^4D$	$\frac{7}{2} - \frac{7}{2}$	M5
Zn II	1847.562	75 -A		$3d^9 4s^2 - 3d^{10} 6p$	$^2D - ^3P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M5
Zn II	1850.140	10 -A		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$ $3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^2P^{\circ} - ^2D$ $^4F^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$ $\frac{3}{2} - \frac{7}{2}$	M5 C19
Zn II	1857.274	5 -A					
Zn II?	1864.117	100		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^4F^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	C19
Zn II?	1866.077	100					M5
Zn II	1866.366	10 -A					M5
Zn II	1867.994	40 -A		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$ $3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^2D^{\circ} - ^2D$ $^4D^{\circ} - ^2D$	$\frac{3}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$	M5 C19
Zn II?	1872.125	100					C19
Zn II	1894.259	75 -A					
Zn II	1896.056	2 -A		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$	$^2D^{\circ} - ^2D$	$\frac{5}{2} - \frac{5}{2}$	M5
Zn II	1901.523	60 -A		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^4D^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	C19
Zn II	1914.806	60 -A		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$ $3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^3F^{\circ} - ^2D$ $^2F^{\circ} - ^4D$	$\frac{7}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$	M5 C19
Zn II	1918.962	50					
Zn II	1920.271	70 -A		$3d^9 4s^2 - 3d^9 4s 4p$	$^3D - ^2D^{\circ}$	$\frac{5}{2} - \frac{5}{2}$	M5
Zn II	1929.670	3		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$	$^4D^{\circ} - ^4D$	$\frac{3}{2} - \frac{1}{2}$	M5
Zn II	1931.073	40 -A	8	$3d^9 4s^3 - 3d^{10} 4f$	$^2D - ^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M5
Zn II	1940.413	40 -A		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$ $3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^2P^{\circ} - ^3D$ $^4D^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$ $\frac{1}{2} - \frac{1}{2}$	C19 C19
Zn II	1945.583	60 -A					
Zn II	1948.458	30		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^2F^{\circ} - ^4D$	$\frac{5}{2} - \frac{3}{2}$	C19
Zn II	1951.911	60 -A		$3d^9 4s^2 - 3d^9 4s(^2D) 4p$	$^2D - ^2D^{\circ}$	$\frac{5}{2} - \frac{3}{2}$	C19
Zn II	1952.999	80 -A		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1954.872	75 -A		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$ $3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^4D^{\circ} - ^4D$ $^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{5}{2}$ $\frac{5}{2} - \frac{3}{2}$	M5 C19
Zn II	1964.538	80 -A					
Zn II	1969.404	100		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$	$^4D^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M5
Zn II	1974.467	12 -A		$3d^9 4s^2 - 3d^9 4s 4p$	$^3D - ^2P^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M5
Zn II	1977.159	25 -A		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^3F^{\circ} - ^4D$	$\frac{5}{2} - \frac{7}{2}$	C19
Zn II	1977.494	5 -A		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$ $3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^2P^{\circ} - ^4D$ $^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{3}{2} - \frac{1}{2}$	C19 C19
Zn II	1982.111	100 -A					
Zn II	1982.429	10 -A		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$	$^4D^{\circ} - ^4D$	$\frac{7}{2} - \frac{7}{2}$	M5
Zn II	1985.608	70 -A		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^2D^{\circ} - ^2D$? $\frac{3}{2} - \frac{3}{2}$	C19
Zn II	1986.988	100 -A		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^4D^{\circ} - ^4D$? $\frac{1}{2} - \frac{3}{2}$	C19
Zn II	1993.367	50 -A		$3d^9 4s 4p - 3d^9 4s(^2D) 5s$ $3d^9 4s 4p - 3d^9 4s(^2D) 5s$	$^4D^{\circ} - ^4D$ $^2D^{\circ} - ^2D$	$\frac{5}{2} - \frac{5}{2}$? $\frac{5}{2} - \frac{5}{2}$	M5 M5
Zn II	1996.922	50 -A					
Zn II?	1998.238	20		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^4D^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	C19
Zn II	1998.977	25b -A		$3d^9 4s(^2D) 4p - 3d^9 4s(^2D) 5s$	$^2D^{\circ} - ^4D$	$\frac{3}{2} - \frac{1}{2}$	C19

ZINC III (Zn^{2+}), $Z = 30$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} \ ^1S_0$ (28 electrons)
 Ionization Potential $320\ 390\ cm^{-1}$; $39.722\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn III	383.759	1		$3d^{10} - 3d^9(^2D)4I$	$g^1S - ^2D^o$	0 - 1	D4
Zn III	387.740	1		$3d^{10} - 3d^9(^2D)4I$	$g^1S - ^1P^o$	0 - 1	D4
Zn III	388.224	0		$3d^{10} - 3d^9(^2D)4f$	$g^1S - ^3P^o$	0 - 1	D4
Zn III	419.807	1		$3d^{10} - 3d^9(^2D)5p$	$g^1S - ^3D^o$	0 - 1	D4
Zn III	421.035	3		$3d^{10} - 3d^9(^2D)5p$	$g^1S - ^1P^o$	0 - 1	D4
Zn III	425.799	15		$3d^{10} - 3d^9(^2D)5p$	$g^1S - ^3P^o$	0 - 1	D4
Zn III	467.630	0		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^1F^o$	3 - 3	D4
Zn III	470.211	1		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^1F^o$	2 - 3	D4
Zn III	479.743	1		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^1D - ^1F^o$	2 - 3	D4
Zn III	496.423	1		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	2 - 2	D4
Zn III	499.678	2		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3D^o$	3 - 2	D4
Zn III	499.915	2		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	2 - 3	D4
Zn III	500.342	2		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	1 - 2	D4
Zn III	501.264	5		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3D^o$	3 - 3	D4
Zn III	502.632	5		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3D^o$	2 - 2	D4
Zn III	504.227	1		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3D^o$	2 - 3	D4
Zn III	506.646	3		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3D^o$	1 - 2	D4
Zn III	507.202	5		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	3 - 4	D4
Zn III	516.837	8		$3d^9(^2D)4s - 3d^8 4s(^2P)4p$	$^3D - ^3D^o$	3 - 3	D4
Zn III	519.998	8		$3d^9(^2D)4s - 3d^8 4s(^2P)4p$	$^3D - ^3D^o$	2 - 1	D4
Zn III	521.872	4		$3d^9(^2D)4s - 3d^8 4s(^2D)4p$	$^3D - ^1F^o$	3 - 3	D4
Zn III	525.109	5		$3d^9(^2D)4s - 3d^8 4s(^2D)4p$	$^3D - ^1F^o$	2 - 3	D4
Zn III	533.517	10		$3d^9(^2D)4s - 3d^8 4s(^2D)4p$	$^3D - ^3F^o$	3 - 4	D4
Zn III	533.646	4		$3d^9(^2D)4s - 3d^8 4s(^2D)4p$	$^3D - ^3F^o$	3 - 3	D4
Zn III	537.019	8		$3d^9(^2D)4s - 3d^8 4s(^2D)4p$	$^3D - ^3F^o$	2 - 3	D4
Zn III	539.072	2		$3d^9(^2D)4s - 3d^8 4s(^2D)4p$	$^3D - ^3F^o$	1 - 2	D4
Zn III	546.802	0		$3d^9(^2D)4s - 3d^8(^2D)4I$	$^3D - ^3G^o$	3 - 3	D4
Zn III	549.491	4		$3d^9(^2D)4s - 3d^8 4s(^2D)4p$	$^1D - ^3F^o$	2 - 3	D4
Zn III	555.627	0		$3d^9(^2D)4s - 3d^8(^2D)4f$	$^3D - ^3D^o$	3 - 3	D4
Zn III	555.979	0		$3d^9(^2D)4s - 3d^8(^2D)4I$	$^3D - ^3D^o$	3 - 2	D4
Zn III	556.763	6		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^1F^o$	3 - 3	D4
Zn III	558.641	0		$3d^9(^2D)4s - 3d^8(^2D)4f$	$^3D - ^3F^o$	2 - 3	D4
Zn III	559.239	6		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^1D^o$	2 - 2	D4
Zn III	559.628	2		$3d^9(^2D)4s - 3d^8(^2D)4I$	$^3D - ^3D^o$	1 - 2	D4
Zn III	560.513	8		$3d^9(^2D)4s - 3d^8(^2D)4f$	$^3D - ^3P^o$	2 - 2	D4
Zn III	563.759	1		$3d^9(^2D)4s - 3d^8(^2D)4f$	$^1D - ^1F^o$	2 - 3	D4
Zn III	568.099	25		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3G^o$	3 - 3	D4
Zn III	569.987	75		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3D^o$	1 - 1	D4
Zn III	571.927	15		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3G^o$	2 - 3	D4
Zn III	572.151	10		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3D^o$	3 - 3	D4
Zn III	572.788	20		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^1D - ^1D^o$	2 - 2	D4
Zn III	573.187	12		$3d^9(^2D)4s - 3d^8(^2D)4I$	$^1D - ^3D^o$	2 - 2	D4
Zn III	573.338	8		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3D^o$	2 - 2	D4
Zn III	573.695	8		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3F^o$	3 - 3	D4
Zn III	574.037	12		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^1D - ^1F^o$	2 - 3	D4
Zn III	574.161	8		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3F^o$	3 - 4	D4
Zn III	577.031	25		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3F^o$	1 - 2	D4
Zn III	577.590	15		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3F^o$	2 - 3	D4
Zn III	578.559	12		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3D^o$	1 - 2	D4
Zn III	582.123	10		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^3D - ^3G^o$	3 - 4	D4
Zn III	585.100	2		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	3 - 3	D4
Zn III	586.087	8		$3d^9(^2D)4s - 3d^8 4s(^2F)4p$	$^1D - ^3G^o$	2 - 3	D4
Zn III	587.194	4		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	2 - 2	D4
Zn III	588.048	10		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	3 - 4	D4
Zn III	589.146	6		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	2 - 3	D4
Zn III	591.710	2		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	1 - 1	D4
Zn III	592.677	0		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3F^o$	1 - 2	D4
Zn III	598.665	2		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3G^o$	3 - 4	D4
Zn III	600.599	2		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3G^o$	2 - 3	D4
Zn III	604.082	1		$3d^9(^2D)4s - 3d^8 4s(^4F)4p$	$^3D - ^3G^o$	1 - 2	D4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn III	606.164	8		$3d^9(2D)4s - 3d^94s(4F)4p$	$3P^o - 4D^o$	2-2	D4
Zn III	607.364	10		$3d^9(2D)4s - 3d^94s(4F)4p$	$1D^o - 3F^o$	3-3	D4
Zn III	612.787	0		$3d^9(2D)4s - 3d^94s(4F)4p$	$3D^o - 3D^o$	3-4	D4
Zn III	616.310	8		$3d^9(2D)4s - 3d^94s(4F)4p$	$3D^o - 3D^o$	1-1	D4
Zn III	628.682	4		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 1D^o$	2-2	D4
Zn III	631.444	5		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 1F^o$	2-3	D4
Zn III	634.807	10		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3D^o$	3-3	D4
Zn III	634.979	1		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 1D^o$	1-2	D4
Zn III	635.498	6		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3D^o$	1-1	D4
Zn III	639.060	20		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3F^o$	3-4	D4
Zn III	639.597	2		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3D^o$	2-3	D4
Zn III	639.850	4		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3F^o$	3-3	D4
Zn III	640.263	20		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3D^o$	3-3	D4
Zn III	641.821	1		$3d^9(2D)4s - 3d^9(2D)5p$	$3F^o - 1D^o$	3-2	D4
Zn III	642.216	6		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3P^o$	1-0	D4
Zn III	642.702	8		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3P^o$	2-1	D4
Zn III	643.026	12		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3P^o$	3-2	D4
Zn III	643.259	0		$3d^9(2D)4p - 3d^9(2D)7d$	$3P^o - 3D^o$	0-1	D4
Zn III	644.700	30		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3F^o$	2-3	D4
Zn III	645.836	15		$3d^9(2D)4s - 3d^9(2D)5p$	$1D^o - 1D^o$	2-2	D4
Zn III	646.377	4		$3d^9(2D)4s - 3d^9(2D)5p$	$1D^o - 3D^o$	2-1	D4
Zn III	646.802	2		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3D^o$	1-2	D4
Zn III	647.927	1		$3d^9(2D)4s - 3d^9(2D)5p$	$3D^o - 3P^o$	2-2	D4
Zn III	648.755	12		$3d^9(2D)4s - 3d^9(2D)5p$	$1D^o - 1F^o$	2-3	D4
Zn III	649.318	6		$3d^9(2D)4s - 3d^9(2D)5p$	$1D^o - 1P^o$	2-1	D4
Zn III	651.261	10		$3d^9(2D)4s - 3d^9(2D)5p$	$1D^o - 3F^o$	2-2	D4
Zn III	651.975	0		$3d^9(2D)4p - 3d^9(2D)7d$	$3F^o - 3G$	3-4	D4
Zn III	653.321	1		$3d^9(2D)4p - 3d^9(2D)8s$	$3F^o - 3D$	3-2	D4
Zn III	653.575	0		$3d^9(2D)4p - 3d^9(2D)8s$	$3F^o - 3D$	3-3	D4
Zn III	654.977	0		$3d^9(2D)4p - 3d^9(2D)7d$	$3F^o - 3G$	4-5	D4
Zn III	656.486	2		$3d^9(2D)4p - 3d^9(2D)8s$	$3F^o - 3D$	4-3	D4
Zn III	657.372	6		$3d^9(2D)4s - 3d^9(2D)5p$	$1D^o - 3D^o$	2-3	D4
Zn III	658.115	6		$3d^9(2D)4s - 3d^9(2D)5p$	$1D^o - 3D^o$	2-2	D4
Zn III	662.309	0		$3d^9(2D)4p - 3d^9(2D)7d$	$1F^o - 3F$	3-2	D4
Zn III	662.776	20		$3d^9(2D)4s - 3d^9(2D)5p$	$1D^o - 3F^o$	2-3	D4
Zn III	673.499	2		$3d^9(2D)4p - 3d^9(2D)8s$	$3D^o - 3D$	2-2	D4
Zn III	677.642	60		$3d^{10} - 3d^9(2D)4p$	$g^1S - 1F^o$	0-1	D4
Zn III	677.971	60		$3d^{10} - 3d^9(2D)4p$	$g^1S - 3D^o$	0-1	D4
Zn III	683.268	0		$3d^9(2D)4p - 3d^9(2D)7d$	$1D^o - 3F$	2-3	D4
Zn III	689.790	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^o - 3D$	2-3	D4
Zn III	692.619	0		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^o - 3S$	2-1	D4
Zn III	692.983	0		$3d^9(2D)4p - 3d^9(2D)7s$	$3P^o - 3D$	2-2	D4
Zn III	693.571	1		$3d^9(2D)4p - 3d^9(2D)7s$	$3P^o - 3D$	2-3	D4
Zn III	694.570	0		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^o - 3P$	1-0	D4
Zn III	698.157	0		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^o - 1F$	2-3	D4
Zn III	699.680	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^o - 3G$	2-3	D4
Zn III	699.904	0		$3d^9(2D)4p - 3d^9(2D)6d$	$3P^o - 3D$	1-2	D4
Zn III	702.594	0		$3d^9(2D)4p - 3d^9(2D)7s$	$3F^o - 3D$	2-1	D4
Zn III	704.108	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^o - 3G$	3-4	D4
Zn III	705.979	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^o - 3F$	4-4	D4
Zn III	706.667	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^o - 3D$	4-3	D4
Zn III	707.671	1		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^o - 3G$	4-5	D4
Zn III	710.603	2		$3d^9(2D)4p - 3d^9(2D)7s$	$3F^o - 3D$	4-3	D4
Zn III	711.924	0		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^o - 3D$	2-2	D4
Zn III	713.904	10		$3d^{10} - 3d^9(2D)4p$	$g^1S - 3P^o$	0-1	D4
Zn III	716.952	0		$3d^9(2D)4p - 3d^9(2D)7s$	$3D^o - 1D$	2-2	D4
Zn III	716.758	1		$3d^9(2D)4p - 3d^9(2D)5g$	$3F^o - 3F$	4-4	D4
Zn III	717.143	0		$3d^9(2D)4p - 3d^9(2D)6d$	$3F^o - 3G$	3-3	D4
Zn III	719.765	1		$3d^9(2D)4p - 3d^9(2D)7s$	$1F^o - 1D$	3-2	D4
Zn III	722.182	0		$3d^9(2D)4p - 3d^9(2D)6d$	$3D^o - 3F$	3-3	D4
Zn III	725.533	0		$3d^9(2D)4p - 3d^9(2D)6d$	$1D^o - 3F$	2-2	D4
Zn III	725.694	0		$3d^9(2D)4p - 3d^9(2D)6d$	$1D^o - 1F$	2-3	D4
Zn III	726.394	0		$3d^9(2D)4p - 3d^9(2D)7s$	$3D^o - 3D$	3-2	D4
Zn III	727.002	0		$3d^9(2D)4p - 3d^9(2D)7s$	$3D^o - 3D$	3-3	D4
Zn III	727.332	0		$3d^9(2D)4p - 3d^9(2D)6d$	$1D^o - 3G$	2-3	D4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn III	728.252	0		3d ⁹ (² D)4p - 3d ⁹ (² D)7s	³ D° - ³ D	1 - 1	D4
Zn III	728.646	0		3d ⁹ (² D)4p - 3d ⁹ (² D)7s	¹ P° - ³ D	1 - 1	D4
Zn III	728.921	1		3d ⁹ (² D)4p - 3d ⁹ (² D)6d	³ D° - ¹ P	1 - 1	D4
Zn III	730.064	1		3d ⁹ (² D)4p - 3d ⁹ (² D)7s	¹ D° - ¹ D	2 - 2	D4
Zn III	730.310	1		3d ⁹ (² D)4p - 3d ⁹ (² D)7s	³ F° - ³ D	2 - 2	D4
Zn III	730.946	0		3d ⁹ (² D)4p - 3d ⁹ (² D)7s	³ D° - ³ D	2 - 3	D4
Zn III	731.197	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6d	¹ D° - ¹ P	2 - 1	D4
Zn III	734.185	0		3d ⁹ (² D)4p - 3d ⁹ (² D)7s	¹ F° - ³ D	3 - 2	D4
Zn III	734.828	1		3d ⁹ (² D)4p - 3d ⁹ (² D)7s	¹ F° - ³ D	3 - 3	D4
Zn III	742.964	1		3d ⁹ (² D)4p - 3d ⁹ (² D)7s	¹ P° - ³ D	1 - 2	D4
Zn III	794.474	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ P° - ¹ D	2 - 2	D4
Zn III	800.422	3		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ P° - ¹ D	1 - 2	D4
Zn III	804.077	5		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ P° - ³ D	2 - 3	D4
Zn III	805.351	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ P° - ¹ P	1 - 1	D4
Zn III	805.108	5		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ P° - ³ P	2 - 2	D4
Zn III	808.606	3		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ P° - ¹ D	1 - 2	D4
Zn III	813.485	3		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ P° - ³ D	2 - 3	D4
Zn III	814.120	1		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ F° - ³ F	2 - 2	D4
Zn III	816.670	1		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ P° - ³ D	1 - 2	D4
Zn III	818.682	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ F° - ³ G	2 - 3	D4
Zn III	820.661	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ P° - ³ P	1 - 2	D4
Zn III	820.735	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ F° - ³ F	3 - 4	D4
Zn III	821.070	2		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ F° - ³ F	3 - 3	D4
Zn III	822.498	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ F° - ³ D	3 - 3	D4
Zn III	824.711	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ F° - ³ G	3 - 4	D4
Zn III	825.955	2		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ F° - ³ D	2 - 1	D4
Zn III	826.909	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ P° - ³ D	1 - 2	D4
Zn III	829.866	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ F° - ³ G	4 - 5	D4
Zn III	830.901	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ F° - ³ D	3 - 2	D4
Zn III	831.380	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ¹ G	3 - 4	D4
Zn III	832.426	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ G	3 - 3	D4
Zn III	832.868	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ F	2 - 2	D4
Zn III	833.606	1b		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ F° - ³ F	2 - 3	D4
Zn III	837.054	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ P° - ³ D	4 - 3	D4
Zn III	837.613	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ G	2 - 3	D4
Zn III	838.313	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ F° - ¹ F	3 - 3	D4
Zn III	838.658	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ D° - ¹ D	3 - 2	D4
Zn III	841.664	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ F° - ¹ G	3 - 4	D4
Zn III	845.238	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ F° - ³ D	2 - 3	D4
Zn III	847.525	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ F	3 - 4	D4
Zn III	847.879	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ F	3 - 3	D4
Zn III	849.117	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	¹ F° - ¹ D	3 - 2	D4
Zn III	849.386	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ D	3 - 3	D4
Zn III	851.539	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ P° - ¹ D	1 - 2	D4
Zn III	852.306	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ D	1 - 1	D4
Zn III	852.707	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ D	2 - 2	D4
Zn III	853.220	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	³ D° - ³ F	2 - 3	D4
Zn III	858.152	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ F° - ³ F	3 - 4	D4
Zn III	859.760	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ D° - ¹ P	2 - 1	D4
Zn III	859.895	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ D° - ³ D	3 - 3	D4
Zn III	860.062	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ F° - ³ D	3 - 3	D4
Zn III	860.286	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ D° - ¹ D	1 - 2	D4
Zn III	860.808	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	¹ P° - ¹ D	1 - 2	D4
Zn III	861.667	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ D° - ³ D	1 - 1	D4
Zn III	863.850	1		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	³ D° - ³ D	2 - 2	D4
Zn III	870.890	3		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	¹ F° - ³ D	3 - 3	D4
Zn III	872.633	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ D° - ³ D	2 - 2	D4
Zn III	873.207	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ D° - ³ F	2 - 3	D4
Zn III	874.542	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ P° - ³ P	1 - 2	D4
Zn III	879.380	0		3d ⁹ (² D)4p - 3d ⁹ (² D)5d	¹ P° - ³ S	1 - 1	D4
Zn III	881.565	0		3d ⁹ (² D)4p - 3d ⁹ (² D)6s	¹ P° - ³ D	1 - 2	D4
Zn III	1124.021	2		3d ⁹ 4s ² - 3d ⁹ 4s(¹ F)4f	³ F - ³ F°	4 - 5	D4
Zn III	1137.030	3		3d ⁹ 4s ² - 3d ⁹ 4s(¹ F)4p	³ F - ³ F°	3 - 2	D4
Zn III	1146.105	50		3d ⁹ 4s ² - 3d ⁹ 4s(¹ F)4p	³ F - ³ D°	4 - 3	D4
Zn III	1155.497	60		3d ⁹ 4s ² - 3d ⁹ 4s(¹ F)4p	³ F - ³ F°	3 - 3	D4

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J	I	References
Zn III	1157.289	40		$3d^9 4s^0 - 3d^9 4s(4F)4p$	$^3F - ^3F^o$	2-2		D4
Zn III	1166.790	25		$3d^9(3D)4p - 3d^9 4s^2$	$^3D^o - ^1S$	1-0		D4
Zn III	1167.764	30		$3d^9(3D)4p - 3d^9 4s^2$	$^1P^o - ^1S$	1-0		D4
Zn III	1170.149	50		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$^3F - ^3D^o$	3-2		D4
Zn III	1177.651	50		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$^3F - ^3F^o$	4-4		D4
Zn III	1178.835	25		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$^3F - ^3D^o$	3-3		D4
Zn III	1191.597	10		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$^3F - ^3D^o$	2-2		D4
Zn III	1191.864	40		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$^1D - ^1F^o$	2-3		D4
Zn III	1197.973	20		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3F$	2-2		D4
Zn III	1198.322	15		$3d^9(3D)4d - 3d^9(3D)7f$	$^1G - ^3H^o$?	4	C18, K8
Zn III	1200.635	60		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$^3F - ^3D^o$	2-3		D4
Zn III	1200.854	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^1F$	2-3		D4
Zn III	1202.152	30		$3d^9(3D)4d - 3d^9(3D)7f$	$^3G - ^3G^o$?	3-3	C18, K8
Zn III	1203.270	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3D^o - ^1S$	1-0		D4
Zn III	1204.310	60		$3d^9(3D)4p - 3d^9(3D)4d$	$^1P^o - ^1S$	1-0		D4
Zn III	1207.737	10		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^1D$	2-2		D4
Zn III	1212.255	40		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$^3F - ^3F^o$	3-4		D4
Zn III	1217.494	3		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3D$	2-1		D4
Zn III	1222.266	8		$3d^9 4s^2 - 3d^9(3D)7f$	$^1G - ^3G^o$	4-3		D4
Zn III	1230.451	25		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3F$	1-2		D4
Zn III	1230.949	1		$3d^9 4s^2 - 3d^9 4s(3F)4p$	$^3F - ^3D^o$	4-3		D4
Zn III	1233.948	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^1P$	2-1		D4
Zn III	1239.355	3		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3F$	3-2		D4
Zn III	1240.750	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^1D$	1-2		D4
Zn III	1242.411	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^1F$	3-3		D4
Zn III	1243.833	20		$3d^9(3D)4p - 3d^9 4s^2$	$^3F^o - ^1G$?	3-4	D4
Zn III	1247.355	5		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3F$?	2-3	D4
Zn III	1250.336	30		$3d^9(3D)4p - 3d^9(3D)5s$	$^3P^o - ^1D$	2-2		D4
Zn III	1251.021	40		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3D$	1-1		D4
Zn III	1252.673	3		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^1F$	4-3		D4
Zn III	1253.201	10		$3d^9(3D)4p - 3d^9(3D)5s$	$^3P^o - ^3D$?	2-1	D4
Zn III	1253.345	60		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3D$?	2-3	D4
Zn III	1254.316	25		$3d^9(3D)4p - 3d^9 4s^2$	$^3F^o - ^1G$	4-4		D4
Zn III	1259.912	20		$3d^9 4s^2 - 3d^9 4s(3D)4p$	$^3F - ^1F^o$	4-3		D4
Zn III	1262.541	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3P$	2-2		D4
Zn III	1265.370	60		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3P$	2-1		D4
Zn III	1268.077	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3F$	2-2		D4
Zn III	1268.423	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^1P$	1-1		D4
Zn III	1268.792	10		$3d^9 4s^2 - 3d^9 4s(3P)4p$	$^3F - ^3D^o$	3-3		D4
Zn III	1270.573	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^1G$	3-4		D4
Zn III	1271.291	8		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^1F$	2-3		D4
Zn III	1272.037	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3D$	0-1		D4
Zn III	1274.383	60		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3D$	1-2		D4
Zn III	1276.219	60		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3P$	1-0		D4
Zn III	1279.021	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^1D$	2-2		D4
Zn III	1281.508	40		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^1G$	4-4		D4
Zn III	1283.941	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3D$	3-2		D4
Zn III	1285.752	40		$3d^9(3D)4p - 3d^9(3D)5s$	$^3P^o - ^1D$	1-2		D4
Zn III	1288.767	40		$3d^9(3D)4p - 3d^9(3D)5s$	$^3P^o - ^3D$	1-1		D4
Zn III	1289.935	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3D$	2-1		D4
Zn III	1290.051	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^1P$	0-1		D4
Zn III	1290.789	5		$3d^9(3D)4p - 3d^9(3D)5s$	$^3P^o - ^3D$	2-2		D4
Zn III	1292.231	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3F$	3-3		D4
Zn III	1295.318	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3G$	2-3		D4
Zn III	1295.463	10		$3d^9(3D)4p - 3d^9(3D)5s$	$^3F^o - ^1D$	3-2		D4
Zn III	1298.539	50		$3d^9(3D)4p - 3d^9(3D)5s$	$^3P^o - ^3D$	2-3		D4
Zn III	1298.689	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3D$	3-3		D4
Zn III	1301.371	40		$3d^9(3D)4p - 3d^9(3D)4d$	$^3D^o - ^3F$	3-2		D4
Zn III	1301.687	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3P$	1-1		D4
Zn III	1303.551	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3F$	4-4		D4
Zn III	1304.769	50		$3d^9(3D)4p - 3d^9(3D)4d$	$^3D^o - ^1F$	3-3		D4
Zn III	1306.322	50		$3d^9(3D)4p - 3d^9 4s^2$	$^3D^o - ^1G$	3-4		D4
Zn III	1307.364	60		$3d^9(3D)4p - 3d^9(3D)4d$	$^3P^o - ^3S$	2-1		D4
Zn III	1308.450	5		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^1P$	2-1		D4
Zn III	1308.569	60		$3d^9(3D)4p - 3d^9(3D)4d$	$^3F^o - ^3P$	3-2		D4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn III	1310.117	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3F^o - 3D$	4-3	D4
Zn III	1311.104	50		$3d^9(2E)4p - 3d^9(2D)5s$	$3P^o - 3D$	0-1	D4
Zn III	1312.504	35		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3D$	3-2	D4
Zn III	1314.367	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3F$	2-2	D4
Zn III	1314.796	60		$3d^9(2D)4p - 3d^9(2E)4d$	$3F^o - 3D$	2-2	D4
Zn III	1317.599	0		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 1F$	2-3	D4
Zn III	1319.096	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3F^o - 3G$	3-4	D4
Zn III	1323.512	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3F^o - 3F$	2-3	D4
Zn III	1324.455	20		$3d^9(2D)4p - 3d^9(2D)4d$	$3P^o - 3F$	0-1	D4
Zn III	1325.831	30b		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 1D$	2-2	D4
Zn III	1326.708	50b		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^o - 3F$	3-2	D4
Zn III	1326.899	50		$3d^9(2D)4p - 3d^9(2D)5s$	$3F^o - 1D$	2-2	D4
Zn III	1328.372	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3F^o - 3G$	4-5	D4
Zn III	1328.561	40		$3d^9(2D)4p - 3d^9(2D)5s$	$3P^o - 3D$	1-2	D4
Zn III	1329.923	40b		$3d^9 4s^2 - 3d^9 4s(2D)4p$	$3F - 3F^o$	1-4	D4
Zn III	1330.087	40		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3G$	3-3	D4
Zn III	1330.178	40		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^o - 1F$	3-3	D4
Zn III	1330.297	40b		$3d^9(2D)4p - 3d^9(2D)4d$	$3F^o - 3D$	2-3	D4
Zn III	1330.897	40		$3d^9(2D)4p - 3d^9(2D)4d$	$3F^o - 3G$	4-4	D4
Zn III	1331.823	50		$3d^9(2D)4p - 3d^9 4s^2$	$1F^o - 1G$	3-4	D4
Zn III	1335.846	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 1G$	3-4	D4
Zn III	1336.996	2		$3d^9(2D)5p - 3d^9(2D)11s$	$3P^o - 3D$	2-2	D4
Zn III	1337.571	20		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3D$	2-1	D4
Zn III	1338.659	20		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^o - 1D$	3-2	D4
Zn III	1338.939	50		$3d^9(2D)4p - 3d^9(2D)5s$	$3F^o - 3D$	3-2	D4
Zn III	1340.656	3		$3d^9(2D)5p - 3d^9(2D)11s$	$3P^o - 3D$	0-1	D4
Zn III	1343.355	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3G$	2-3	D4
Zn III	1346.146	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3P^o - 3S$	1-1	D4
Zn III	1347.286	50		$3d^9(2D)4p - 3d^9(2D)5s$	$3F^o - 3D$	3-3	D4
Zn III	1350.377	50		$3d^9(2D)4p - 3d^9 4s^2$	$3P^o - 3P$	2-1	D4
Zn III	1350.638	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3D$	3-2	D4
Zn III	1350.968	10b		$3d^9(2D)5p - 3d^9(2D)11s$	$3F^o - 3D$	3-2	D4
Zn III	1353.953	50		$3d^9(2D)4p - 3d^9 4s^2$	$3P^o - 3P$	2-2	D4
Zn III	1354.189	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3F$	1-2	D4
Zn III	1354.650	1		$3d^9(2D)5p - 3d^9(2D)11s$	$3F^o - 3D$	4-3	D4
Zn III	1355.518	30		$3d^9(2D)4p - 3d^9(2D)4d$	$3P^o - 3F$	1-2	D4
Zn III	1356.519	50		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^o - 3G$	3-3	D4
Zn III	1357.496	15		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 1P$	2-1	D4
Zn III	1359.604	50		$3d^9(2D)4p - 3d^9(2D)5s$	$3F^o - 3D$	4-3	D4
Zn III	1359.804	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3F$	3-4	D4
Zn III	1360.220	0		$3d^9(2D)5p - 3d^9(2D)11s$	$1F^o - 1D$	3-2	D4
Zn III	1361.979	60b		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^o - 3F$	2-2	D4
Zn III	1362.335	5		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3D - 1F^o$	2-3	D4
Zn III	1362.523	60b		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^o - 1G$	3-4	D4
Zn III	1363.413	60b		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^o - 1D$	3-2	D4
Zn III	1364.323	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3D$	2-2	D4
Zn III	1365.702	60		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^o - 1F$	2-3	D4
Zn III	1366.682	60b		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 1D$	1-2	D4
Zn III	1366.978	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3D$	3-3	D4
Zn III	1368.027	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3P^o - 1D$	1-2	D4
Zn III	1370.532	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3P^o - 3S$	0-1	D4
Zn III	1372.541	50		$3d^9(2D)4p - 3d^9(2D)5s$	$3F^o - 3D$	2-2	D4
Zn III	1373.200	1		$3d^9(2D)5p - 3d^9(2D)11s$	$1D^o - 1D$	2-2	D4
Zn III	1373.381	1		$3d^9(2D)5p - 3d^9(2D)11s$	$1D^o - 3D$	2-1	D4
Zn III	1373.687	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3F$	2-3	D4
Zn III	1374.005	3		$3d^9(2D)5p - 3d^9(2D)11s$	$3D^o - 3D$	3-2	D4
Zn III	1374.130	1		$3d^9(2D)5p - 3d^9(2D)11s$	$3D^o - 3D$	3-3	D4
Zn III	1374.638	60		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^o - 1P$	2-2	D4
Zn III	1375.105	20		$3d^9 4s^2 - 3d^9 4s(2D)4p$	$3F - 3F^o$	3-3	D4
Zn III	1377.346	40		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^o - 1D$	2-2	D4
Zn III	1377.915	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3P$	3-2	D4
Zn III	1379.161	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3D$	1-1	D4
Zn III	1380.554	12		$3d^9(2D)4p - 3d^9(2D)4d$	$1P^o - 3D$	1-1	D4
Zn III	1380.828	50		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^o - 3D$	2-1	D4
Zn III	1380.986	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^o - 3D$	2-3	D4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn III	1381.314	40		$3d^9(2D)4p - 3d^9(2D)5s$	$3F^{\circ} - 3D$	2-3	D4
Zn III	1383.700	60		$3d^9(2D)4p - 3d^94s^2$	$3P^{\circ} - 3P$	1-0	D4
Zn III	1383.920	1		$3d^9(2D)4d - 3d^94s(4F)4p$	$3G - 1F^{\circ}$	3-3	D4
Zn III	1387.215	50b		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 3D$	2-1	D4
Zn III	1387.440	50		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^{\circ} - 3F$	3-4	D4
Zn III	1387.925	3		$3d^94s^2 - 3d^94s(2D)4p$	$3F^{\circ} - 3F^{\circ}$	2-2	D4
Zn III	1389.604	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 3G$	3-4	D4
Zn III	1391.216	60b		$3d^9(2D)4p - 3d^9(2D)5s$	$1F^{\circ} - 1D$	3-2	D4
Zn III	1391.790	40		$3d^9(2D)4p - 3d^94s^2$	$3P^{\circ} - 3P$	1-1	D4
Zn III	1392.170	30		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 3P$	2-2	D4
Zn III	1393.460	50		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 3G$	2-3	D4
Zn III	1394.911	60		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^{\circ} - 3D$	3-3	D4
Zn III	1395.652	60		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 3P$	2-1	D4
Zn III	1399.599	2		$3d^9(2D)5p - 3d^9(2D)10s$	$3P^{\circ} - 3D$	0-1	D4
Zn III	1400.344	8		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 1P$	1-1	D4
Zn III	1401.762	60		$3d^9(2D)4p - 3d^9(2D)4d$	$1P^{\circ} - 1P$	1-1	D4
Zn III	1404.853	3		$3d^94s^2 - 3d^94s(2D)4p$	$3F^{\circ} - 3F^{\circ}$	2-3	D4
Zn III	1406.326	60		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^{\circ} - 3P$	3-2	D4
Zn III	1407.039	40		$3d^9(2D)4p - 3d^94s^2$	$3F^{\circ} - 3P$	3-2	D4
Zn III	1407.619	40		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 3D$	1-2	D4
Zn III	1408.687	70		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 1P$	2-1	D4
Zn III	1409.050	30		$3d^9(2D)4p - 3d^9(2D)4d$	$1P^{\circ} - 3D$	1-2	D4
Zn III	1409.855	50		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 3P$	1-0	D4
Zn III	1411.287	40		$3d^9(2D)4p - 3d^9(2D)4d$	$1P^{\circ} - 3P$	1-0	D4
Zn III	1411.647	60		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^{\circ} - 3D$	3-2	D4
Zn III	1413.168	2		$3d^9(2D)5p - 3d^9(2D)11s$	$1F^{\circ} - 3D$	3-2	D4
Zn III	1416.048	40		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 3D$	2-2	D4
Zn III	1417.682	5		$3d^94s^2 - 3d^9(2D)4f$	$3F^{\circ} - 1F^{\circ}$	4-3	D4
Zn III	1417.868	40		$3d^9(2D)4p - 3d^94s^2$	$3P^{\circ} - 3P$	0-1	D4
Zn III	1418.152	0		$3d^9(2D)5p - 3d^9(2D)10s$	$1F^{\circ} - 1D$	1-2	D4
Zn III	1418.482	1		$3d^9(2D)4p - 3d^9(2D)4d$	$1F^{\circ} - 3G$	3-4	D4
Zn III	1420.509	10		$3d^9(2D)5p - 3d^9(2D)10s$	$3P^{\circ} - 3D$	1-2	D4
Zn III	1420.920	60		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^{\circ} - 3D$	3-3	D4
Zn III	1421.494	50		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^{\circ} - 1D$	1-2	D4
Zn III	1422.976	50		$3d^9(2D)4p - 3d^9(2D)5s$	$1P^{\circ} - 1D$	1-2	D4
Zn III	1425.002	25		$3d^9(2D)4p - 3d^94s^2$	$3P^{\circ} - 1D$	2-2	D4
Zn III	1425.210	50		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^{\circ} - 3D$	1-1	D4
Zn III	1426.150	25		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 3F$	2-3	D4
Zn III	1426.611	60		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^{\circ} - 3D$	2-2	D4
Zn III	1430.107	50		$3d^9(2D)4p - 3d^9(2D)5s$	$1D^{\circ} - 1D$	2-2	D4
Zn III	1432.143	60		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 1D^{\circ}$	3-2	D4
Zn III	1432.716	2		$3d^9(2D)5p - 3d^9(2D)10s$	$3D^{\circ} - 3D$	2-3	D4
Zn III	1433.853	50		$3d^9(2D)4p - 3d^9(2D)5s$	$1D^{\circ} - 3D$	2-1	D4
Zn III	1434.027	25		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 3D$	2-3	D4
Zn III	1435.037	2		$3d^9(2D)5p - 3d^9(2D)10s$	$1D^{\circ} - 1D$	2-2	D4
Zn III	1436.075	40		$3d^9(2D)4p - 3d^9(2D)5s$	$3D^{\circ} - 3D$	2-3	D4
Zn III	1436.219	15		$3d^9(2D)5p - 3d^9(2D)10s$	$3D^{\circ} - 3D$	3-3	D4
Zn III	1437.296	12		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 3P$	1-2	D4
Zn III	1437.767	1		$3d^94s^2 - 3d^94s(4F)4p$	$1D - 3D^{\circ}$	2-3	D4
Zn III	1438.808	10		$3d^9(2D)4p - 3d^9(2D)4d$	$1P^{\circ} - 3P$	1-2	D4
Zn III	1440.159	12		$3d^9(2D)4p - 3d^94s^2$	$3F^{\circ} - 3P$	2-1	D4
Zn III	1441.017	15		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 3P$	1-1	D4
Zn III	1441.474	50		$3d^9(2D)4p - 3d^9(2D)5s$	$1F^{\circ} - 3D$	3-2	D4
Zn III	1442.512	60		$3d^9(2D)4p - 3d^9(2D)4d$	$1P^{\circ} - 3P$	1-1	D4
Zn III	1444.216	10		$3d^9(2D)4p - 3d^94s^2$	$3F^{\circ} - 3P$	2-2	D4
Zn III	1446.086	50		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 3P$	2-2	D4
Zn III	1446.915	40		$3d^9(2D)4p - 3d^9(2D)4d$	$3D^{\circ} - 3S$	2-1	D4
Zn III	1449.832	40b		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 3P$	2-1	D4
Zn III	1451.147	50		$3d^9(2D)4p - 3d^9(2D)5s$	$1F^{\circ} - 3D$	3-3	D4
Zn III	1453.700	1		$3d^94s^2 - 3d^94s(4F)4p$	$3P - 3F^{\circ}$	1-2	D4
Zn III	1456.797	60		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 1D^{\circ}$	2-2	D4
Zn III	1464.198	75		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 1P^{\circ}$	2-1	D4
Zn III	1465.744	60		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^{\circ}$	2-1	D4
Zn III	1465.952	15		$3d^9(2D)5p - 3d^9(2D)10s$	$3F^{\circ} - 3D$	2-2	D4
Zn III	1468.113	4		$3d^94s^2 - 3d^9(2D)4f$	$3F - 1F^{\circ}$	3-3	D4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn III	1471.224	30		$3d^9(2D)4p - 3d^9 4s^2$	$2P^{\circ} - 1D$	1-2	D4
Zn III	1472.769	2		$3d^9 4s^2 - 3d^9(2D)4f$	$2F^{\circ} - 2G^{\circ}$	4-4	D4
Zn III	1473.394	75		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 1F^{\circ}$	3-3	D4
Zn III	1474.132	15		$3d^9 4s^2 - 3d^9(2D)4f$	$2F^{\circ} - 2F^{\circ}$	4-4	D4
Zn III	1474.270	20		$3d^9 4s^2 - 3d^9(2D)4f$	$2F^{\circ} - 2G^{\circ}$	4-5	D4
Zn III	1475.591	50		$3d^9(2D)4p - 3d^9(2D)5s$	$1P^{\circ} - 2D$	1-2	D4
Zn III	1483.266	30		$3d^9(2D)4p - 3d^9(2D)5s$	$1D^{\circ} - 2D$	2-2	D4
Zn III	1483.979	8		$3d^9(2D)4p - 3d^9 4s^2$	$2F^{\circ} - 1D$	3-2	D4
Zn III	1484.484	5		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$2F^{\circ} - 1F^{\circ}$	4-3	D4
Zn III	1487.566	25		$3d^9(2D)4p - 3d^9 4s^2$	$2D^{\circ} - 2P$	3-2	D4
Zn III	1489.245	40		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 2D^{\circ}$	3-2	D4
Zn III	1489.708	3		$3d^9(2D)5p - 3d^9(2D)8s$	$2P^{\circ} - 2S$	2-1	D4
Zn III	1490.543	50		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 1D^{\circ}$	1-2	D4
Zn III	1493.506	30		$3d^9(2D)4p - 3d^9(2D)5s$	$1D^{\circ} - 2D$	2-3	D4
Zn III	1495.715	15		$3d^9(2D)4p - 3d^9(2D)4d$	$2D^{\circ} - 2S$	1-1	D4
Zn III	1497.327	10		$3d^9(2D)4p - 3d^9(2D)4d$	$1P^{\circ} - 2S$	1-1	D4
Zn III	1498.778	50		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 1P^{\circ}$	1-1	D4
Zn III	1499.400	70		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 1F^{\circ}$	2-3	D4
Zn III	1499.780	5		$3d^9(2D)4p - 3d^9 4s^2$	$2D^{\circ} - 2P$	2-1	D4
Zn III	1500.398	60		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 2D^{\circ}$	1-1	D4
Zn III	1502.077	5		$3d^9 4s^2 - 3d^9(2D)4f$	$2F^{\circ} - 1F^{\circ}$	2-3	D4
Zn III	1503.803	0		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$2P^{\circ} - 2D^{\circ}$	2-2	D4
Zn III	1504.188	15		$3d^9(2D)4p - 3d^9 4s^2$	$2D^{\circ} - 2P$	2-2	D4
Zn III	1505.234	20		$3d^9(2D)4p - 3d^9(2D)4d$	$1D^{\circ} - 2S$	2-1	D4
Zn III	1505.903	75		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 2D^{\circ}$	3-3	D4
Zn III	1507.862	15		$3d^9(2D)5p - 3d^9(2D)9s$	$2F^{\circ} - 2D$	3-2	D4
Zn III	1508.220	10		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$2P^{\circ} - 2D^{\circ}$	1-2	D4
Zn III	1512.611	2		$3d^9(2D)5p - 3d^9(2D)9s$	$2F^{\circ} - 2D$	4-3	D4
Zn III	1515.289	10		$3d^9(2D)5p - 3d^9(2D)9s$	$1P^{\circ} - 1D$	1-2	D4
Zn III	1515.833	80		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 2D^{\circ}$	2-2	D4
Zn III	1517.611	20		$3d^9(2D)5p - 3d^9(2D)7g$	$2F^{\circ} - 2F$	2-2	C18, K8
Zn III	1518.150	3		$3d^9(2D)5p - 3d^9(2D)8s$	$2P^{\circ} - 2S$	1-1	D4
Zn III	1518.396	6		$3d^9(2D)5p - 3d^9(2D)9s$	$1F^{\circ} - 1D$	3-2	D4
Zn III	1518.979	2		$3d^9(2D)5p - 3d^9(2D)9s$	$2P^{\circ} - 2D$	1-2	D4
Zn III	1520.713	60		$3d^9(2D)4p - 3d^9 4s^2$	$1F^{\circ} - 2P$	3-2	D4
Zn III	1525.371	8		$3d^9(2D)4p - 3d^9 4s^2$	$2F^{\circ} - 1D$	2-2	D4
Zn III	1526.417	2		$3d^9 4s^2 - 3d^9(2D)4f$	$2F^{\circ} - 2F^{\circ}$	3-3	D4
Zn III	1531.725	1h		$3d^9(2D)5p - 3d^9(2D)8s$	$2D^{\circ} - 2S$	2-1	D4
Zn III	1532.588	6		$3d^9(2D)5p - 3d^9(2D)9s$	$2D^{\circ} - 2D$	2-2	D4
Zn III	1533.087	30		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 2D^{\circ}$	2-3	D4
Zn III	1534.563	2		$3d^9(2D)5p - 3d^9(2D)9s$	$1D^{\circ} - 1D$	2-2	D4
Zn III	1536.999	3		$3d^9(2D)5p - 3d^9(2D)9s$	$2D^{\circ} - 2D$	3-3	D4
Zn III	1539.845	20		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$2F^{\circ} - 1F^{\circ}$	3-3	D4
Zn III	1542.223	25		$3d^9(2D)4p - 3d^9 4s^2$	$2D^{\circ} - 2P$	1-0	D4
Zn III	1543.954	10		$3d^9(2D)4p - 3d^9 4s^2$	$1F^{\circ} - 2P$	1-0	D4
Zn III	1545.086	20		$3d^9(2D)5p - 3d^9(2D)7g$	$2D^{\circ} - 1D$	2-2	C18, K8
Zn III	1549.173	10		$3d^9(2D)5p - 3d^9(2D)7g$	$2D^{\circ} - 1D$	3-2	C18, K8
Zn III	1552.090	5		$3d^9(2D)5p - 3d^9 4s(4F)4p$	$2D^{\circ} - 2F^{\circ}$	3-3	D4
Zn III	1552.288	50		$3d^9(2D)4s - 3d^9(2D)4p$	$1D^{\circ} - 1D^{\circ}$	2-2	D4
Zn III	1552.937	30		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 2D^{\circ}$	1-2	D4
Zn III	1553.106	25		$3d^9(2D)4s - 3d^9(2D)4p$	$2D^{\circ} - 2F^{\circ}$	3-2	D4
Zn III	1554.030	20		$3d^9(2D)4p - 3d^9 4s^2$	$1P^{\circ} - 2P$	1-1	D4
Zn III	1556.993	15		$3d^9(2D)4p - 3d^9 4s^2$	$2D^{\circ} - 2P$	1-2	D4
Zn III	1558.738	25		$3d^9(2D)4p - 3d^9 4s^2$	$1P^{\circ} - 2P$	1-2	D4
Zn III	1560.780	70		$3d^9(2D)4s - 3d^9(2D)4p$	$1D^{\circ} - 1P^{\circ}$	2-1	D4
Zn III	1562.538	75		$3d^9(2D)4s - 3d^9(2D)4p$	$1D^{\circ} - 2D^{\circ}$	2-1	D4
Zn III	1563.163	10		$3d^9 4s^2 - 3d^9(2D)4f$	$2F^{\circ} - 2F^{\circ}$	2-3	D4
Zn III	1566.955	12		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$2P^{\circ} - 2F^{\circ}$	1-2	D4
Zn III	1567.310	25		$3d^9(2D)4p - 3d^9 4s^2$	$1D^{\circ} - 2P$	2-2	D4
Zn III	1570.900	3		$3d^9 4s^2 - 3d^9(2D)4f$	$2F^{\circ} - 2D^{\circ}$	2-2	D4
Zn III	1571.008	3		$3d^9(2D)5p - 3d^9(2D)9s$	$2F^{\circ} - 2D$	2-2	D4
Zn III	1571.377	12		$3d^9(2D)5p - 3d^9(2D)9s$	$2F^{\circ} - 2D$	2-3	D4
Zn III	1572.198	15		$3d^9 4s^2 - 3d^9(2D)4f$	$2F^{\circ} - 1P^{\circ}$	2-1	D4
Zn III	1573.809	25		$3d^9(2D)4p - 3d^9 4s^2$	$2D^{\circ} - 1D$	3-2	D4
Zn III	1577.275	0		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$2F^{\circ} - 1F^{\circ}$	2-3	D4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn III	1578.642	15		$3d^9(2D)5s - 3d^9 4s(4F)4p$	$3D - 3D^{\circ}$	3-2	D4
Zn III	1579.729	15		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3F$	2-5	D4
Zn III	1581.505	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3P^{\circ} - 3F^{\circ}$	3-4	D4
Zn III	1582.034	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3F^{\circ}$	2-2	D4
Zn III	1585.876	5		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3D - 3F^{\circ}$	3-2	D4
Zn III	1586.076	6		$3d^9(2D)5s - 3d^9 4s(4F)4p$	$3D - 3F^{\circ}$	1-2	D4
Zn III	1590.678	2		$3d^9(2D)5s - 3d^9 4s(4F)4p$	$3D - 3F^{\circ}$	2-2	D4
Zn III	1592.128	3		$3d^9(2D)5p - 3d^9(2D)8s$	$3P^{\circ} - 3D$	2-1	D4
Zn III	1592.431	50		$3d^9(2D)4p - 3d^9 4s^2$	$3D - 3D$	2-2	D4
Zn III	1598.517	80		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3F$	3-3	D4
Zn III	1599.146	3		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$3F - 3D^{\circ}$	4-3	D4
Zn III	1600.074	2		$3d^9(2D)5p - 3d^9(2D)9s$	$3D - 3D$	1-2	D4
Zn III	1600.206	1		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3D$	3-2	D4
Zn III	1600.858	80		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3F^{\circ}$	2-3	D4
Zn III	1602.511	1		$3d^9(2D)5p - 3d^9(2D)8s$	$3D - 3S$	2-1	D4
Zn III	1603.470	0		$3d^9(2D)5p - 3d^9(2D)9s$	$3D - 3D$	2-2	D4
Zn III	1603.873	5		$3d^9(2D)5p - 3d^9(2D)9s$	$3D - 3D$	2-3	D4
Zn III	1607.950	10		$3d^9 4s(4F)4p - 3d^9(2D)9s$	$3D - 3D$	3-3	C18,K8
Zn III	1608.424	20		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3D - 3F^{\circ}$	2-2	D4
Zn III	1608.829	40		$3d^9 4s(4F)4p - 3d^9(2D)10s$	$3D - 3D$	1-2	C18,K8
Zn III	1609.043	20		$3d^9 4s(4F)4p - 3d^9(2D)11s$	$3F - 3D$	3-2	C18,K8
Zn III	1610.713	3		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3F$	1-2	D4
Zn III	1610.832	30		$3d^9(2D)5p - 3d^9(2D)8s$	$3P^{\circ} - 3D$	3-2	D4
Zn III	1610.968	40		$3d^9(2D)4p - 3d^9 4s^2$	$3F^{\circ} - 3D$	3-2	D4
Zn III	1612.688	10b		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3D$	1-2	D4
Zn III	1613.201	15		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$3F - 3D^{\circ}$	2-1	D4
Zn III	1613.728	20		$3d^9(2D)5p - 3d^9(2D)7d$	$3D - 3D$	3-2	C18,K8
Zn III	1614.895	8		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$3F - 3F^{\circ}$	4-4	D4
Zn III	1619.616	80		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^{\circ}$	2-2	D4
Zn III	1621.552	40b		$3d^9 4s^2 - 3d^9 4s(2D)4p$	$3D - 3F^{\circ}$	2-3	D4
Zn III	1622.509	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3F^{\circ}$	1-2	D4
Zn III	1626.009	1		$3d^9(2D)5p - 3d^9(2D)7d$	$3D - 3F$	2-2	D4
Zn III	1629.157	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3F^{\circ}$	2-3	D4
Zn III	1630.546	5		$3d^9(2D)5p - 3d^9(2D)7d$	$3D - 3F$	3-2	D4
Zn III	1631.653	8		$3d^9(2D)5p - 3d^9(2D)7d$	$3D - 3F$	3-3	D4
Zn III	1632.171	2		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	3-3	D4
Zn III	1632.626	10		$3d^9(2D)5p - 3d^9(2D)7d$	$3D - 3D$	3-2	D4
Zn III	1639.318	100b		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^{\circ}$	2-3	D4
Zn III	1641.257	2b		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$3F - 3D^{\circ}$	3-2	D4
Zn III	1644.820	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3P^{\circ}$	2-1	D4
Zn III	1648.406	2		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3F$	2-3	D4
Zn III	1651.739	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3P^{\circ}$	1-0	D4
Zn III	1652.541	3		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3D$	2-3	D4
Zn III	1653.697	60		$3d^9(2D)4p - 3d^9 4s^2$	$3P^{\circ} - 3D$	1-2	D4
Zn III	1654.950	5		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3P$	2-2	D4
Zn III	1662.279	2		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3S$	2-1	D4
Zn III	1663.344	40		$3d^9(2D)4p - 3d^9 4s^2$	$3D - 3D$	2-2	D4
Zn III	1665.352	6		$3d^9(2D)5p - 3d^9(2D)8s$	$3P^{\circ} - 3D$	2-3	D4
Zn III	1669.297	2		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3F$	2-2	D4
Zn III	1669.699	2		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3F$	3-3	D4
Zn III	1670.416	20		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3F$	2-3	D4
Zn III	1670.617	2b		$3d^9(2D)5p - 3d^9(2D)8s$	$3P^{\circ} - 3D$	0-1	D4
Zn III	1671.779	3		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$3F - 3G^{\circ}$	2-3	D4
Zn III	1672.120	5		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3D$	3-2	D4
Zn III	1673.049	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3P^{\circ}$	3-2	D4
Zn III	1674.291	12		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3F$	4-4	D4
Zn III	1675.059	3		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3F$	4-3	D4
Zn III	1675.788	3		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3G$	2-3	D4
Zn III	1676.443	20b		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3G$	3-4	D4
Zn III	1676.692	2b		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$3F - 3F^{\circ}$	3-3	D4
Zn III	1677.216	5		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3G - 3F^{\circ}$	3-2	D4
Zn III	1678.728	2		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	3-2	D4
Zn III	1679.180	0		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3F - 3D^{\circ}$	4-3	D4
Zn III	1679.321	2		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3D$	4-3	D4
Zn III	1681.858	1		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3G$	4-4	D4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - I	References
Zn III	1682.656	1		$3d^9(2D)5p - 3d^9(2D)7d$	$2F^{\circ} - 3G$	4 - 5	D4
Zn III	1684.381	6		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	2 - 2	D4
Zn III	1685.196	4		$3d^9(2D)5p - 3d^9(2D)8s$	$3F^{\circ} - 3D$	3 - 2	D4
Zn III	1685.942	5b		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$1P - 3D^{\circ}$	1 - 2	D4
Zn III	1686.039	6		$3d^9(2D)5p - 3d^9(2D)7d$	$1F^{\circ} - 3F$	3 - 2	D4
Zn III	1688.240	15b		$3d^9(2D)5p - 3d^9(2D)7d$	$1F^{\circ} - 1D$	3 - 2	D4
Zn III	1688.589	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3P^{\circ}$	1 - 1	D4
Zn III	1689.818	25b		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3P$	1 - 1	D4
Zn III	1690.111	3		$3d^9(2D)5p - 3d^9(2D)7d$	$3P^{\circ} - 3P$	1 - 2	D4
Zn III	1692.554	8		$3d^9(2D)5p - 3d^9(2D)8s$	$3F^{\circ} - 3D$	4 - 3	D4
Zn III	1695.407	100		$3d^9(2D)4s - 3d^9(2D)4p$	$1D - 3F^{\circ}$	2 - 2	D4
Zn III	1697.433	1		$3d^9(2D)5p - 3d^9(2D)8s$	$1P^{\circ} - 3D$	1 - 1	D4
Zn III	1699.036	2		$3d^9(2D)5p - 3d^9(2D)8s$	$3P^{\circ} - 3D$	3 - 2	D4
Zn III	1700.053	5		$3d^9(2D)5p - 3d^9(2D)8s$	$1F^{\circ} - 1D$	3 - 2	D4
Zn III	1700.976	1		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3G - 3F^{\circ}$	4 - 4	D4
Zn III	1702.210	10b		$3d^9(2D)5p - 3d^9(2D)7d$	$3D^{\circ} - 3F$	1 - 2	D4
Zn III	1702.540	7		$3d^9(2D)5p - 3d^9(2D)7d$	$3D^{\circ} - 3D$	2 - 2	D4
Zn III	1704.178	2b		$3d^9(2D)5p - 3d^9(2D)7d$	$3D^{\circ} - 3F$	3 - 4	D4
Zn III	1704.475	0		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	4 - 3	D4
Zn III	1704.971	10b		$3d^9(2D)5p - 3d^9(2D)7d$	$3D^{\circ} - 3F$	3 - 3	D4
Zn III	1705.115	2		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3G - 3F^{\circ}$	5 - 4	D4
Zn III	1705.997	15b		$3d^9(2D)5p - 3d^9(2D)7d$	$1D^{\circ} - 3F$	2 - 2	D4
Zn III	1706.659	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3P^{\circ}$	2 - 2	D4
Zn III	1707.191	20b		$3d^9(2D)5p - 3d^9(2D)7d$	$1D^{\circ} - 1F$	2 - 3	D4
Zn III	1708.259	3		$3d^9(2D)5p - 3d^9(2D)7d$	$1D^{\circ} - 1D$	2 - 2	D4
Zn III	1708.896	9		$3d^9(2D)5p - 3d^9(2D)7d$	$1D^{\circ} - 3D$	2 - 1	D4
Zn III	1709.401	4		$3d^9(2D)5p - 3d^9(2D)7d$	$3D^{\circ} - 3D$	3 - 3	D4
Zn III	1711.982	1		$3d^9(2D)5p - 3d^9(2D)7d$	$3D^{\circ} - 3P$	3 - 2	D4
Zn III	1714.800	0		$3d^9(2D)5p - 3d^9(2D)7d$	$3D^{\circ} - 3S$	2 - 1	D4
Zn III	1716.090	4		$3d^9(2D)5p - 3d^9(2D)8s$	$3D^{\circ} - 3D$	2 - 2	D4
Zn III	1716.467	1		$3d^9(2D)5p - 3d^9(2D)8s$	$3D^{\circ} - 1D$	1 - 2	D4
Zn III	1716.589	2		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$1G - 3F^{\circ}$	4 - 3	D4
Zn III	1717.212	1		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$1G - 3D^{\circ}$	4 - 3	D4
Zn III	1717.880	1		$3d^9(2D)5p - 3d^9(2D)8s$	$3D^{\circ} - 3D$	1 - 1	D4
Zn III	1720.339	2		$3d^9(2D)5p - 3d^9(2D)8s$	$1D^{\circ} - 1D$	2 - 2	D4
Zn III	1721.151	2		$3d^9(2D)5p - 3d^9(2D)8s$	$3D^{\circ} - 3D$	3 - 2	D4
Zn III	1723.111	6		$3d^9(2D)5p - 3d^9(2D)8s$	$3D^{\circ} - 3D$	3 - 3	D4
Zn III	1724.558	2		$3d^9 4s^2 - 3d^9 4s(2D)4p$	$3P - 1P^{\circ}$	3 - 3	D4
Zn III	1725.230	0		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	2 - 3	D4
Zn III	1729.918	3		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	4 - 4	D4
Zn III	1736.138	0		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3D - 3F^{\circ}$	3 - 4	D4
Zn III	1737.473	10		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$1D - 3D^{\circ}$	2 - 2	D4
Zn III	1747.872	0		$3d^9(2D)4d - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	4 - 4	D4
Zn III	1749.629	200		$3d^9(2D)4s - 3d^9(2D)4p$	$1D - 3F^{\circ}$	2 - 3	D4
Zn III	1750.770	10		$3d^9 4s^2 - 3d^9 4s(2F)4p$	$3F - 3G^{\circ}$	3 - 4	D4
Zn III	1753.824	100		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3P^{\circ}$	1 - 2	D4
Zn III	1754.498	0		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3P$	2 - 1	D4
Zn III	1754.777	0		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3P$	2 - 2	D4
Zn III	1760.192	2		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	3 - 2	D4
Zn III	1763.032	6		$3d^9(2D)5p - 3d^9(2D)7d$	$3F^{\circ} - 3S$	2 - 1	D4
Zn III	1767.684	90		$3d^9(2D)4s - 3d^9(2D)4p$	$1D - 3P^{\circ}$	2 - 1	D4
Zn III	1777.404	40b		$3d^9(2D)5p - 3d^9(2D)7d$	$1P^{\circ} - 3S$	1 - 1	D4
Zn III	1777.911	3		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	3 - 3	D4
Zn III	1791.180	1		$3d^9(2D)5p - 3d^9(2D)7d$	$3D^{\circ} - 3P$	1 - 2	D4
Zn III	1792.523	1		$3d^9(2D)5p - 3d^9(2D)7d$	$1D^{\circ} - 3D$	2 - 3	D4
Zn III	1800.147	15b		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	2 - 1	D4
Zn III	1805.599	3		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3F - 3F^{\circ}$	3 - 4	D4
Zn III	1807.566	1		$3d^9(2D)5p - 3d^9(2D)8s$	$1D^{\circ} - 3D$	2 - 3	D4
Zn III	1809.253	1		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3P - 3F^{\circ}$	2 - 2	D4
Zn III	1821.676	35		$3d^9(2D)4p - 3d^9 4s^2$	$3P^{\circ} - 3F$	2 - 3	D4
Zn III	1825.020	1		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3F - 3G^{\circ}$	4 - 4	D4
Zn III	1839.334	150		$3d^9(2D)4s - 3d^9(2D)4p$	$1D - 3P^{\circ}$	2 - 2	D4
Zn III	1843.953	25		$3d^9(2D)4p - 3d^9 4s^2$	$3P^{\circ} - 3F$	1 - 2	D4
Zn III	1864.006	50		$3d^9(2D)4p - 3d^9 4s^2$	$3F^{\circ} - 3F$	3 - 2	D4
Zn III	1886.405	1		$3d^9 4s^2 - 3d^9 4s(4F)4p$	$3F - 3G^{\circ}$	3 - 3	D4

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn III	1888.968	3		$3d^9 4s^2 - 3d^9(^2D)4f$	$^1D - ^3G^o$	2-3	D4
Zn III	1899.793	12		$3d^9(^2D)4d - 3d^9 4s(^2D)4p$	$^3P - ^1F^o$	2-3	L4
Zn III	1908.436	1		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^3F - ^3D^o$	4-3	D4
Zn III	1909.424	6		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^3F - ^5G^o$	3-4	D4
Zn III	1919.068	20		$3d^9(^2D)4p - 3d^9 4s^2$	$^3F^o - ^3F$	3-3	M5, D4
Zn III	1921.612	20		$3d^9(^2D)4d - 3d^9 4s(^2D)4p$	$^3D - ^1F^o$	3-3	D4
Zn III	1927.005	2		$3d^9(^2D)5p - 3d^9(^2D)6d$	$^3P - ^3D$	2-1	D4
Zn III	1928.098	0		$3d^9(^2D)5s - 3d^9 4s(^2D)4p$	$^1D - ^1F^o$	2-3	D4
Zn III	1929.774	80		$3d^9(^2D)4p - 3d^9 4s^2$	$^3F^o - ^3F$	2-2	M5, D4
Zn III	1930.525	15		$3d^9(^2D)5p - 3d^9(^2D)6d$	$^3P - ^3G$	2-3	D4
Zn III	1935.354	5		$3d^9(^2D)4d - 3d^9 4s(^2D)4p$	$^3F - ^1F^o$	4-3	D4
Zn III	1942.392	1		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^3F - ^3D^o$	3-2	D4
Zn III	1944.160	60		$3d^9(^2D)4p - 3d^9 4s^2$	$^3F^o - ^3F$	4-3	D4
Zn III	1946.637	0		$3d^9(^2D)5p - 3d^9(^2D)6d$	$^3F^o - ^3F$	3-2	D4
Zn III	1954.183	1		$3d^9(^2D)4d - 3d^9 4s(^2D)4p$	$^3D - ^1F^o$	2-3	D4
Zn III	1962.974	1		$3d^9 4s^2 - 3d^9 4s(^4F)4p$	$^3F - ^3D^o$	4-4	D4
Zn III	1967.230	1		$3d^9(^2D)5p - 3d^9(^2D)6d$	$^3F^o - ^3G$	4-3	D4
Zn III	1971.416	2		$3d^9(^2D)5p - 3d^9(^2D)6d$	$^3P - ^1D$	1-2	D4
Zn III	1974.863	0		$3d^9(^2D)5p - 3d^9(^2D)6d$	$^3P - ^3D$	1-1	D4
Zn III	1986.020	4		$3d^9(^2D)4d - 3d^9 4s(^2D)4p$	$^1G - ^1F^o$	4-3	D4
Zn III	1989.190	10b		$3d^9(^2D)5p - 3d^9(^2D)6d$	$^3D - ^1F$	2-3	D4
Zn III	1990.637	25		$3d^9(^2D)4d - 3d^9 4s(^2P)4p$	$^3F - ^3D^o$	2-3	D4
Zn III	1994.454	1		$3d^9(^2D)5p - 3d^9(^2D)6d$	$^3D - ^1D$	2-2	D4
Zn III	1998.150	10		$3d^9 4s^2 - 3d^9 4s(^2F)4p$	$^1D - ^1D^o$	2-2	D4
Zn III	1998.653	10		$3d^9 4s^2 - 3d^9(^2D)4f$	$^1D - ^3D^o$	2-3	D4
Zn III	1998.977	25b		$3d^9(^2D)4d - 3d^9 4s(^2D)4p$	$^3G - ^1F^o$	3-3	D4

ZINC IV (Zn^{3+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 \ ^3D_{5/2}$ (27 electrons)Ionization Potential [508 000] cm^{-1} ; [63] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn IV	412.671	3		$3d^9 - 3d^9(^1G)4p$	$ga^2D - y^2G^o$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	423.424	0		$3d^9 - 3d^9(^3P)4p$	$ga^2D - z^4S^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	423.533	5		$3d^9 - 3d^9(^1G)4p$	$ga^2D - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	425.891	40		$3d^9 - 3d^9(^1G)4p$	$ga^2D - x^2F^o$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	428.541	30		$3d^9 - 3d^9(^1G)4p$	$ga^2D - x^2F^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	428.788	10		$3d^9 - 3d^9(^3P)4p$	$ga^2D - z^2S^o$	$\frac{3}{2} - \frac{1}{2}$	C19
Zn IV	429.299	25		$3d^9 - 3d^9(^3P)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	430.586	15		$3d^9 - 3d^9(^3P)4p$	$ga^2D - x^1D^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	431.535	15		$3d^9 - 3d^9(^3P)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$	C19
Zn IV	431.613	25		$3d^9 - 3d^9(^3P)4p$	$ga^2D - x^1D^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	434.407	0		$3d^9 - 3d^9(^3P)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	435.023	5		$3d^9 - 3d^9(^3P)4p$	$ga^2D - y^4D^o$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	435.762	20		$3d^9 - 3d^9(^3P)4p$	$ga^2D - x^1D^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	436.248	15		$3d^9 - 3d^9(^3P)4p$	$ga^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	436.381	8		$3d^9 - 3d^9(^3P)4p$	$ga^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	436.812	10		$3d^9 - 3d^9(^3P)4p$	$ga^2D - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	441.146	15		$3d^9 - 3d^9(^1D)4p$	$ga^2D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	441.543	8		$3d^9 - 3d^9(^3P)4p$	$ga^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	441.693	20		$3d^9 - 3d^9(^3P)4p$	$ga^2D - y^4D^o$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	442.381	40		$3d^9 - 3d^9(^1D)4p$	$ga^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	C19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn IV	444.383	60		3d ⁹ - 3d ⁹ (¹ D)4p	g ² D - y ² F ^o	3/2 - 7/2	C19
Zn IV	444.455	30		3d ⁹ - 3d ⁹ (¹ D)4p	g ² D - y ² D ^o	3/2 - 3/2	C19
Zn IV	446.582	40		3d ⁹ - 3d ⁹ (¹ D)4p	g ² D - z ² P ^o	3/2 - 3/2	C19
Zn IV	447.850	8		3d ⁹ - 3d ⁹ (¹ D)4p	g ² D - y ² D ^o	3/2 - 3/2	C19
Zn IV	449.131	1		3d ⁹ - 3d ⁹ (¹ D)4p	g ² D - z ² P ^o	3/2 - 3/2	C19
Zn IV	449.970	40		3d ⁹ - 3d ⁹ (¹ D)4p	g ² D - y ² D ^o	3/2 - 3/2	C19
Zn IV	450.985	50		3d ⁹ - 3d ⁹ (³ P)4p	g ² D - z ⁴ P ^o	3/2 - 3/2	C19
Zn IV	451.624	10		3d ⁹ - 3d ⁹ (³ P)4p	g ² D - z ⁴ P ^o	3/2 - 3/2	C19
Zn IV	452.803	50		3d ⁹ - 3d ⁹ (³ P)4p	g ² D - y ² F ^o	3/2 - 3/2	C19
Zn IV	456.671	35		3d ⁹ - 3d ⁹ (³ P)4p	g ² D - z ⁴ P ^o	3/2 - 3/2	C19
Zn IV	457.315	50		3d ⁹ - 3d ⁹ (³ P)4p	g ² D - z ⁴ P ^o	3/2 - 3/2	C19
Zn IV	466.924	60		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ F ^o	3/2 - 3/2	C19
Zn IV	468.426	40		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ D ^o	3/2 - 3/2	C19
Zn IV	472.086	75		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ F ^o	3/2 - 7/2	C19
Zn IV	472.655	70		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ D ^o	3/2 - 3/2	C19
Zn IV	473.014	60		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ F ^o	3/2 - 3/2	C19
Zn IV	473.501	75		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ G ^o	3/2 - 7/2	C19
Zn IV	474.558	60		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ D ^o	3/2 - 3/2	C19
Zn IV	475.768	8		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ F ^o	3/2 - 3/2	C19
Zn IV	476.411	60		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ F ^o	3/2 - 3/2	C19
Zn IV	478.640	75		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ F ^o	3/2 - 7/2	C19
Zn IV	478.858	60		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ D ^o	3/2 - 3/2	C19
Zn IV	482.089	50		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ F ^o	3/2 - 3/2	C19
Zn IV	482.663	2		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ G ^o	3/2 - 3/2	C19
Zn IV	485.476			3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ G ^o	3/2 - 7/2	C19
Zn IV	489.183	1		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ G ^o	3/2 - 3/2	C19
Zn IV	490.956	3		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ D ^o	3/2 - 3/2	C19
Zn IV	493.365	2		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ D ^o	3/2 - 3/2	C19
Zn IV	496.719	1		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ D ^o	3/2 - 7/2	C19
Zn IV	497.701	3		3d ⁹ - 3d ⁹ (³ F)4p	g ² D - z ⁴ D ^o	3/2 - 3/2	C19
Zn IV	986.960	2h		3d ⁹ (¹ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - x ² D ^o	7/2 - 3/2	C19
Zn IV	988.667	5		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - y ⁴ D ^o	3/2 - 7/2	C19
Zn IV	1001.156	2		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - x ² D ^o	3/2 - 3/2	C19
Zn IV	1004.931	2		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - y ⁴ D ^o	7/2 - 7/2	C19
Zn IV	1011.003	0		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - x ² D ^o	3/2 - 3/2	C19
Zn IV	1011.605	7		3d ⁹ (³ F)4s - 3d ⁹ (¹ G)4p	a ² F - x ² F ^o	7/2 - 7/2	C19
Zn IV	1012.192	5		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - y ⁴ D ^o	7/2 - 3/2	C19
Zn IV	1024.255	2		3d ⁹ (³ F)4s - 3d ⁹ (¹ G)4p	a ² F - x ² F ^o	3/2 - 3/2	C19
Zn IV	1030.414	4		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - y ⁴ D ^o	3/2 - 3/2	C19
Zn IV	1037.118	6		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - y ⁴ D ^o	3/2 - 3/2	C19
Zn IV	1036.551	3		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - y ⁴ D ^o	3/2 - 3/2	C19
Zn IV	1036.773	2		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - y ⁴ D ^o	3/2 - 3/2	C19
Zn IV	1044.502	1		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ² F - x ² D ^o	7/2 - 3/2	C19
Zn IV	1062.240	1		3d ⁹ (¹ D)4s - 3d ⁹ (¹ G)4p	b ² D - y ² G ^o	3/2 - 7/2	C19
Zn IV	1066.520	1		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ² F - x ² D ^o	3/2 - 3/2	C19
Zn IV	1072.496	1		3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ⁴ F - y ² F ^o	7/2 - 3/2	C19
Zn IV	1073.027			3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ⁴ F - y ² D ^o	3/2 - 3/2	C19
Zn IV	1089.334	0		3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ⁴ F - y ² F ^o	3/2 - 3/2	C19
Zn IV	1094.128			3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ² F - y ² F ^o	3/2 - 7/2	C19
Zn IV	1094.429	8		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - z ⁴ P ^o	7/2 - 3/2	C19
Zn IV	1101.896	2h		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ² F - y ⁴ D ^o	3/2 - 3/2	C19
Zn IV	1109.919	35		3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ² F - y ² D ^o	7/2 - 3/2	C19
Zn IV	1111.935	2		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - z ⁴ P ^o	3/2 - 3/2	C19
Zn IV	1115.801	3		3d ⁹ (³ F)4s - 3d ⁹ (³ P)4p	a ⁴ F - z ⁴ P ^o	3/2 - 3/2	C19
Zn IV	1122.587	3		3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ² F - y ² F ^o	7/2 - 7/2	C19
Zn IV	1133.744	15		3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ² F - z ² P ^o	3/2 - 3/2	C19
Zn IV	1136.406	40		3d ⁹ (¹ D)4s - 3d ⁹ (³ P)4p	b ² D - z ⁴ S ^o	3/2 - 3/2	C19
Zn IV	1137.243	3		3d ⁹ (¹ D)4s - 3d ⁹ (¹ G)4p	b ² D - x ² F ^o	3/2 - 3/2	C19
Zn IV	1140.849	8		3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ² F - y ² F ^o	7/2 - 3/2	C19
Zn IV	1141.955	20h		3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ² F - y ² D ^o	3/2 - 3/2	C19
Zn IV	1149.610	25		3d ⁹ (¹ D)4s - 3d ⁹ (³ P)4p	b ² D - z ⁴ S ^o	3/2 - 3/2	C19
Zn IV	1150.481	30		3d ⁹ (¹ D)4s - 3d ⁹ (¹ G)4p	b ² D - x ² F ^o	3/2 - 3/2	C19
Zn IV	1152.278	20		3d ⁹ (¹ D)4s - 3d ⁹ (³ P)4p	b ² D - z ⁴ S ^o	3/2 - 1/2	C19
Zn IV	1154.402	25		3d ⁹ (¹ D)4s - 3d ⁹ (¹ G)4p	b ² D - x ² F ^o	3/2 - 7/2	C19
Zn IV	1155.384	5		3d ⁹ (³ F)4s - 3d ⁹ (¹ D)4p	a ⁴ F - y ² F ^o	3/2 - 3/2	C19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J J	References
Zn IV	1155.850	40		$3d^6(^3F)4s - 3d^6(^1D)4p$	$a^2F - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1172.304	30		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1177.484	60		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1178.391	15		$3d^6(^3P)4s - 3d^6(^1G)4p$	$a^4P - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1179.478	50		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1179.814	25		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1180.274	4		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1182.016	50		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1189.565	35		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1194.068	30		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1197.440	30		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1201.292	25		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1201.489	50		$3d^6(^3P)4s - 3d^6(^1G)4p$	$a^4P - y^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1203.430	40		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1204.038	30		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1205.594	25		$3d^6(^3F)4s - 3d^6(^3P)4p$	$a^2F - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1212.110	12		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1212.693	25		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1214.121	15		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1223.181	60		$3d^6(^1G)4s - 3d^6(^1G)4p$	$a^2G - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1223.680	30		$3d^6(^1G)4s - 3d^6(^1G)4p$	$a^2G - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1224.052	50		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1224.179	20		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1224.348	20		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1226.325	8		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1227.615	15		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1228.003	1		$3d^6(^1G)4s - 3d^6(^1G)4p$	$a^2G - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1228.482	60		$3d^6(^1G)4s - 3d^6(^1G)4p$	$a^2G - y^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1228.646	50		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1229.062	15		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1231.458	25		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1233.806	10		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1234.857	20		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1236.768	1		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1237.250	25		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1239.102	40		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1239.602	40b		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1243.157	40		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1246.260	3		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1247.000	10		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1248.184	15		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1249.083	3		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1249.402	5		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1249.676	40		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1250.466	30		$3d^6(^1D)4s - 3d^6(^3P)4p$	$b^2D - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1253.664	40		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1257.291	30		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1259.673	5		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1264.205	0		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^2P - z^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1265.223	3		$3d^6(^3P)4s - 3d^6(^1G)4p$	$a^2P - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1265.716	60		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1267.397	40		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^2P - z^2S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1269.144	4		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1272.192	50		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^2G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1272.963	60		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1273.618	30		$3d^6(^1D)4s - 3d^6(^1D)4p$	$b^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1275.756	40		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1277.110	60		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1278.491	20		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^2F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1280.443	60		$3d^6(^3F)4s - 3d^6(^3F)4p$	$a^4F - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1281.292	15		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^2P - z^2S^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	C19
Zn IV	1282.027	20		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1282.363	50		$3d^6(^3P)4s - 3d^6(^3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1283.497	50		$3d^6(^3F)4s - 3d^6(^3P)4p$	$a^4P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1284.185	40		$3d^6(^1D)4s - 3d^6(^1D)4p$	$b^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn IV	1284.382	50		$3d^8(^2P)4s - 3d^8(^2P)4p$	$a^4P - y^4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	C19
Zn IV	1284.715	50		$3d^8(^2P)4s - 3d^8(^2P)4p$	$a^4P - y^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	C19
Zn IV	1288.875	40		$3d^8(^2P)4s - 3d^8(^2P)4p$	$z^4F - y^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	C19
Zn IV	1290.440	40		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1291.795	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1292.484	60		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	C19
Zn IV	1294.306	10		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	C19
Zn IV	1296.589	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	C19
Zn IV	1296.730	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4F^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	C19
Zn IV	1301.082	30		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	C18, K8
Zn IV	1301.204	50		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	1301.865	40		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	C19
Zn IV	1306.097	40		$3d^8(^2P)4s - 3d^8(^2P)4p$	$a^2P - y^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	C19
Zn IV	1306.641	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	C19
Zn IV	1311.939	50		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	C19
Zn IV	1317.975	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^2F^{\circ}$	$\frac{7}{2} - \frac{3}{2}$	C19
Zn IV	1319.200	5		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	1320.699	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1321.188	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1322.308	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{1}{2} - \frac{7}{2}$	C19
Zn IV	1322.414	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^2D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	C19
Zn IV	1325.659	5		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1325.831	30b		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1326.708	50b		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1329.061	5		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^2G^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	C19
Zn IV	1329.923	40b		$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	C19
Zn IV	1330.297	40b		$3d^8(^2P)4s - 3d^8(^2P)4p$	$z^2P - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1331.390	40		$3d^8(^1P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1333.168	40		$3d^8(^2P)4s - 3d^8(^2P)4p$	$a^2D - y^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	C19
Zn IV	1333.296	50		$3d^8(^2P)4s - 3d^8(^2F)4p$	$a^2F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1336.889	40		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	C19
Zn IV	1340.162	50		$3d^8(^2P)4s - 3d^8(^2P)4p$	$a^2P - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1342.720	50		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1343.794	50		$3d^8(^1D)4s - 3d^8(^1D)4p$	$b^2D - y^2F^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	C19
Zn IV	1344.063	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1345.622	10		$3d^8(^2P)4s - 3d^8(^2P)4p$	$a^2P - x^2D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	C19
Zn IV	1347.949	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	1348.354	40		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	C19
Zn IV	1349.872	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	C19
Zn IV	1350.968	10b		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - z^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	C19
Zn IV	1352.247	40		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^4F^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	C19
Zn IV	1352.876	60		$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	C19
Zn IV	1353.476	3		$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - x^2F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	C19
Zn IV	1355.967	40		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1356.178	50		$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	C19
Zn IV	1357.787	50		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1358.608	30		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^{\circ}$	$\frac{1}{2} - \frac{7}{2}$	C19
Zn IV	1359.460	50		$3d^8(^1D)4s - 3d^8(^2P)4p$	$b^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1361.321	50		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	1361.979	60b		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1363.413	60b		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	1363.913	60		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4D^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	C19
Zn IV	1365.233	60		$3d^8(^1D)4s - 3d^8(^2P)4p$	$b^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1368.135	8		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1369.497	60		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^2G^{\circ}$	$\frac{7}{2} - \frac{5}{2}$	C19
Zn IV	1370.385	60		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^4F^{\circ}$	$\frac{7}{2} - \frac{7}{2}$	C19
Zn IV	1371.176	50		$3d^8(^1D)4s - 3d^8(^2P)4p$	$b^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	C19
Zn IV	1375.304	60		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^2F - z^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	1375.954	40		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	1377.621	60		$3d^8(^2F)4s - 3d^8(^2F)4p$	$a^4F - z^4D^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	C19
Zn IV	1382.035	15		$3d^8(^2P)4s - 3d^8(^1D)4p$	$a^4P - y^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1384.341	40		$3d^8(^1D)4s - 3d^8(^2P)4p$	$b^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1385.473	4		$3d^8(^2P)4s - 3d^8(^2P)4p$	$a^2P - y^4D^{\circ}$	$\frac{7}{2} - \frac{1}{2}$	C19
Zn IV	1385.908	5		$3d^8(^2P)4s - 3d^8(^2P)4p$	$a^2P - y^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1387.046	50		$3d^8(^1G)4s - 3d^8(^1G)4p$	$a^2G - z^2H^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn IV	1387.215	50b		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - y ⁴ D°	½ - ½	C19
Zn IV	1387.695	50		3d ⁸ (¹ G)4s - 3d ⁸ (¹ G)4p	a ² G - z ² H°	½ - ½	C19
Zn IV	1388.258	50		3d ⁸ (² P)4s - 3d ⁸ (¹ D)4p	a ² P - y ² F°	½ - ½	C19
Zn IV	1391.216	60b		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ D°	½ - ½	C19
Zn IV	1393.019	50		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ F°	½ - ½	C19
Zn IV	1394.509	50		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ F°	½ - ½	C19
Zn IV	1400.111	50		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ F°	½ - ½	C19
Zn IV	1402.097	20		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - y ⁴ D°	½ - ½	C19
Zn IV	1402.500	35		3d ⁸ (² P)4s - 3d ⁸ (² F)4p	a ² P - y ⁴ D°	½ - ½	C19
Zn IV	1403.954	40		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ G°	½ - ½	C19
Zn IV	1409.370	60		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ D°	½ - ½	C19
Zn IV	1410.310	25		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ D°	½ - ½	C19
Zn IV	1411.015	60		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1412.996	10		3d ⁸ (¹ G)4s - 3d ⁸ (² P)4p	a ² G - x ² D°	½ - ½	C19
Zn IV	1413.867	50		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1418.667	40		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1419.572	40		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ F°	½ - ½	C19
Zn IV	1425.002	25b		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1425.210	50b		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1427.759	10		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ G°	½ - ½	C19
Zn IV	1427.879	40		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1431.592	8		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1436.577	40		3d ⁸ (² P)4s - 3d ⁸ (¹ D)4p	a ² P - z ² P°	½ - ½	C19
Zn IV	1438.558	15		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ D°	½ - ½	C19
Zn IV	1449.496	40		3d ⁸ (¹ G)4s - 3d ⁸ (² P)4p	a ² G - y ⁴ D°	½ - ½	C19
Zn IV	1449.837	40b		3d ⁸ (² P)4s - 3d ⁸ (¹ D)4p	a ² P - y ² D°	½ - ½	C19
Zn IV	1454.465	25		3d ⁸ (² P)4s - 3d ⁸ (¹ D)4p	a ² P - z ² P°	½ - ½	C19
Zn IV	1455.630	30		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ G°	½ - ½	C19
Zn IV	1459.964	40		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ G°	½ - ½	C19
Zn IV	1463.283	30		3d ⁸ (² P)4s - 3d ⁸ (¹ D)4p	a ² P - z ² P°	½ - ½	C19
Zn IV	1465.386	20		3d ⁸ (¹ G)4s - 3d ⁸ (² P)4p	a ² G - y ⁴ D°	½ - ½	C19
Zn IV	1472.256	20		3d ⁸ (² P)4s - 3d ⁸ (¹ D)4p	a ² P - y ² D°	½ - ½	C19
Zn IV	1476.410	40		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ D°	½ - ½	C19
Zn IV	1481.232	30		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ G°	½ - ½	C19
Zn IV	1481.837	25		3d ⁸ (² P)4s - 3d ⁸ (¹ D)4p	a ² P - z ² P°	½ - ½	C19
Zn IV	1493.146	40		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ D°	½ - ½	C19
Zn IV	1503.079	30		3d ⁸ (² P)4s - 3d ⁸ (¹ D)4p	a ² P - y ² F°	½ - ½	C19
Zn IV	1515.425	15		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ² F°	½ - ½	C19
Zn IV	1529.833	25		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ D°	½ - ½	C19
Zn IV	1531.372	25b		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ² D°	½ - ½	C19
Zn IV	1533.667	20		3d ⁸ (² F)4s - 3d ⁸ (² F)4p	a ² F - z ⁴ D°	½ - ½	C19
Zn IV	1535.415	25		3d ⁸ (¹ G)4s - 3d ⁸ (¹ D)4p	a ² G - y ² D°	½ - ½	C19
Zn IV	1539.068	6		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ² F°	½ - ½	C19
Zn IV	1546.454	20b		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1553.941	20		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1555.431	20		5d ² (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ² D°	½ - ½	C19
Zn IV	1557.881	20		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1558.971	25		3d ⁸ (¹ G)4s - 3d ⁸ (¹ D)4p	a ² G - y ² F°	½ - ½	C19
Zn IV	1559.709	15b		3d ⁸ (¹ G)4s - 3d ⁸ (¹ D)4p	a ² G - y ² F°	½ - ½	C19
Zn IV	1571.207	5		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ² F°	½ - ½	C19
Zn IV	1574.833	20		3d ⁸ (² P)4s - 3d ⁸ (² P)4p	a ² P - z ⁴ P°	½ - ½	C19
Zn IV	1577.504	20		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ² D°	½ - ½	C19
Zn IV	1587.036	5		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ² G°	½ - ½	C19
Zn IV	1595.258	30		3d ⁸ (¹ G)4s - 3d ⁸ (¹ D)4p	a ² G - y ² F°	½ - ½	C19
Zn IV	1597.563	50b		3d ⁸ (² P)4s - 3d ⁸ (² F)4p	a ² P - z ⁴ F°	½ - ½	C19
Zn IV	1603.088	6		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ² D°	½ - ½	C19
Zn IV	1606.907	12		3d ⁸ (² P)4s - 3d ⁸ (² F)4p	a ² P - z ² D°	½ - ½	C19
Zn IV	1610.574	3		3d ⁸ (² P)4s - 3d ⁸ (² F)4p	a ² P - z ² D°	½ - ½	C19
Zn IV	1612.688	10b		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ⁴ F°	½ - ½	C19
Zn IV	1615.345	8		3d ⁸ (² P)4s - 3d ⁸ (² F)4p	a ² P - z ² D°	½ - ½	C19
Zn IV	1620.165	40		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ⁴ F°	½ - ½	C19
Zn IV	1639.318	100b		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ⁴ F°	½ - ½	C19
Zn IV	1646.290	8		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ⁴ F°	½ - ½	C19
Zn IV	1647.161	2		3d ⁸ (¹ D)4s - 3d ⁸ (² F)4p	b ² D - z ⁴ F°	½ - ½	C19
Zn IV	1657.790	5		3d ⁸ (² P)4s - 3d ⁸ (² F)4p	a ² P - z ² D°	½ - ½	C19

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn IV	1666.760	60		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1677.399	2		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1700.788	2		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1704.971	10b		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1705.997	15b		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1714.457	15b		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1729.760	10		$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^4D - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1743.734	15		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1744.502	12		$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1745.998	25		$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1751.453	8		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^{\circ}$? $\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1772.643	1		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1777.404	40b		$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1788.015	0		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1800.147	15b		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1801.704	80		$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1809.521	20		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1814.222	75		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1834.966	30		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1835.124	50		$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1837.680	1		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1844.909	75		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1849.791	75		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1856.025	5		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1877.976	50		$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^4G - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1881.861	90		$3d^8(^1D)4s - 3d^8(^3F)4p$	$b^4D - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1907.168	90		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1913.521	1		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1919.019	100b		$3d^8(^3P)4s - 3d^8(^3F)4p$	$a^4P - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1963.112	60		$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^4G - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1974.254	15		$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^4G - z^4D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1987.874	35		$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^4G - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19
Zn IV	1989.199	10b		$3d^8(^1G)4s - 3d^8(^3F)4p$	$a^4G - z^4G^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	C19

ZINC V (Zn^{4+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 \ ^3F_4$ (26 electrons)Ionization Potential [702 000] cm^{-1} ; [87] eVZINC VI (Zn^{5+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 \ ^4F_{3/2}$ (25 electrons)Ionization Potential [919 000] cm^{-1} ; [114] eV

ZINC VII (Zn^{6+}), $Z = 30$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6$ 5D_4 (24 electrons)
Ionization Potential [1 161 000] cm^{-1} ; [144] eV

ZINC VIII (Zn^{7+}), $Z = 30$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$ $^6S_{5/2}$ (23 electrons)
Ionization Potential [1 420 000] cm^{-1} ; [176] eV

ZINC IX (Zn^{8+}), $Z = 30$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4$ 5D_0 (22 electrons)
Ionization Potential [1 670 000] cm^{-1} ; [207] eV

ZINC X (Zn^{9+}), $Z = 30$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3$ $^4F_{3/2}$ (21 electrons)
Ionization Potential [2 033 000] cm^{-1} ; [241] eV

ZINC XI (Zn^{10+}), $Z = 30$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^3F_2$ (20 electrons)
 Ionization Potential [2 226 000] cm^{-1} ; [276] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn XI	74.173	60		$3d^2 - 3d4f$	$g^3F - ^3G^o$	1 -	E37
Zn XI	74.213	80		$3d^2 - 3d4f$	$g^3F - ^3G^o$	3 - 4	E37
Zn XI	74.337	160		$3d^2 - 3d4f$	$g^3F - ^3G^o$	4 - 5	E37
Zn XI	74.412	10		$3d^2 - 3d4f$	$g^3F - ^3G^o$	4 - 4	E37
Zn XI	74.669	10		$3d^2 - 3d4f$	$g^3F - ^3F^o$	2 - 3	E37
Zn XI	74.724	20		$3d^2 - 3d4f$	$g^3F - ^3F^o$	2 - 2	E37
Zn XI	74.836	20		$3d^2 - 3d4f$	$g^3F - ^3F^o$	3 - 3	E37
Zn XI	74.856	10		$3d^2 - 3d4f$	$g^3F - ^3F^o$	3 - 2	E37
Zn XI	74.940	20		$3d^2 - 3d4f$	$g^3F - ^3F^o$	4 - 4	E37
Zn XI	75.950	16		$3d^2 - 3d4f$	$g^3F - ^3F^o$	4 - 3	E37
Zn XI	75.406	20		$3d^2 - 3d4f$	$^1D - ^1F^o$	2 - 3	E37
Zn XI	75.590	120		$3d^2 - 3d4f$	$^1D - ^1D^o$	2 - 2	E37
Zn XI	75.635	10		$3d^2 - 3d4f$	$^3P - ^3D^o$	0 - 1	E37
Zn XI	75.668	20		$3d^2 - 3d4f$	$^3P - ^3D^o$	1 - 2	E37

ZINC XII (Zn^{11+}), $Z = 30$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d \ ^2D_{3/2}$ (19 electrons)
 Ionization Potential [2 508 400] cm^{-1} ; [311] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn XII	54.409	10		$3d - 5f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E37
Zn XII	54.544	10		$3d - 5f$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	E37
Zn XII	68.271	40		$3d - 4f$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	E37
Zn XII	68.495	120		$3d - 4f$	$g^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	E37
Zn XII	126.786	40		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^o$	$\frac{3}{2} - \frac{3}{2}$	G17
Zn XII	127.346	40		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2P^o$	$\frac{5}{2} - \frac{3}{2}$	G17
Zn XII	127.631	40		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2D^o$	$\frac{5}{2} - \frac{5}{2}$	G17
Zn XII	128.518	20		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	G17
Zn XII	138.448	40		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2P^o$	$\frac{5}{2} - \frac{7}{2}$	G17
Zn XII	140.283	40		$3p^6 3d - 3p^5 3d^2$	$g^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	G17

ZINC XIII (Zn^{12+}), $Z = 30$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1S_0$ (18 electrons)
 Ionization Potential [3 395 700] cm^{-1} ; [421] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn XIII	50.248	20		$3p^6 - 3p^5(^2P^o)4s$	$g^1S - \frac{1}{2} \frac{1}{2} ^o$	0 - 1	E37
Zn XIII	61.356	10		$3p^6 - 3p^5(^2P^o)4s$	$g^1S - \frac{3}{2} \frac{3}{2} ^o$	0 - 1	E37
Zn XIII	131.082	40		$3p^6 - 3p^5(^2P^o)3d$	$g^1S - ^1P^o$	0 - 1	G17

ZINC XIV (Zn^{13+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 \ ^2P_{3/2}$ (17 electrons)Ionization Potential [3 661 900] cm^{-1} ; [454] eV

ZINC XV (Zn^{14+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)Ionization Potential [3 944 200] cm^{-1} ; [489] eV

ZINC XVI (Zn^{15+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)Ionization Potential [4 323 000] cm^{-1} ; [536] eV

ZINC XVII (Zn^{16+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)Ionization Potential [4 637 800] cm^{-1} ; [575] eV

ZINC XVIII (Zn^{17+}), $Z = 30$ Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}$ (13 electrons)Ionization Potential [4 952 400] cm^{-1} ; [614] eV

ZINC XIX (Zn^{18+}), $Z = 30$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential [5 622 000] cm^{-1} ; [697] eV

ZINC XX (Zn^{19+}), $Z = 30$
 Ground State $1s^2 2s^2 2p^6 3s \ ^2S_{1/2}$ (11 electrons)
 Ionization Potential [5 950 700] cm^{-1} ; [738] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn XX	26.33	10		3p - 5d	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F30
Zn XX	26.62	30		3p - 5d	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F30
Zn XX	30.08	20		3d - 5f	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F30
Zn XX	30.14	30		3d - 5f	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$	F30
Zn XX	34.08	60		3s - 4p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{3}{2}$	F30
Zn XX	34.27	30		3s - 4p	$g^2S - ^2P^\circ$	$\frac{1}{2} - \frac{5}{2}$	F30
Zn XX	36.20	50		3p - 4d	$^2P^\circ - ^2D$	$\frac{1}{2} - \frac{3}{2}$	F30
Zn XX	36.74	70		3p - 4d	$^2P^\circ - ^2D$	$\frac{3}{2} - \frac{5}{2}$	F30
Zn XX	42.83	70		3d - 4f	$^2D - ^2F^\circ$	$\frac{3}{2} - \frac{5}{2}$	F30
Zn XX	42.93	80		3d - 4f	$^2D - ^2F^\circ$	$\frac{5}{2} - \frac{7}{2}$	F30

ZINC XXI (Zn^{20+}), $Z = 30$
 Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
 Ionization Potential 14 969 000 cm^{-1} ; 1855.9 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn XXI	9.77	1		$2s^2 2p^6 - 2s 2p^6 3p$	$^1S - ^1P^\circ$	0 - 1	F29
Zn XXI	10.47	60		$2p^6 - 2p^5 3d$	$^1S - ^1P^\circ$	0 - 1	F29
Zn XXI	10.67	40		$2p^6 - 2p^5 3d$	$^1S - ^3D^\circ$	0 - 1	F29
Zn XXI	10.80	20		$2p^6 - 2p^5 3d$	$^1S - ^3P^\circ$	0 - 1	F29
Zn XXI	11.51	40		$2p^6 - 2p^5 3s$	$^1S - ^1P^\circ$	0 - 1	F29
Zn XXI	11.76	60		$2p^3 - 2p^5 3s$	$^1S - ^3P^\circ$	0 - 1	F29

ZINC XXII (Zn^{21+}), $Z = 30$
Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
Ionization Potential [15 753 000] cm^{-1} ; [180] eV

ZINC XXIII (Zn^{22+}), $Z = 30$
Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
Ionization Potential [16 696 000] cm^{-1} ; [2070] eV

ZINC XXIV (Zn^{23+}), $Z = 30$
Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
Ionization Potential [17 874 000] cm^{-1} ; [2216] eV

ZINC XXV (Zn^{24+}), $Z = 30$
Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
Ionization Potential [18 954 000] cm^{-1} ; [2350] eV

ZINC XXVI (Zn^{25+}), $Z = 30$
Ground State $1s^2 2s^2 2p \ ^2P_{1/2}^o$ (5 electrons)
Ionization Potential [19 995 000] cm^{-1} ; [2479] eV

ZINC XXVII (Zn^{26+}), $Z = 30$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential [21 350 000] cm^{-1} ; [2647] eV

ZINC XXVIII (Zn^{27+}), $Z = 30$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [22 423 000] cm^{-1} ; [2780] eV

ZINC XXIX (Zn^{28+}), $Z = 30$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential [95 692 000] cm^{-1} ; [11864] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn XXIX	1.18			$1s^2 - 1s 3p$	$g^1S - ^3P^o$	0 - 1	C11
Zn XXIX	1.39			$1s^2 - 1s 2p$	$g^1S - ^3P^o$	0 - 1	C11

ZINC XXX (Zn^{29+}), $Z = 30$
 Ground State $1s \ ^2S_{1/2}$ (1 electron)
 Ionization Potential [99 910 000] cm^{-1} ; [12387] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Zn XXX	1.34 P			$1s - 2p$	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	K8

GALLIUM I (Ga⁰⁺), Z = 31
 Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p²P_{1/2} (31 electrons)
 Ionization Potential 48 387.63 cm⁻¹; 5.999 eV

GALLIUM II (Ga¹⁺), Z = 31
 Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²1S₀ (30 electrons)
 Ionization Potential 165 458 cm⁻¹; 20.51 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ga II	829.60	100	3	4s ² - 4s 5p	g ⁴ S - ¹ P ^o	0 - 1	S4
Ga II	958.67	100		4s 4p - 4s 7d	³ P ^o - ³ D	2 - 3	S4
Ga II	960.57	20		4s 4p - 4s 8s	³ P ^o - ³ S	1 - 1	S4
Ga II	969.29	100		4s 4p - 4s 8s	³ P ^o - ³ S	2 - 1	S4
Ga II	998.52	100		4s 4p - 4s 6d	³ P ^o - ³ D	0 - 1	S4
Ga II	1002.95	150		4s 4p - 4s 6d	³ P ^o - ³ D	1 - 2	S4
Ga II	1012.32	250		4s 4p - 4s 6d	³ F ^o - ³ D	2 - 3	S4
Ga II	1019.10	150	7	4s 4p - 4s 7s	³ P ^o - ³ S	0 - 1	S4
Ga II	1023.80	250	7	4s 4p - 4s 7s	³ P ^o - ³ S	1 - 1	S4
Ga II	1033.69	400	7	4s 4p - 4s 7s	³ P ^o - ³ S	2 - 1	S4
Ga II	1113.78	50		4s 4p - 4s 5d	³ P ^o - ³ D	0 - 1	S4
Ga II	1119.29	150		4s 4p - 4s 5d	³ P ^o - ³ D	1 - 2	S4
Ga II	1130.81	250		4s 4p - 4s 5d	³ P ^o - ³ D	2 - 3	S4
Ga II	1167.62	50	6	4s 4p - 4s 6s	³ P ^o - ³ S	0 - 1	S4
Ga II	1173.78	100	6	4s 4p - 4s 6s	³ P ^o - ³ S	1 - 1	S4
Ga II	1186.81	150	6	4s 4p - 4s 6s	³ P ^o - ³ S	2 - 1	S4
Ga II	1227.10	20		4s 4p - 4s 8s	¹ P ^o - ¹ S	1 - 0	S4
Ga II	1286.38	250		4s 4p - 4s 7d	¹ P ^o - ¹ D	1 - 2	S4
Ga II	1327.81	250		4s 4p - 4s 7s	¹ P ^o - ¹ S	1 - 0	S4
Ga II	1414.44	1000	2	4s ² - 4s 4p	g ⁴ S - ¹ P ^o	0 - 1	S4
Ga II	1449.40	250		4s 4p - 4s 6d	¹ P ^o - ¹ D	1 - 2	S4
Ga II	1463.65	100		4s 4p - 4p ²	³ P ^o - ³ P	1 - 2	S4
Ga II	1473.73	150		4s 4p - 4p ²	³ P ^o - ³ P	0 - 1	S4
Ga II	1483.48	150		4s 4p - 4p ²	³ P ^o - ³ P	1 - 1	S4
Ga II	1483.95	150		4s 4p - 4p ²	³ P ^o - ³ P	2 - 2	S4
Ga II	1495.11	150		4s 4p - 4p ²	³ P ^o - ³ P	1 - 0	S4
Ga II	1504.31	150		4s 4p - 4p ²	³ P ^o - ³ P	2 - 1	S4
Ga II	1505.00	150	5	4s 4p - 4s 4d	³ P ^o - ³ D	0 - 1	S4
Ga II	1514.57	250	5	4s 4p - 4s 4d	³ P ^o - ³ D	1 - 2	S4
Ga II	1515.15	150	5	4s 4p - 4s 4d	³ P ^o - ³ D	1 - 1	S4
Ga II	1535.50	400	5	4s 4p - 4s 4d	³ P ^o - ³ D	2 - 3	S4
Ga II	1536.31	250	5	4s 4p - 4s 4d	³ P ^o - ³ D	2 - 2	S4
Ga II	1536.91	50	5	4s 4p - 4s 4d	³ P ^o - ³ D	2 - 1	S4
Ga II	1669.38	150		4s 4p - 4s 4d	³ P ^o - ¹ D	1 - 2	S4
Ga II	1695.81	250		4s 4p - 4s 4d	³ P ^o - ¹ D	2 - 2	S4
Ga II	1770.2	500		4s 4p - 4s 5d	¹ P ^o - ¹ D	?	C3, K8
Ga II	1799.42	250	4	4s 4p - 4s 5s	³ P ^o - ³ S	0 - 1	S4
Ga II	1813.98	500	4	4s 4p - 4s 5s	³ P ^o - ³ S	1 - 1	S4
Ga II	1845.26	750	4	4s 4p - 4s 5s	³ P ^o - ³ S	2 - 1	S4

GALLIUM III (Ga^{2+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 S_{1/2}$ (29 electrons)
 Ionization Potential $247\,700\text{ cm}^{-1}$ 30.71 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ga III	619.96	P	100	4s - 5p	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{3}{2}$	L2
Ga III	622.04	P	100	4s - 5p	$g^2S - ^3P^o$	$\frac{1}{2} - \frac{1}{2}$	L2
Ga III	1267.25	150		4p - 4d	$^3P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	L2
Ga III	1293.50	250		4p - 4d	$^3P^o - ^2D$	$\frac{3}{2} - \frac{1}{2}$	L2
Ga III	1295.45	100		4p - 4d	$^3P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	L2
Ga III	1323.15	300		4p - 5s	$^3P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	L2
Ga III	1353.94	400		4p - 5s	$^3P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	L2
Ga III	1495.10	500		4s - 4p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{3}{2}$	L2
Ga III	1534.51	500		4s - 4p	$g^2S - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	L2

GALLIUM IV (Ga^{3+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} ^1S_0$ (28 electrons)
 Ionization Potential $517\,500\text{ cm}^{-1}$; 64.2 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ga IV	422.5	200		$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^3D^o$	0 - 1	M1
Ga IV	423.6	250		$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^1P^o$	0 - 1	M1
Ga IV	440.3	50		$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^3P^o$	0 - 1	M1
Ga IV	1137.1	50		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^1D^o$	3 - 2	M1
Ga IV	1156.2	250		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1D^o$	2 - 2	M1
Ga IV	1163.6	150		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^o$	2 - 1	M1
Ga IV	1170.6	500		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1F^o$	3 - 3	M1
Ga IV	1171.7	20		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1P^o$	2 - 1	M1
Ga IV	1185.3	400		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1D^o$	1 - 2	M1
Ga IV	1186.0	20		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^o$	3 - 2	M1
Ga IV	1190.9	450		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1F^o$	2 - 3	M1
Ga IV	1194.0	450		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^o$	1 - 1	M1
Ga IV	1195.1	500		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^o$	3 - 3	M1
Ga IV	1201.6	200		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^1P^o$	1 - 1	M1
Ga IV	1206.9	500		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^o$	2 - 2	M1
Ga IV	1216.2	0		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^o$	2 - 3	M1
Ga IV	1228.0	500		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^1D^o$	2 - 2	M1
Ga IV	1236.4	150		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3D^o$	2 - 1	M1
Ga IV	1238.6	250		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3D^o$	1 - 2	M1
Ga IV	1241.7	50		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$	3 - 2	M1
Ga IV	1245.5	600		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^1P^o$	2 - 1	M1
Ga IV	1258.7	750		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$	3 - 4	M1
Ga IV	1264.6	500		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$	2 - 2	M1
Ga IV	1267.2	900		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^1F^o$	2 - 3	M1
Ga IV	1279.2	500		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$	3 - 3	M1
Ga IV	1285.3	600		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3D^o$	2 - 2	M1
Ga IV	1295.9	750		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3D^o$	2 - 3	M1
Ga IV	1299.5	750		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$	1 - 2	M1
Ga IV	1303.5	750		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$	2 - 3	M1
Ga IV	1309.6	500		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^o$	2 - 1	M1
Ga IV	1314.8	250		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^o$	1 - 0	M1
Ga IV	1338.1	750		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^o$	3 - 2	M1
Ga IV	1347.0	150		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^o$	1 - 1	M1
Ga IV	1351.0	100		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3F^o$	2 - 2	M1
Ga IV	1364.7	50		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3P^o$	2 - 2	M1

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ga IV	1395.5	200		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^2F^{\circ}$	2 - 3	M1
Ga IV	1402.5	100		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^2P^{\circ}$	2 - 1	M1
Ga IV	1405.4	20		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^2D - ^2P^{\circ}$	1 - 2	M1
Ga IV	1465.9	50		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^2P^{\circ}$	2 - 2	M1

GALLIUM V (Ga^{4+}), $Z = 31$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 2D_{5/2}$ (27 electrons)Ionization Potential [726 000] cm^{-1} ; [90] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ga V	296.75	100		$3d^9 - 3d^8(^1G)4p$	$a^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	298.36	1000		$3d^9 - 3d^8(^1G)4p$	$a^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	K16
Ga V	299.41	800		$3d^9 - 3d^8(^3P)4p$	$a^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	299.95	900		$3d^9 - 3d^8(^1G)4p$	$a^2D - x^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	300.51	960		$3d^9 - 3d^8(^3P)4p$	$a^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	300.73	200		$3d^9 - 3d^8(^3P)4p$	$a^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	301.15	800		$3d^9 - 3d^8(^3P)4p$	$a^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	K16
Ga V	302.65	10		$3d^9 - 3d^8(^3P)4p$	$a^2D - y^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	303.81	800		$3d^9 - 3d^8(^3P)4p$	$a^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	304.01	10		$3d^9 - 3d^8(^3P)4p$	$a^2D - x^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	306.20	100		$3d^9 - 3d^8(^1D)4p$	$a^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	306.99	1000		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	308.24	700		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	K16
Ga V	308.32	200		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	309.61	200		$3d^9 - 3d^8(^1D)4p$	$a^2D - z^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	310.42	10		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	311.77	800		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	312.39	400		$3d^9 - 3d^8(^3P)4p$	$a^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	312.91	10		$3d^9 - 3d^8(^3P)4p$	$a^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	313.66	300		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	315.94	100		$3d^9 - 3d^8(^3P)4p$	$a^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	316.47	200		$3d^9 - 3d^8(^3P)4p$	$a^2D - z^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	319.40	800		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	320.53	100		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	322.30	600		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	K16
Ga V	322.92	300		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2G^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	K16
Ga V	322.98	800		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	323.10	300		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	324.24	500		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	324.94	500		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	326.13	400		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^4F^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	K16
Ga V	326.76	400		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16
Ga V	328.64	300		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^4F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	K16

GALLIUM VI (Ga^{5+}), $Z = 31$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 \ ^3F_4$ (26 electrons)
Ionization Potential [944 000] cm^{-1} ; [117] eV

GALLIUM VII (Ga^{6+}), $Z = 31$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 \ ^4F_{9/2}$ (25 electrons)
Ionization Potential [1 186 000] cm^{-1} ; [147] eV

GALLIUM VIII (Ga^{7+}), $Z = 31$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 \ ^5D_4$ (24 electrons)
Ionization Potential [1 444 000] cm^{-1} ; [179] eV

GALLIUM IX (Ga^{8+}), $Z = 31$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)
Ionization Potential [1 726 000] cm^{-1} ; [214] eV

GALLIUM X (Ga^{9+}), $Z = 31$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)
Ionization Potential [2 000 000] cm^{-1} ; [248] eV

GALLIUM XI (Ga^{10+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \text{}^4\text{F}_{5/2}$ (21 electrons)
 Ionization Potential [2 420 000] cm^{-1} ; [284] eV

GALLIUM XII (Ga^{11+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \text{}^3\text{F}_2$ (20 electrons)
 Ionization Potential [2 589 000] cm^{-1} ; [321] eV

GALLIUM XIII (Ga^{12+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d \text{}^2\text{D}_{3/2}$ (19 electrons)
 Ionization Potential [2 887 500] cm^{-1} ; [358] eV

GALLIUM XIV (Ga^{13+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \text{}^1\text{S}_0$ (18 electrons)
 Ionization Potential [3 831 300] cm^{-1} ; [475] eV

GALLIUM XV (Ga^{14+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 \text{}^2\text{P}_{3/2}^{\circ}$ (17 electrons)
 Ionization Potential [4 113 600] cm^{-1} ; [510] eV

GALLIUM XVI (Ga^{15+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
 Ionization Potential [4 494 000] cm^{-1} ; [546] eV

GALLIUM XVII (Ga^{16+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [4 807 000] cm^{-1} ; [596] eV

GALLIUM XVIII (Ga^{17+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [5 137 900] cm^{-1} ; [637] eV

GALLIUM XIX (Ga^{18+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}^o$ (13 electrons)
 Ionization Potential [5 460 600] cm^{-1} ; [677] eV

GALLIUM XX (Ga^{19+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential [6 170 000] cm^{-1} ; [765] eV

GALLIUM XXI (Ga^{20+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)
 Ionization Potential [6 517 100] cm^{-1} ; [808] eV

GALLIUM XXII (Ga^{21+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^6 {}^1S_0$ (10 electrons)
 Ionization Potential [16 293 000] cm^{-1} ; [2020] eV

GALLIUM XXIII (Ga^{22+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^5 {}^2P_{3/2}$ (9 electrons)
 Ionization Potential [17 100 000] cm^{-1} ; [2129] eV

GALLIUM XXIV (Ga^{23+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^4 {}^3P_2$ (8 electrons)
 Ionization Potential [18 083 000] cm^{-1} ; [2242] eV

GALLIUM XXV (Ga^{24+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^3 {}^4S_{3/2}^{\circ}$ (7 electrons)
 Ionization Potential [19 301 000] cm^{-1} ; [2393] eV

GALLIUM XXVI (Ga^{25+}), $Z = 31$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential [20 431 000] cm^{-1} ; [2533] eV

GALLIUM XXVII (Ga^{26+}), $Z = 31$
 Ground State $1s^2 2s^2 2p \ ^2P_{1/2}^o$ (5 electrons)
 Ionization Potential [21 519 000] cm^{-1} ; [2668] eV

GALLIUM XXVIII (Ga^{27+}), $Z = 31$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential [22 901 000] cm^{-1} ; [2840] eV

GALLIUM XXIX (Ga^{28+}), $Z = 31$
 Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
 Ionization Potential [24 052 000] cm^{-1} ; [2982] eV

GALLIUM XXX (Ga^{29+}), $Z = 31$
 Ground State $1s^2 \ ^1S_0$ (2 electrons)
 Ionization Potential [102 395 000] cm^{-1} ; [12695] eV

GALLIUM XXXI (Ga^{30+}), $Z = 31$
Ground State is $^2S_{1/2}$ (1 electron)
Ionization Potential [106 774 000] cm^{-1} ; [13238] eV

GERMANIUM I (Ge^{0+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2 \ ^3P_0$ (32 electron.)
 Ionization Potential $63\,715\text{ cm}^{-1}$; 7.899 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge I?	1546.234						A6
Ge I?	1546.581						A6
Ge I?	1546.883						A6
Ge I?	1547.069						A6
Ge I?	1547.412						A6
Ge I?	1579.405						A6
Ge I	1579.899			$4p^2 - 4p8d$	$g^3P - ^1P^o$	0-1	A6
Ge I	1580.989			$4p^2 - 4p8d$	$g^3P - ^3P^o$	0-1	A6
Ge I?	1587.63						A6
Ge I	1591.07			$4p^2 - 4p8d$	$g^3P - ^3P^o$	1-2	A6
Ge I?	1591.87						A6
Ge I?	1591.98						A6
Ge I	1592.842			$4p^2 - 4p8d$	$g^3P - ^3F^o$	1-2	A6
Ge I	1593.950			$4p^2 - 4p8d$	$g^3P - ^1P^o$	1-1	A6
Ge I	1595.046			$4p^2 - 4p8d$	$g^3P - ^3P^o$	1-1	A6
Ge I	1596.443			$4p^2 - 4p11d$	$g^3P - ^3D^o$	0-1	A6
Ge I?	1596.711						A6
Ge I	1598.020			$4p^2 - 4p9s$	$g^3P - ^1P^o$	0-1	A6
Ge I	1600.824			$4p^2 - 4p10d$	$g^3P - ^3D^o$	0-1	A6
Ge I?	1604.28						A6
Ge I?	1608.500						A6
Ge I	1610.774			$4p^2 - 4p11d$	$g^3P - ^3D^o$	1-1	A6
Ge I	1610.866			$4p^2 - 4p11d$	$g^3P - ^3D^o$	1-2	A6
Ge I	1612.974			$4p^2 - 4p8d$	$g^3P - ^3P^o$	2-2	A6
Ge I	1613.557			$4p^2 - 4p9s$	$g^3P - ^3P^o$	1-2	A6
Ge I?	1613.818						A6
Ge I	1614.792			$4p^2 - 4p8d$	$g^3P - ^3F^o$	2-2	A6
Ge I	1615.234			$4p^2 - 4p10d$	$g^3P - ^3D^o$	1-1	A6
Ge I	1615.571	3		$4p^2 - 4p10d$	$g^3P - ^3D^o$	1-2	A6
Ge I	1615.715	2		$4p^2 - 4p10s$	$g^3P - ^3P^o$	2-2	A6
Ge I?	1616.509						A6
Ge I?	1617.29						A6
Ge I	1624.1300 st	2		$4p^2 - 4p8d$	$g^3P - ^3D^o$	0-1	K5
Ge I	1624.78			$4p^2 - 4p10s$	$g^3P - ^3P^o$	0-1	A6
Ge I	1625.46			$4p^2 - 4p9d$	$g^3P - ^3D^o$? 1-1	A6
Ge I	1629.600			$4p^2 - 4p7d$	$g^3P - ^3P^o$	0-1	A6
Ge I	1630.1733 st	2		$4p^2 - 4p8s$	$g^3P - ^1P^o$	0-1	K5, K3
Ge I	1633.312			$4p^2 - 4p11d$	$g^3P - ^3D^o$	2-2	A6
Ge I	1633.468	2		$4p^2 - 4p11d$	$g^3P - ^3D^o$? 2-3	W10, A6
Ge I	1635.2590 st	2		$4p^2 - 4p7d$	$g^3P - ^3D^o$	0-1	K5, A6
Ge I	1636.062			$4p^2 - 4p9s$	$g^3F - ^3P^o$	2-2	A6
Ge I	1636.312	5		$4p^2 - 4p10d$	$g^3P - ^3D^o$	2-3	A6
Ge I	1637.74			$4p^2 - 4p10d$	$g^3P - ^3D^o$	2-1	A6
Ge I	1638.138			$4p^2 - 4p10d$	$g^3P - ^3D^o$	2-2	A6
Ge I	1638.958	3		$4p^2 - 4p8d$	$g^3P - ^3D^o$	1-1	A6
Ge I	1639.641	2		$4p^2 - 4p10s$	$g^3P - ^3P^o$	1-1	A6
Ge I	1639.7300 st	6		$4p^2 - 4p8d$	$g^3P - ^3D^o$	1-2	K5, A6
Ge I	1640.394			$4p^2 - 4p7d$	$g^3P - ^1F^o$	2-3	A6
Ge I	1643.1931 st	4		$4p^2 - 4p9s$	$g^3P - ^3P^o$	0-1	K5, K3
Ge I	1644.52			$4p^2 - 4p7d$	$g^3P - ^3P^o$	1-1	A6
Ge I	1645.1146 st	1		$4p^2 - 4p8s$	$g^3P - ^1P^o$	1-1	K5, K3
Ge I	1647.1222 st	2		$4p^2 - 4p7d$	$g^3P - ^3D^o$	1-2	K5, K3
Ge I	1647.5310 st	3		$4p^2 - 4p8s$	$g^3P - ^3P^o$	1-2	K5, K3
Ge I	1650.2945 st	4		$4p^2 - 4p7d$	$g^3P - ^3D^o$	1-1	K5, A6
Ge I	1651.5288 st	3		$4p^2 - 4p6d$	$g^3P - ^3P^o$	0-1	K5, K3
Ge I	1651.9547 st	6		$4p^2 - 4p7d$	$g^3P - ^1D^o$	1-2	K5, K3
Ge I	1652.347	1		$4p^2 - 4p7d$	$g^3P - ^3F^o$	2-3	A6
Ge I	1658.3752 st	3		$4p^2 - 4p9s$	$g^3P - ^3P^o$	1-1	K5, K3
Ge I	1660.7956 st	2		$4p^2 - 4p9s$	$g^3P - ^3P^o$	1-0	K5, K3
Ge I	1661.3453 st	5		$4p^2 - 4p6d$	$g^3P - ^1P^o$	1-1	K5, K3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge I	1662.9860 st	3		$4p^2 - 4p8d$	$g^2P - ^3D^o$	2-2	K5, A6
Ge I	1663.5393 st	10		$4p^2 - 4p8d$	$g^2P - ^3D^o$	2-3	K5, A6
Ge I	1665.2751 st	5		$4p^2 - 4p6d$	$g^2P - ^2P^o$	1-6	K5, K3
Ge I	1667.8015 st	6		$4p^2 - 4p6d$	$g^2P - ^2P^o$	1-2	K5, K3
Ge I	1670.6085 st	9		$4p^2 - 4p7d$	$g^2P - ^2D^o$	2-3	K3, K3
Ge I	1670.9490 st	2		$4p^2 - 4p6d$	$g^2P - ^3F^o$	1-2	K5, K3
Ge I	1671.0096 st	3		$4p^2 - 4p8s$	$g^2P - ^3P^o$	2-2	K5, K3
Ge I	1673.850	1		$4p^2 - 4p7d$	$g^2P - ^3D^o$	2-1	A6
Ge I	1674.2703 st	9		$4s^2 4p^2 - 4s 4p^3$	$g^2P - ^3D^o$	0-1	K5, K3
Ge I	1675.5605 st	7		$4p^2 - 4p7d$	$g^2P - ^1D^o$	2-2	K5, K3
Ge I	1679.9868 st	2		$4p^2 - 4p8s$	$g^2P - ^3P^o$	0-1	K5, K3
Ge I	1681.3426 st	7		$4p^2 - 4p6d$	$g^2P - ^1F^o$	2-3	K5, K3
Ge I	1685.2221 st	3		$4p^2 - 4p6d$	$g^2P - ^1P^o$	2-1	K5, K3
Ge I	1690.0349 st	10		$4s^2 4p^2 - 4s 4p^3$	$g^2P - ^3D^o$	1-1	K5, K3
Ge I	1690.9030 st	4		$4p^2 - 4p6d$	$g^2P - ^1P^o$	2-1	K5, K3
Ge I	1691.0897 st	20		$4s^2 4p^2 - 4s 4p^3$	$g^2P - ^3D^o$	1-2	K5, K3
Ge I	1691.6254 st	7		$4p^2 - 4p7s$	$g^2P - ^1F^o$	0-1	K5, K3
Ge I	1691.8656 st	7		$4p^2 - 4p6d$	$g^2P - ^3P^o$	2-2	K5, K3
Ge I	1694.3424 st	4		$4p^2 - 4p6d$	$g^2P - ^3F^o$	2-3	K5, K3
Ge I	1695.8597 st	8		$4p^2 - 4p8s$	$g^2P - ^3P^o$	1-1	K5, K3
Ge I	1696.7160 st	8		$4p^2 - 4p8s$	$g^2P - ^3P^o$	1-0	K5, K3
Ge I	1702.3873 st	4		$4p^2 - 4p6d$	$g^2P - ^3D^o$	0-1	K5, K3
Ge I	1713.0806 st	10		$4p^2 - 4p7s$	$g^2P - ^3P^o$	1-2	K5, K3
Ge I	1714.7497 st	1		$4s^2 4p^2 - 4s 4p^3$	$g^2P - ^3D^o$	2-1	K5, K3
Ge I	1715.8355 st	15		$4s^2 4p^2 - 4s 4p^3$	$g^2P - ^3D^o$	2-2	K5, K3
Ge I	1716.7844 st	40		$4s^2 4p^2 - 4s 4p^3$	$g^2P - ^3D^o$	2-3	K5, K3
Ge I	1718.4933 st	6		$4p^2 - 4p6d$	$g^2P - ^3D^o$	1-2	K5, K3
Ge I	1718.6883 st	10		$4p^2 - 4p6d$	$g^2P - ^3D^o$	1-1	K5, K3
Ge I	1720.7464 st	8		$4p^2 - 4p8s$	$g^2P - ^3P^o$	2-1	K5, K3
Ge I	1724.3082 st	10		$4p^2 - 4p6d$	$g^2P - ^1D^o$	1-2	K5, K3
Ge I	1732.9586 st	2		$4p^2 - 4p7s$	$g^2P - ^1P^o$	2-1	K5, K3
Ge I	1738.1185 st	15		$4p^2 - 4p6d$	$g^2P - ^3D^o$	2-3	K5, K3
Ge I	1738.4791 st	30		$4p^2 - 4p7s$	$g^2P - ^3P^o$	2-2	K5, K3
Ge I	1739.1024 st	25		$4p^2 - 4p5d$	$g^2P - ^1P^o$	1-1	K5, K3
Ge I	1742.1951 st	25		$4p^2 - 4p5d$	$g^2P - ^3P^o$	0-1	K5, K3
Ge I	1744.0537 st	15		$4p^2 - 4p6d$	$g^2P - ^3D^o$	2-2	K5, K3
Ge I	1744.2546 st	15		$4p^2 - 4p6d$	$g^2P - ^3D^o$	2-1	K5, K3
Ge I	1746.0651 st	30		$4p^2 - 4p5d$	$g^2P - ^3P^o$	1-0	K5, A6
Ge I	1748.8572 st	20		$4p^2 - 4p7s$	$g^2P - ^3P^o$	0-1	K5, K3
Ge I	1750.0432 st	30		$4p^2 - 4p6d$	$g^2P - ^1D^o$	2-2	K5, K3
Ge I	1758.2792 st	40		$4p^2 - 4p5d$	$g^2P - ^3P^o$	1-2	K5, K3
Ge I	1759.2712 st	15		$4p^2 - 4p5d$	$g^2P - ^3P^o$	1-1	K5, K3
Ge I	1764.1852 st	30		$4p^2 - 4p5d$	$g^2P - ^1F^o$	2-3	K5, K3
Ge I	1765.2843 st	30		$4p^2 - 4p5d$	$g^2P - ^1P^o$	2-1	K5, K3
Ge I	1766.0648 st	25		$4p^2 - 4p7s$	$g^2P - ^3P^o$	1-1	K5, K3
Ge I	1766.4330 st	30		$4p^2 - 4p7s$	$g^2P - ^3P^o$	1-0	K5, K3
Ge I	1774.1755 st	40		$4p^2 - 4p5d$	$g^2P - ^3F^o$	1-2	K5, K3
Ge I	1779.15	15		$4p^2 - 4p10s$	$^1D - ^1P^o$	2-1	A6
Ge I	1785.0460 st	50		$4p^2 - 4p5d$	$g^2P - ^3P^o$	2-2	K5, K3
Ge I	1786.0686 st	40		$4p^2 - 4p5d$	$g^2P - ^3P^o$	2-1	K5, K3
Ge I	1793.0711 st	40		$4p^2 - 4p7s$	$g^2P - ^3P^o$	2-1	K5, K3
Ge I	1801.4323 st	50		$4p^2 - 4p5d$	$g^2P - ^3F^o$	2-2	K5, K3
Ge I	1802.6246 st	40		$4p^2 - 4p5d$	$g^2P - ^3D^o$	0-1	K5, K3
Ge I	1804.4523 st	50	7	$4p^2 - 4p5d$	$g^2P - ^3F^o$	2-3	K5, K3
Ge I	1805.135	15		$4p^2 - 4p10d$	$^1D - ^3D^o$	2-3	A6
Ge I	1810.1006 st	4		$4p^2 - 4p7d$	$^1D - ^1F^o$	2-3	K5, A6
Ge I	1813.9087 st	15		$4p^2 - 4p5d$	$g^2P - ^3D^o$	1-2	K5, K3
Ge I	1824.3023 st	70	7	$4p^2 - 4p5d$	$g^2P - ^1D^o$	1-2	K5, K3
Ge I	1836.649	2		$4p^2 - 4p8d$	$^1D - ^3D^o$	2-1	A6
Ge I	1837.583	2		$4p^2 - 4p8d$	$^1D - ^3D^o$	2-2	A6
Ge I	1838.321	2		$4p^2 - 4p8d$	$^1D - ^3D^o$	2-3	A6
Ge I	1841.3275 st	70		$4p^2 - 4p5d$	$g^2P - ^3D^o$	2-3	K5, K3
Ge I	1842.4098 st	70	7	$4p^2 - 4p5d$	$g^2P - ^3D^o$	2-2	K5, K3
Ge I	1844.4102 st	15		$4p^2 - 4p8s$	$^1D - ^1P^o$	2-1	K5, K3
Ge I	1845.8723 st	70		$4p^2 - 4p6s$	$g^2P - ^1P^o$	0-1	K5, K3

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge I	1846.9578 st	20	20	4p ² - 4p7d	¹ D - ³ D°	2 - 3	K5, K3
Ge I	1849.6354 st	20		4p ² - 4p5d	³ P - ³ D°	2 - 1	K5, K3
Ge I	1853.1336 st	80		4p ² - 4p5d	³ P - ¹ D°	2 - 2	K5, K3
Ge I	1860.0865 st	50	19	4p ² - 4p6d	¹ D - ¹ F°	2 - 3	K5, K3
Ge I	1861.0945 st	9		4p ² - 4p9s	¹ D - ³ P°	2 - 1	K5, K3
Ge I	1865.0525 st	70		4p ² - 4p6s	³ P - ¹ P°	1 - 1	K5, K3
Ge I	1872.9745 st	6		4p ² - 4p6d	¹ D - ³ P°	2 - 2	K5, K3
Ge I	1874.2565 st	200	6	4p ² - 4p6s	³ P - ³ P°	1 - 2	K5, K3
Ge I	1876.0104 st	10		4p ² - 4p6d	¹ D - ³ F°	2 - 3	K5, K3
Ge I	1881.6570 st	8		4s ² 4p ² - 4s4p ²	¹ D - ³ S°	2 - 1	K5, K3
Ge I	1895.1968 st	100		4p ² - 4p6s	³ P - ¹ P°	2 - 1	K5, K3
Ge I	1901.0607 st	8		4s ² 4p ² - 4s4p ²	³ D - ³ D°	2 - 1	K5, K3
Ge I	1902.3955 st	2		4s ² 4p ² - 4s4p ²	¹ D - ³ D°	2 - 2	K5, K3
Ge I	1903.5620 st	10		4s ² 4p ² - 4s4p ²	¹ D - ³ D°	2 - 3	K5, K3
Ge I	1904.7015 st	400	6	4p ² - 4p6s	³ P - ³ P°	2 - 2	K5, K3
Ge I	1908.4342 st	50		4p ² - 4p6s	¹ D - ³ P°	2 - 1	K5, K3
Ge I	1912.4087 st	100	1	4p ² - 4p4d	³ P - ¹ P°	1 - 1	K5, K3
Ge I	1917.5924 st	200	6	4p ² - 4p6s	³ P - ³ P°	0 - 1	K5, K3
Ge I	1923.4674 st	100	18	4p ² - 4p7s	¹ D - ¹ P°	2 - 1	K5, K3
Ge I	1929.8262 st	400	17	4p ² - 4p6d	¹ D - ³ D°	2 - 3	K5, K3
Ge I	1930.2707 st	8		4p ² - 4p7s	¹ D - ³ P°	2 - 2	K5, K3
Ge I	1934.0482 st	100	5	4p ² - 4p4d	³ P - ³ P°	0 - 1	K5, K3
Ge I	1937.1456 st	8		4p ² - 4p6d	¹ D - ³ D°	2 - 2	K5, K3
Ge I	1937.4825 st	300	6	4p ² - 4p6s	³ P - ³ P°	1 - 0	K5, K3
Ge I	1938.3003 st	300	6	4p ² - 4p6s	³ P - ³ P°	1 - 1	K5, K3
Ge I	1944.1163 st	150		4p ² - 4p4d	³ P - ¹ P°	2 - 1	K5, K3
Ge I	1944.7513 st	300	5	4p ² - 4p4d	³ P - ³ P°	1 - 0	K5, K3
Ge I	1951.8018 st	100		4p ² - 4p4d	³ P - ¹ F°	2 - 3	K5, K3
Ge I	1955.1150 st	200	5	4p ² - 4p4d	³ P - ³ P°	1 - 1	K5, K3
Ge I	1962.0133 st	500	16	4p ² - 4p5d	¹ D - ¹ F°	2 - 3	K5, K3
Ge I	1963.3728 st	100		4p ² - 4p5d	¹ D - ¹ P°	2 - 1	K5, K3
Ge I	1965.3830 st	200	5	4p ² - 4p4d	³ P - ³ P°	1 - 2	K5, K3
Ge I	1970.8796 st	500	6	4p ² - 4p6s	³ P - ³ P°	2 - 1	K5, K3
Ge I	1987.8492 st	300		4p ² - 4p5d	¹ D - ³ P°	2 - 2	K5, K3
Ge I	1988.2668 st	600	5	4p ² - 4p4d	³ P - ³ P°	2 - 1	K5, K3
Ge I	1989.1174 st	100		4p ² - 4p5d	¹ D - ³ P°	2 - 1	K5, K3
Ge I	1997.8064 st	150		4p ² - 4p7s	¹ D - ³ P°	2 - 1	K5, K3
Ge I	1998.8869 st	1000	5	4p ² - 4p4d	³ P - ³ P°	2 - 2	K5, K3

GERMANIUM II (Ge¹⁺), Z = 32Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p²P_{1/2}^o (31 electrons)Ionization Potential 128 521.3 cm⁻¹; 15.934 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge II	710.487	5h		4s ² 4p - 4s4p(³ P°)5p	³ P° - ³ P	1/2 - 3/2	S15
Ge II	714.206	2h		4s ² 4p - 4s4p(³ P°)5p	³ P° - ³ P	1/2 - 1/2	S15
Ge II	719.487	5h		4s ² 4p - 4s4p(³ P°)5p	³ P° - ³ P	3/2 - 3/2	S15
Ge II	822.968	0		4p - 9d	³ P° - ³ D	1/2 - 3/2	S15
Ge II	828.67	i					S15
Ge II	829.91	3					S15
Ge II	835.083	2		4p - 9d	³ P° - ³ D	3/2 - 5/2	S15
Ge II	837.60	0h					S15
Ge II	837.947	20h		4p - 8d	³ P° - ³ D	1/2 - 3/2	S15
Ge II	838.91	2h		4p - 10s	³ P° - ³ S	3/2 - 1/2	S15

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J	References
Ge II	843.7165 st	5h		4p - 9s	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K7, S15
Ge II	850.495	15h		4p - 8d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	856.4980 st	10h		4p - 9s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K7, S15
Ge II	861.68	10f		4p - 6f	$g^2P^{\circ} - ^2F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	862.2339 st	50h	9	4p - 7d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{1}{2}$	K7, S15
Ge II	872.3075 st	10h		4p - 8s	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K7, S15
Ge II	874.99	10h		4p - 6f	$g^2P^{\circ} - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	875.4927 st	100h	9	4p - 7d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K7, S15
Ge II	875.5766 st	10	9	4p - 7d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K7, W10
Ge II	885.7463 st	20		4p - 8s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K7, S15
Ge II	899.6	5			$^4P - 4^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	900.61	10		4s4p ² - 4s4p(² P)5d	$^4P - 3^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	904.90	2f		4s4p ² - 4s4p(² P)5d	$^4P - 3^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	905.9771 st	200h	8	4p - 5f	$g^2P^{\circ} - ^2F^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	908.50	10h		4p - 6d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K7, S15
Ge II				4s4p ² - 4s4p(² P)5d	$^4P - 1^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	909.050	5					S15
Ge II	909.432	3					S15
Ge II	911.258	15h		4s4p ² - 4s4p(² P)5d	$^4P - 3^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	914.444	2		4s4p ² - 4s4p(² P)5d	$^4P - 2^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	919.57	15f		4s4p ² - 4s4p(² P)5d	$^4P - 1^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II				4p - 5f	$g^2P^{\circ} - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	920.5537 st	400h	8	4p - 6d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{1}{2}$	K7, S15
Ge II	920.7195 st			4p - 6d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K7, K8
Ge II	926.4736 st	20		4p - 7s	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K7, S15
Ge II	926.93	2					S15
Ge II	931.32	3					S15
Ge II	940.04	1					S15
Ge II	941.8962 st	50					S15
Ge II	942.845	8		4p - 7s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K7, S15
Ge II	943.75	1		4s4p ² - 4s4p(² P)6s	$^4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	952.500	20					S15
Ge II				4s4p ² - 4s4p(² P)6s	$^4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	955.96	0					S15
Ge II	962.537	5		4s4p ² - 4s4p(² P)6s	$^4P - 4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S15
Ge II	965.48	3h		4s4p ² - 4s4p(² P)6s	$^4P - 4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	999.1011 st	500	7	4s4p ² - 4s4p(² P)6s	$^4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1014.66	10f		4p - 5d	$g^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	K7, S15
Ge II				4p - 4f	$g^2P^{\circ} - ^2F^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1016.6377 st	500	7	4p - 5d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K7, S15
Ge II	1017.0600 st	300	7	4p - 5d	$g^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K7, S15
Ge II	1044.24	20h		4s4p ² - 4s4p(² P)5d	$^2D - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1046.05	2h		4s4p ² - 4s4p(² P)5d	$^2D - ^2D$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1046.88	5h					S15
Ge II	1055.0261 st	100	6	4p - 6s	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	K7, S15
Ge II	1075.0720 st	300	6	4p - 6s	$g^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	K7, S15
Ge II	1085.513	100	5	4s ² 4p - 4s4p ²	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	1093.01	1h					S15
Ge II	1098.08	2h		4s4p ² - 4p ³	$^2D - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1098.710	200	5	4s ² 4p - 4s4p ²	$g^2P^{\circ} - ^2P$	$\frac{1}{2} - \frac{1}{2}$	S15
Ge II	1100.98	10h		4s4p ² - 4p ³	$^2D - ^2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1106.737	200	5	4s ² 4p - 4s4p ²	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1120.458	200	5	4s ² 4p - 4s4p ²	$g^2P^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1127.48	5h		4s4p ² - 4s4p(² P)4d	$^4P - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1134.02	20h		4s4p ² - 4p ³	$^4P - 4S^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	1141.36	10h		4s4p ² - 4s4p(² P)4d	$^4P - 2P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1143.25	40h		4s4p ² - 4p ³	$^4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1146.972	3		4s4p ² - 4s4p(² P)4d	$^4P - 4P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S15
Ge II	1149.547	20		4s4p ² - 4s4p(² P)4d	$^4P - 4P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	1156.462	20		4s4p ² - 4s4p(² P)4d	$^4P - 4P^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1157.50	50h		4s4p ² - 4p ³	$^4P - 4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1159.066	50		4s4p ² - 4s4p(² P)4d	$^4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1164.273	100		4s ² 4p - 4s4p ²	$g^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	S15
Ge II	1173.707	75		4s4p ² - 4s4p(² P)4d	$^4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1178.957	100		4s4p ² - 4s4p(² P)4d	$^4P - 4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1180.10	7h					S15
Ge II	1181.194	150	11	4s4p ² - 4s4p(² P)4d	$^4P - 4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	1181.650	150	11	4s4p ² - 4s4p(² P)4d	$^4P - 4D^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S15
Ge II	1185.154	3		4s4p ² - 4p ³	$^2D - ^2D^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	S15

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J J	References
Ge II	1187.323	50		4s4p ² - 4p ³	² D - ² D°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1187.539	50		4s4p ² - 4p ³	² D - ² D°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1188.732	200		4s ² 4p - 4s4p ²	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1189.623	150	11	4s4p ² - 4s4p(³ P)4d	⁴ P - ⁴ D°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1191.264	100	11	4s4p ² - 4s4p(³ P)4d	⁴ P - ⁴ D°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1191.719	15	11	4s4p ² - 4s4p(³ P°)4d	⁴ P - ⁴ D°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1194.787	500	11	4s4p ² - 4s4p(³ P°)4d	⁴ P - ⁴ D°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1205.049	15	11	4s4p ² - 4s4p(³ P°)4d	⁴ P - ⁴ D°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1206.725	3	11	4s4p ² - 4s4p(³ P°)4d	⁴ P - ⁴ D°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1237.0589 st	500	4	4p - 4d	g ² P° - ² D	$\frac{1}{2} - \frac{3}{2}$	K7, S15
Ge II	1261.9053 st	1000	4	4p - 4d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	K7, S15
Ge II	1264.7096 st	300	4	4p - 4d	g ² P° - ² D	$\frac{3}{2} - \frac{3}{2}$	K7, S15
Ge II	1268.444	2		4s4p ² - 4s4p(³ P)4d	⁴ P - ⁴ F°	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	1274.100	5		4s4p ² - 4s4p(³ P)4d	⁴ P - ⁴ F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1280.050	2		4s4p ² - 4s4p(³ P)4d	⁴ P - ⁴ F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1282.345	15		4s4p ² - 4s4p(³ P°)4d	⁴ P - ⁴ F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1290.07	100h		4s4p ² - 4s4p(³ P°)4d	² D - ² F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1291.82	2		4s4p ² - 4s4p(³ P°)4d	⁴ P - ⁴ F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1311.249	50h		4s4p ² - 4s4p(³ P°)4d	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1314.15	10h		4s4p ² - 4s4p(³ P)4d	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1319.3	10h		4s4p ² - 4s4p(³ P)4d	² D - ² P°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1340.92	5h		4s4p ² - 4p ³	² D - ⁴ S°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1386.425	100h	10	4s4p ² - 4s4p(³ P)5s	⁴ P - ⁴ P°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1392.265	100h	10	4s4p ² - 4s4p(³ P)5s	⁴ P - ⁴ P°	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	1401.235	200h	10	4s4p ² - 4s4p(³ P)5s	⁴ P - ⁴ P°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1406.195	20	10	4s4p ² - 4s4p(³ P)5s	⁴ P - ⁴ P°	$\frac{1}{2} - \frac{1}{2}$	S15
Ge II	1406.269	20h	10	4s4p ² - 4s4p(³ P)5s	⁴ P - ⁴ P°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1420.385	200h	10	4s4p ² - 4s4p(³ P)5s	⁴ P - ⁴ P°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1427.877	200h	10	4s4p ² - 4s4p(³ P)5s	⁴ P - ⁴ P°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1433.48	5h					S15
Ge II	1457.96	2h					S15
Ge II	1458.64	1		4s ² 4d - 4p ³	⁴ D - ² D	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1461.970	5		4s ² 4d - 4p ³	² D - ² D°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1462.388	10		4s ² 4d - 4p ³	² D - ² D°	$\frac{5}{2} - \frac{3}{2}$	S15
Ge II	1465.73	1		4s ² 4d - 4p ³	² D - ² D°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1538.0907 st	15w	3	4s ² 4p - 4s4p ²	g ² P - ² D	$\frac{1}{2} - \frac{3}{2}$	K7, S15
Ge II	1576.8547 st	500	3	4s ² 4p - 4s4p ²	g ² P - ² D	$\frac{3}{2} - \frac{3}{2}$	K7, S15
Ge II	1578.598	3		4s4p ² - 4p ³	² S - ² D	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	1581.0698 st	300	3	4s ² 4p - 4s4p ²	g ² P - ² D	$\frac{3}{2} - \frac{3}{2}$	K7, S15
Ge II	1602.4863 st	500	2	4p - 5s	g ² P - ² S	$\frac{1}{2} - \frac{1}{2}$	K7, S15
Ge II	1606.29	2h		4s4p ² - 4s4p(³ P)4d	² D - ² D	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1610.640	3h		4s4p ² - 4s4p(³ P)4d	² D - ² D	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1615.332	3h		4s4p ² - 4s4p(³ P)4d	² D - ² D	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1619.74	1		4s4p ² - 4s4p(³ P)4d	² D - ² D	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1621.03	100h		4s ² 4d - 4s4p(³ P)4d	² D - ² F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1649.1942 st	500	2	4p - 5s	g ² P° - ² S	$\frac{3}{2} - \frac{1}{2}$	K7, S15
Ge II	1654.46	75h		4s ² 4d - 4s4p(³ P)4d	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1659.22	3h		4s ² 4d - 4s4p(³ P)4d	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1676.26	0		4s4p ² - 4s ² 11f	² D - ² F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1677.99	5		4s ² 4d - 4s4p(³ P)4d	² D - ² P°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1679.335	2		4s4p ² - 4s4p(³ P)5s	² D - ⁴ F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1698.43	0		4s4p ² - 4s ² 10f	² D - ² F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1702.20	0h		4s ² 4d - 4p ³	² D - ⁴ S°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1729.385	2		4s4p ² - 4s ² 9f	² D - ² F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1750.85	10		4s4p ² - 4p ³	² P - ² D°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1769.377	5		4s4p ² - 4s ² 8f	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1774.703	10		4s4p ² - 4s ² 8f	² D - ² F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1810.83	1		4s ² 4d - 4s4p(³ P)4d	² D - ⁴ D	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1815.09	10h		4s4p ² - 4s4p(³ P)4d	² S - ² P°	$\frac{1}{2} - \frac{3}{2}$	S15
Ge II	1837.460	0		4s4p ² - 4s ² 9p	² D - ² P°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1839.634	20		4s4p ² - 4s ² 7f	² D - ² F°	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1845.388	30		4s4p ² - 4s ² 7f	² D - ² F°	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1856.81	10h					S15
Ge II	1912.376	20	1	4s ² 4p - 4s4p ²	g ² P° - ⁴ P	$\frac{1}{2} - \frac{3}{2}$	M23
Ge II	1938.0077 st	100	1	4s ² 4p - 4s4p ²	g ² P - ⁴ P	$\frac{3}{2} - \frac{3}{2}$	K7, S15

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge II	1938.8906 st	100	1	$4s^2 4p - 4s 4p^2$	$g^2 P^o - 4P$	$\frac{1}{2} - \frac{1}{2}$	K7, S15
Ge II	1947.55	2h		$4s 4p^2 - 4s^2 8p$	$^3 D - ^3 P^o$	$\frac{3}{2} - \frac{1}{2}$	S15
Ge II	1952.29	3h		$4s 4p^2 - 4s^2 8p$	$^3 D - ^3 P^o$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1959.781	30h	14	$4s 4p^2 - 4s^2 6i$	$^1 D - ^3 F^o$	$\frac{3}{2} - \frac{3}{2}$	S15
Ge II	1966.3173	40h	14	$4s 4p^2 - 4s^2 6i$	$^3 D - ^2 F^o$	$\frac{3}{2} - \frac{1}{2}$	K3, S15
Ge II	1979.2736 st	30	1	$4s^2 4p - 4s 4p^2$	$g^2 P^o - 4P$	$\frac{3}{2} - \frac{3}{2}$	K7, S15
Ge II	1986.6	3h		$4s^2 4d - 4s 4p(^2 P^o) 4d$	$^3 D - 4F^o$	$\frac{3}{2} - \frac{7}{2}$	S15

GERMANIUM III (Ge^{2+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 \ ^1S_0$ (30 electrons)
 Ionization Potential $276\ 036\ cm^{-1}$; $34.22\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge III	542.57	40		$4s^2 - 4s 5p$	$g^1 S - ^1 P^o$	0 - 1	L6
Ge III	660.50	20		$4s 4p - 4s 5d$	$^3 P - ^3 D$	0 - 1	L6
Ge III	663.71	40		$4s 4p - 4s 5d$	$^3 P - ^3 D$	1 - 2	L6
Ge III	669.27	10		$4s 4p - 4s 6s$	$^3 P - ^3 S$	0 - 1	L6
Ge III	670.83	60		$4s 4p - 4s 5d$	$^3 P - ^3 D$	2 - 3	L6
Ge III	671.02	5		$4s 4p - 4s 5d$	$^3 P - ^3 D$	2 - 2	L6
Ge III	672.70	20		$4s 4p - 4s 6s$	$^3 P - ^3 S$	1 - 1	L6
Ge III	680.22	40		$4s 4p - 4s 6s$	$^3 P - ^3 S$	2 - 1	L6
Ge III	952.79	40		$4s 4p - 4s 5s$	$^3 P - ^1 S$	1 - 0	L6
Ge III	988.94	240		$4s 4p - 4s 4d$	$^3 P - ^3 D$	0 - 1	L6
Ge III	995.76	300		$4s 4p - 4s 4d$	$^3 P - ^3 D$	1 - 2	L6
Ge III	996.46	200		$4s 4p - 4s 1d$	$^3 P - ^3 D$	1 - 1	L6
Ge III	1011.22	300		$4s 4p - 4s 1d$	$^3 P - ^3 D$	2 - 3	L6
Ge III	1012.31	200		$4s 4p - 4s 4d$	$^3 P - ^3 D$	2 - 2	L6
Ge III	1013.04	40		$4s 4p - 4s 4d$	$^3 P - ^3 D$	2 - 1	L6
Ge III	1032.60	160		$4s 4p - 4s 5s$	$^3 P - ^3 S$	0 - 1	L6
Ge III	1040.80	240		$4s 4p - 4s 5s$	$^3 P - ^3 S$	1 - 1	L6
Ge III	1058.89	240		$4s 4p - 4s 5s$	$^3 P - ^3 S$	2 - 1	L6
Ge III	1088.46	800		$4s^2 - 4s 4p$	$g^1 S - ^1 P^o$	0 - 1	L6
Ge III	1137.95	200		$4s 4p - 4p^2$	$^3 P - ^3 P$	1 - 2	L6
Ge III	1150.60	240		$4s 4p - 4p^2$	$^3 P - ^3 P$	0 - 1	L6
Ge III	1159.12	160		$4s 4p - 4p^2$	$^3 P - ^1 D$	1 - 2	L6
Ge III	1159.62	160		$4s 4p - 4p^2$	$^3 P - ^3 P$	2 - 2	L6
Ge III	1160.79	160		$4s 4p - 4p^2$	$^3 P - ^3 P$	1 - 1	L6
Ge III	1173.78	290		$4s 4p - 4p^2$	$^3 P - ^3 P$	1 - 0	L6
Ge III	1212.47	160		$4s 4p - 4s 4d$	$^3 P - ^1 D$	1 - 2	L6
Ge III	1323.15	80		$4s 4p - 4s 5s$	$^1 P - ^1 S$	1 - 0	L6
Ge III	1499.18	10		$4s 4p - 4s 5s$	$^1 P - ^3 S$	1 - 1	L6
Ge III	1525.34	200		$4s 4d - 4s 4f$	$^1 D - ^3 F^o$	2 - 3	L6
Ge III	1527.10	40		$4s 4d - 4s 4f$	$^1 D - ^3 F^o$	2 - 2	L6
Ge III	1542.95	20		$4p^2 - 4p 4d$	$^1 D - ^1 F$	2 - 3	L6
Ge III	1569.49	10		$4p^2 - 4p 4d$	$^3 P - ^1 P$	1 - 1	L6
Ge III	1572.55	10		$4p^2 - 4p 4d$	$^1 D - ^1 P$	2 - 1	L6
Ge III	1600.10	180		$4s^2 - 4s 4p$	$g^1 S - ^3 P$	0 - 1	L6
Ge III	1613.27	20		$4p^2 - 4p 4d$	$^3 P - ^1 P$	2 - 1	L6
Ge III	1619.09	5		$4p^2 - 4s 4f$	$^1 D - ^1 F$	2 - 3	L6
Ge III	1619.88	10f		$4s^2 - 4s 4p$	$g^1 S - ^3 P$	0 - 0	L6
Ge III	1620.62	10		$4p^2 - 4s 4f$	$^1 D - ^3 F$	2 - 3	L6
Ge III	1621.08	10		$4p^2 - 4s 4f$	$^1 D - ^3 F$	2 - 2	L6
Ge III	1709.40	5		$4s 4p - 4p^2$	$^1 P - ^3 P$	1 - 2	L6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge III	1883.27	120		4s4p - 4s4d	$^1P^{\circ} - ^1D^{\circ}$	1 - 2	L6
Ge III	1917.55	5		4s4d - 4p4d	$^1D^{\circ} - ^1D^{\circ}$	2 - 2	L6
Ge III	1938.01	10		4s5p - 4d ²	$^1P^{\circ} - ^1D^{\circ}$	1 - 2	L6
Ge III	1974.05	23		4s4d - 4p4d	$^3D^{\circ} - ^1F^{\circ}$	2 - 3	L6
Ge III	1978.21	40		4s4d - 4p4d	$^3D^{\circ} - ^1F^{\circ}$	3 - 3	L6

GERMANIUM IV (Ge³⁺), Z = 32Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s $^2S_{1/2}$ (29 electrons)Ionization Potential 368 701 cm⁻¹; 45.71 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge IV	439.77	20		3d ¹⁰ 4s - 3d ¹⁰ 5p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	L6
Ge IV	441.58	20		3d ¹⁰ 4s - 3d ¹⁰ 5p	$g^2S - ^2P^{\circ}$	1/2 - 1/2	L6
Ge IV	529.83	20		3d ¹⁰ 4p - 3d ¹⁰ 6s	$^2P^{\circ} - ^2S$	1/2 - 1/2	L6
Ge IV	537.78	20		3d ¹⁰ 4p - 3d ¹⁰ 6s	$^2P^{\circ} - ^2S$	3/2 - 1/2	L6
Ge IV	847.80	60		3d ¹⁰ 4p - 3d ¹⁰ 5s	$^2P^{\circ} - ^2S$	1/2 - 1/2	L6
Ge IV	868.30	60		3d ¹⁰ 4p - 3d ¹⁰ 5s	$^2P^{\circ} - ^2S$	3/2 - 1/2	L6
Ge IV	915.00	160		3d ¹⁰ 4p - 3d ¹⁰ 4f	$^2P^{\circ} - ^2D$	1/2 - 3/2	L6
Ge IV	936.70	160		3d ¹⁰ 4p - 3d ¹⁰ 4d	$^2P^{\circ} - ^2D$	3/2 - 5/2	L6
Ge IV	938.93	80		3d ¹⁰ 4p - 3d ¹⁰ 4d	$^2P^{\circ} - ^2D$	3/2 - 3/2	L6
Ge IV	1073.38	20		3d ¹⁰ 4d - 3d ¹⁰ 6p	$^2D - ^2P^{\circ}$	3/2 - 3/2	L6
Ge IV	1078.02	40f		3d ¹⁰ 4d - 3d ¹⁰ 6p	$^2D - ^2P^{\circ}$	3/2 - 1/2	L6
Ge IV	1183.39	300		3d ¹⁰ 5s - 3d ¹⁰ 6p	$^2S - ^2P^{\circ}$	1/2 - 3/2	L6
Ge IV	1185.50	10		3d ¹⁰ 5s - 3d ¹⁰ 6p	$^2S - ^2P^{\circ}$	1/2 - 1/2	L6
Ge IV	1188.99	400		3d ¹⁰ 4s - 3d ¹⁰ 4p	$g^2S - ^2P^{\circ}$	1/2 - 3/2	L6
Ge IV	1229.81	400		3d ¹⁰ 4s - 3d ¹⁰ 4p	$g^2S - ^2P^{\circ}$	1/2 - 1/2	L6
Ge IV	1494.89	40		3d ¹⁰ 4d - 3d ¹⁰ 4f	$^2D - ^2F^{\circ}$	3/2 - 5/2	L6
Ge IV	1500.61	120		3d ¹⁰ 4d - 3d ¹⁰ 4f	$^2D - ^2F^{\circ}$	3/2 - 1/2	L6
Ge IV	1648.14	60f		3d ¹⁰ 5s - 3d ⁹ 4s ²	$^2S - ^2D$	1/2 - 3/2	L6

GERMANIUM V (Ge⁴⁺), Z = 32Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰ 1S_0 (28 electrons)Ionization Potential 753 800 cm⁻¹; 93.5 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge V	294.5	300		3d ¹⁰ - 3d ⁹ (² D)4p	$g^1S - ^3D^{\circ}$	0 - 1	K26
Ge V	295.6	500		3d ¹⁰ - 3d ⁹ (² D)4p	$g^1S - ^1P^{\circ}$	0 - 1	K26
Ge V	305.0	50		3d ¹⁰ - 3d ⁹ (² D)4p	$g^1S - ^3P^{\circ}$	0 - 1	K26
Ge V	942.7	100		3d ⁹ (² D)4s - 3d ⁹ (² D)4p	$^3D - ^1D^{\circ}$	3 - 2	C3, M1
Ge V	958.4	150		3d ⁹ (² D)4s - 3d ⁹ (² D)4p	$^3D - ^1D^{\circ}$	2 - 2	C3, M1
Ge V	965.4	100		3d ⁹ (² D)4s - 3d ⁹ (² D)4p	$^3D - ^3D^{\circ}$	2 - 1	C3, M1
Ge V	971.2	300		3d ⁹ (² D)4s - 3d ⁹ (² D)4p	$^3D - ^1F^{\circ}$	2 - 3	C3, M1
Ge V	984.8	200		3d ⁹ (² D)4s - 3d ⁹ (² D)4p	$^3D - ^1D^{\circ}$	1 - 2	C3, M1
Ge V	987.9	250		3d ⁹ (² D)4s - 3d ⁹ (² D)4p	$^3D - ^1F^{\circ}$	2 - 3	C3, M1
Ge V	990.5	250		3d ⁹ (² D)4s - 3d ⁹ (² D)4p	$^3D - ^3D^{\circ}$	3 - 3	C3, M1

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge V	992.2	200		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	1 - 1	C3, M1
Ge V	1004.2	300		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 2	C3, M1
Ge V	1005.1	50		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	1 - 1	C3, M1
Ge V	1007.9	25		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 3	C3, M1
Ge V	1024.5	25		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 1	C3, M1
Ge V	1033.3	150		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	1 - 2	C3, M1
Ge V	1038.3	200		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 1	C3, M1
Ge V	1045.5	350		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	3 - 4	C3, M1
Ge V	1049.9	250		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 3	C3, M1
Ge V	1054.5	200		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 2	C3, M1
Ge V	1068.3	250		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 2	C3, M1
Ge V	1069.1	250		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 2	C3, M1
Ge V	1072.5	300		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	3 - 3	C3, M1
Ge V	1086.5	250		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 3	C3, M1
Ge V	1088.3	400		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	1 - 2	C3, M1
Ge V	1089.4	250		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 1	C3, M1
Ge V	1092.0	250		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 3	C3, M1
Ge V	1116.8	300		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	1 - 0	C3, M1
Ge V	1122.5	50		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	3 - 2	C3, M1
Ge V	1125.4	25		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	1 - 1	C3, M1
Ge V	1138.9	25		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 2	C3, M1
Ge V	1154.0	200		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 2	C3, M1
Ge V	1165.2	25		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 1	C3, M1
Ge V	1176.4	25		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 3	C3, M1
Ge V	1222.1	25		$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	1 - 2	C3, M1
Ge V				$3d^9(2D)4s - 3d^9(2D)4p$	$3D - 3D^o$	2 - 2	C3, M1

GERMANIUM VI (Ge^{5+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1D_{5/2}$ (27 electrons)
 Ionization Potential [968 000] cm^{-1} ; [120] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Ge VI	222.14	100		$3d^9 - 3d^8(^1G)4p$	$a^2D - x^2F^o$	$5/2 - 5/2$	K16
Ge VI	223.32	600		$3d^9 - 3d^8(^1G)4p$	$a^2D - x^2F^o$	$5/2 - 7/2$	K16
Ge VI	223.52	400		$3d^9 - 3d^8(^3P)4p$	$a^2D - y^2P^o$	$3/2 - 3/2$	K16
Ge VI	224.46	1000b		$3d^9 - 3d^8(^1G)4p$	$a^2D - x^2F^o$	$3/2 - 5/2$	K16
Ge VI	224.40	1000b		$3d^9 - 3d^8(^3P)4p$	$a^2D - x^2D^o$	$5/2 - 5/2$	K16
Ge VI	224.49	1000		$3d^9 - 3d^8(^3P)4p$	$a^2D - x^2D^o$	$5/2 - 3/2$	K16
Ge VI	224.94	700		$3d^9 - 3d^8(^3P)4p$	$a^2D - y^2P^o$	$3/2 - 1/2$	K16
Ge VI	225.83	700b		$3d^9 - 3d^8(^3P)4p$	$a^2D - y^2P^o$	$3/2 - 3/2$	K16
Ge VI	226.69	300		$3d^9 - 3d^8(^3P)4p$	$a^2D - x^2D^o$	$3/2 - 1/2$	K16
Ge VI	226.82	500		$3d^9 - 3d^8(^3P)4p$	$a^2D - x^2D^o$	$3/2 - 5/2$	K16
Ge VI	227.86	300		$3d^9 - 3d^8(^1D)4p$	$a^2D - z^2P^o$	$5/2 - 3/2$	K16
Ge VI	228.41	900		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2D^o$	$5/2 - 5/2$	K16
Ge VI	229.26	700		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2D^o$	$5/2 - 7/2$	K16
Ge VI	229.35	400		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2D^o$	$5/2 - 3/2$	K16
Ge VI	230.25	500		$3d^9 - 3d^8(^1D)4p$	$a^2D - z^2P^o$	$3/2 - 3/2$	K16
Ge VI	230.82	200		$3d^9 - 3d^8(^1D)4p$	$a^2D - z^2P^o$	$3/2 - 3/2$	K16
Ge VI	231.78	700		$3d^9 - 3d^8(^1D)4p$	$a^2D - y^2D^o$	$3/2 - 5/2$	K16
Ge VI	232.16	500		$3d^9 - 3d^8(^3P)4p$	$a^2D - y^2D^o$	$3/2 - 3/2$	K16
Ge VI	232.57	200		$3d^9 - 3d^8(^3P)4p$	$a^2D - z^4P^o$	$5/2 - 5/2$	K16
Ge VI	233.14	500		$3d^9 - 3d^8(^3P)4p$	$a^2D - z^4P^o$	$3/2 - 3/2$	K16
Ge VI	233.14	500		$3d^9 - 3d^8(^1D)4p$	$a^2D - z^2F^o$	$3/2 - 5/2$	K16
Ge VI	234.65	400		$3d^9 - 3d^8(^3P)4p$	$a^2D - z^2F^o$	$3/2 - 5/2$	K16
Ge VI	235.05	500		$3d^9 - 3d^8(^3P)4p$	$a^2D - z^2F^o$	$3/2 - 3/2$	K16
Ge VI	235.57	800		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2F^o$	$3/2 - 5/2$	K16
Ge VI	236.40	400		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2D^o$	$3/2 - 5/2$	K16
Ge VI	237.36	500		$3d^9 - 3d^8(^3F)4p$	$a^2D - z^2F^o$	$5/2 - 7/2$	K16

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J	J	References
Ge VI	237.80	600		$3d^9 \cdot 3d^8(^2F)4p$	$a^2D \cdot z^2G^{\circ}$	$\frac{5}{2}$	$\frac{7}{2}$	K16
Ge VI	238.04	800		$3d^9 \cdot 3d^8(^3F)4p$	$a^2D \cdot z^2D^{\circ}$	$\frac{3}{2}$	$\frac{5}{2}$	K16
Ge VI	238.14	500		$3d^9 \cdot 3d^8(^2F)4p$	$a^2D \cdot z^2F^{\circ}$	$\frac{3}{2}$	$\frac{5}{2}$	K16
Ge VI	238.97	700		$3d^9 \cdot 3d^8(^3F)4p$	$a^2D \cdot z^2D^{\circ}$	$\frac{3}{2}$	$\frac{5}{2}$	K16
Ge VI	239.28	700		$3d^9 \cdot 3d^8(^3F)4p$	$a^2D \cdot z^4F^{\circ}$	$\frac{3}{2}$	$\frac{5}{2}$	K16
Ge VI	240.00	700		$3d^9 \cdot 3d^8(^3F)4p$	$a^2D \cdot z^4F^{\circ}$	$\frac{3}{2}$	$\frac{7}{2}$	K16
Ge VI	240.65	700		$3d^9 \cdot 3d^8(^3F)4p$	$a^2D \cdot z^2D^{\circ}$	$\frac{3}{2}$	$\frac{5}{2}$	K16
Ge VI	242.00	700		$3d^9 \cdot 3d^8(^3F)4p$	$a^2D \cdot z^4F^{\circ}$	$\frac{3}{2}$	$\frac{5}{2}$	K16

GERMANIUM VII (Ge^{6+}), $Z = 32$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 \ ^3F_4$ (26 electrons)Ionization Potential [1 218 000] cm^{-1} ; [151] eVGERMANIUM VIII (Ge^{7+}), $Z = 32$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 \ ^4F_{3/2}$ (25 electrons)Ionization Potential [1 476 000] cm^{-1} ; [183] eVGERMANIUM IX (Ge^{8+}), $Z = 32$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 \ ^5D_4$ (24 electrons)Ionization Potential [1 750 000] cm^{-1} ; [217] eV

GERMANIUM X (Ge^{9+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)
Ionization Potential [2 057 000] cm^{-1} ; [255] eV

GERMANIUM XI (Ge^{10+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)
Ionization Potential [2 347 000] cm^{-1} ; [291] eV

GERMANIUM XII (Ge^{11+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 \ ^4F_{3/2}$ (21 electrons)
Ionization Potential [2 831 000] cm^{-1} ; [330] eV

GERMANIUM XIII (Ge^{12+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^3F_2$ (20 electrons)
Ionization Potential [2 976 000] cm^{-1} ; [369] eV

GERMANIUM XIV (Ge^{13+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d \ ^2D_{3/2}$ (19 electrons)
Ionization Potential [3 298 900] cm^{-1} ; [409] eV

GERMANIUM XV (Ge^{14+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6$ 1S_0 (18 electrons)
 Ionization Potential [4 299 100] cm^{-1} ; [533] eV

GERMANIUM XVI (Ge^{15+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5$ $^2P_{3/2}^o$ (17 electrons)
 Ionization Potential [4 581 400] cm^{-1} ; [568] eV

GERMANIUM XVII (Ge^{16+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4$ 3P_2 (16 electrons)
 Ionization Potential [4 896 000] cm^{-1} ; [607] eV

GERMANIUM XVIII (Ge^{17+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3$ $^4S_{3/2}^o$ (15 electrons)
 Ionization Potential [5 307 000] cm^{-1} ; [658] eV

GERMANIUM XIX (Ge^{18+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2$ 3P_0 (14 electrons)
 Ionization Potential [5 653 100] cm^{-1} ; [701] eV

GERMANIUM XX (Ge^{19+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 P_{1/2}^o$ (13 electrons)
Ionization Potential [6 001 000] cm^{-1} ; [744] eV

GERMANIUM XXI (Ge^{20+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 {}^1S_0$ (12 electrons)
Ionization Potential [6 743 000] cm^{-1} ; [836] eV

GERMANIUM XXII (Ge^{21+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 3s^2 {}^2S_{1/2}$ (11 electrons)
Ionization Potential [7 105 900] cm^{-1} ; [881] eV

GERMANIUM XXIII (Ge^{22+}), $Z = 32$
Ground State $1s^2 2s^2 2p^6 {}^1S_0$ (10 electrons)
Ionization Potential [17 680 000] cm^{-1} ; [2192] eV

GERMANIUM XXIV (Ge^{23+}), $Z = 32$
Ground State $1s^2 2s^2 2p^5 {}^2P_{3/2}^o$ (9 electrons)
Ionization Potential [18 503 000] cm^{-1} ; [2294] eV

GERMANIUM XXV (Ge^{24+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
 Ionization Potential [19 527 000] cm^{-1} ; [2421] eV

GERMANIUM XXVI (Ge^{25+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential [20 785 000] cm^{-1} ; [2577] eV

GERMANIUM XXVII (Ge^{26+}), $Z = 32$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential [21 963 000] cm^{-1} ; [2723] eV

GERMANIUM XXVIII (Ge^{27+}), $Z = 32$
 Ground State $1s^2 2s^2 2p \ ^2P_{1/2}^o$ (5 electrons)
 Ionization Potential [23 092 000] cm^{-1} ; [2863] eV

GERMANIUM XXIX (Ge^{28+}), $Z = 32$
 Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
 Ionization Potential [24 528 000] cm^{-1} ; [3041] eV

GERMANIUM XXX (Ge^{29+}), $Z = 32$
Ground State $1s^2 2s^2 \ ^2S_{1/2}$ (3 electrons)
Ionization Potential [25 746 000] cm^{-1} ; [3192] eV

GERMANIUM XXXI (Ge^{30+}), $Z = 32$
Ground State $1s^2 \ ^1S_0$ (2 electrons)
Ionization Potential [109 339 000] cm^{-1} ; [13556] eV

GERMANIUM XXXII (Ge^{31+}), $Z = 32$
Ground State $1s \ ^2S_{1/2}$ (1 electron)
Ionization Potential [113 364 000] cm^{-1} ; [14117] eV

ARSENIC I (As⁰⁺), Z = 33
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^3 \ ^4S_{3/2}$ (33 electrons)
 Ionization Potential 79 165 cm⁻¹; 9.81 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As I	1323.2	3					
As I	1350.5	2		4p ² -	g ⁴ S° - 12	? 3/2 - 3/2	R7
As I	1379.0	4		4p ² -	g ⁴ S° - 8	? 3/2 - 3/2	R7
As I	1390.4	4		4p ² -	g ⁴ S° - 4	? 3/2 - 3/2	R7
As I	1407.34	2		4p ² - 4p ² (¹ D)4d	g ⁴ S° - 3P	? 3/2 - 1/2	R7
				4p ² -	g ⁴ S° - 3	3/2 - 3/2	M8
As I	1434.77	3					
As I	1442.69	5		4p ² - 4p ² (³ P)6s	g ⁴ S° - 3P	3/2 - 3/2	M8
As I	1461.92	3		4p ² - 4p ² (³ P)6s	g ⁴ S° - 4P	3/2 - 3/2	M8
As I	1463.9	5		4s ² 4p ² - 4s 4p ⁴	g ⁴ S° - 2D	3/2 - 3/2	M8
As I	1464.10	2		4p ² - 4p ² (³ F)6s	g ⁴ S° - 3P	? 3/2 - 1/2	R7
				4s ² 4p ² - 4s 4p ⁴	g ⁴ S° - 2D	3/2 - 3/2	M8
As I	1472.32	4					
As I	1492.34	4		4p ² - 4p ² (³ P)6s	g ⁴ S° - 4P	3/2 - 3/2	M8
As I	1504.09	2		4p ² - 4p ² (³ P)6s	g ⁴ S° - 4P	3/2 - 1/2	M8
As I	1506.99	2		4p ² - 4p ² (³ P)4d	g ⁴ S° - 3P	3/2 - 3/2	M8
As I	1509.60	3		4p ² -	² D° - 17	3/2 - 3/2	M8
				4p ² -	² D° - 15	3/2 - 3/2	M8
As I	1510.41	6					
As I	1510.70	6		4p ² -	² D° - 16	3/2 - 3/2	M8
As I	1515.48	20					
As I	1516.97	1					
As I	1526.78	2		4p ² -	² D° - 15	3/2 - 3/2	M8
				4s ² 4p ² - 4s 4p ⁴	g ⁴ S° - 3P	3/2 - 1/2	M8
As I	1533.60	3					
As I	1534.65	4		4p ² -	² D° - 13	3/2 - 3/2	M8
As I	1538.79	20		4p ² -	² D° - 14	3/2 - 3/2	M8
As I	1542.94	4		4p ² -	² D° - 12	3/2 - 3/2	M8
As I	1546.45	2		4s ² 4p ² - 4s 4p ⁴	g ⁴ S° - 2P	3/2 - 3/2	M8
				4p ² -	² D° - 12	3/2 - 3/2	M8
As I	1554.19	4					
As I	1556.14	40		4p ² - 4p ² (³ F)4d	g ⁴ S° - 2D	3/2 - 3/2	M8
As I	1557.20	30	14	4p ² -	² D° - 11	3/2 - 3/2	M8
As I	1558.28	4		4p ² - 4p ² 4d	² D° - 10	3/2 - 3/2	M8
As I	1559.53	4		4p ² -	² D° - 10	3/2 - 3/2	M8
				4p ² - 4p ² (³ P)4d	g ⁴ S° - 3P	3/2 - 1/2	M8
As I	1562.95	10	4				
As I	1565.05	7		4p ² - 4p ² (³ P)4d	g ⁴ S° - 4P	3/2 - 1/2	M8
As I	1566.39	15		4p ² - 4p ² 4d	² D° - 2D	3/2 - 3/2	M8
As I	1573.85	60	14				
As I	1574.72	30	4	4p ² - 4p ² 4d	² D° - 2D	3/2 - 3/2	M8
				4p ² - 4p ² (³ P)4d	g ⁴ S° - 4P	3/2 - 3/2	M8
As I	1575.87	20					
As I	1583.90	2		4p ² -	² D° - 8	3/2 - 3/2	M8
As I	1587.97	20		4p ² -	² D° - 8	3/2 - 3/2	M8
As I	1593.60	100r		4p ² -	² D° - 6	3/2 - 3/2	M8
As I	1594.39	1	4	4p ² - 4p ² (³ P)4d	g ⁴ S° - 4P	3/2 - 3/2	M8
				4p ² -	² D° - 7	3/2 - 3/2	M8
As I	1596.13	2					
As I	1608.07	3		4p ² -	² D° - 6	3/2 - 3/2	M8
As I	1614.82	5		4p ² -	² D° - 5	3/2 - 3/2	M8
As I	1616.44	6		4p ² -	² D° - 4	3/2 - 3/2	M8
As I	1623.26	2		4p ² -	² D° - 5	3/2 - 3/2	M8
				4p ² -	² D° - 4	3/2 - 3/2	M8
As I	1625.17	1					
As I	1630.48	4		4p ² - 4p ² (¹ D)4d	² D° - 2P	3/2 - 3/2	M8
As I	1633.71	5		4p ² - 4p ² (¹ F)4d	² D° - 2P	3/2 - 1/2	M8
As I	1643.79	2		4p ² - 4p ² (¹ D)4d	² D° - 2P	3/2 - 3/2	M8
As I	1644.33	5		4p ² - 4p ² (¹ D)5s	g ⁴ S° - 2D	3/2 - 3/2	M8
				4p ² - 4p ² (¹ D)5s	g ⁴ S° - 3P	3/2 - 3/2	M8
As I	1653.92	4					
As I	1662.76	2		4p ² -	² D° - 3	3/2 - 3/2	M8
As I	1691.87	7		4p ² -	² D° - 2	3/2 - 3/2	M8
As I	1701.16	15		4p ² -	² D° - 2	3/2 - 3/2	M8
As I	1701.22	15		4p ² -	² D° - 2	3/2 - 3/2	M8
				4p ² - 4p ² (³ P)6s	² D° - 2P	3/2 - 3/2	M8
As I	1702.94	3					
As I	1705.74	4		4p ² - 4p ² (³ P)6s	² D° - 4P	3/2 - 3/2	M8
As I	1710.16	7		4p ² -	² P° - 17	3/2 - 3/2	M8
As I	1712.32	10		4p ² -	² P° - 16	3/2 - 3/2	M8
As I	1718.55	1		4p ² - 4p ² (¹ F)6s	² D° - 4P	3/2 - 3/2	M8
				4p ² -	² P° - 15	3/2 - 3/2	M8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As I	1724.77	7			$2P^{\circ} - 14$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1727.38	4		$4p^3 -$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1729.80	30	12	$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1732.44	30	13	$4p^2 - 4p^2(^3P)6s$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1732.86	30	12	$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1735.70	3		$4p^3 -$	$2P^{\circ} - 13$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1739.49	60	12	$4s^2 4p^2 - 4s 4p^4$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1741.28	10		$4p^3 -$	$2P^{\circ} - 14$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1742.59	10	12	$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1749.72	1		$4p^2 -$	$2P^{\circ} - 13$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1754.21	10		$4p^3 - 4p^2(^3P)6s$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M2
As I	1756.51	2		$4p^2 -$	$2P^{\circ} - 12$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1757.47	4		$4p^2 -$	$2P^{\circ} - 10$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1758.60	100	3	$4s^2 4p^2 - 4s 4p^4$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1767.97	6					M8
As I	1768.97	5		$4p^2 -$	$2P^{\circ} - 11$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1771.84	2		$4p^3 -$	$2P^{\circ} - 10$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1772.54	8		$4p^2 - 4p^2(^3P)6s$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1780.52	50	26	$4p^3 - 4p^2 4d$	$2P^{\circ} - 2D$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1781.48	50	9	$4p^2 - 4p^2(^3P)4d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1785.84	3		$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 2S$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1787.07	6		$4p^3 -$	$2P^{\circ} - 9$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1789.14	15		$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1789.85	50	10	$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 2F$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1791.77	40	9	$4p^2 - 4p^2(^3P)4d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1798.61	9					M8
As I	1799.51	2		$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1801.92	3		$4p^3 -$	$2P^{\circ} - 9$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1803.46	10		$4p^2 -$	$2P^{\circ} - 7$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1806.15	200	3	$4s^2 4p^2 - 4s 4p^4$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1816.72	10					M8
As I	1818.59	5		$4p^3 -$	$2P^{\circ} - 7$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1821.32	2		$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1831.30	50	2	$4p^2 - 4p^2(^3P)5s$	$g^4S^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1831.74	30		$4p^2 -$	$2P^{\circ} - 5$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1840.48	10		$4p^3 -$	$2P^{\circ} - 4$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1844.36	40	11	$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1844.57	40	25	$4p^3 - 4p^2 5s$	$2P^{\circ} - 2S$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1847.32	10		$4p^3 -$	$2P^{\circ} - 5$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1850.24	40	10	$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 2F$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1853.21	20					M8
As I	1853.95	3		$4p^3 - 4p^2(^1D)4d$	$2P^{\circ} - 2P$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1855.39	10	11	$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1856.24	2		$4p^3 -$	$2P^{\circ} - 4$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1860.40	80	25	$4p^3 - 4p^2 5s$	$2P^{\circ} - 2S$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1860.46	80	9	$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1860.87	5		$4p^3 - 4p^2(^1D)4d$	$2P^{\circ} - 2P$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1865.10	8					M8
As I	1869.94	15		$4p^3 - 4p^2(^1D)4d$	$2P^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1871.68	30	9	$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 2D$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1873.02	40	8	$4p^2 - 4p^2(^3P)4d$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1876.98	2		$4p^3 - 4p^2(^1D)4d$	$2P^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1881.96	40	2	$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1889.95	5		$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1890.42	1000r	1	$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1891.47	5		$4p^3 -$	$2P^{\circ} - 3$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1901.54	5		$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1902.31	6					M8
As I	1908.13	1		$4p^3 -$	$2P^{\circ} - 3$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1917.21	20	8	$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1929.14	3		$4p^3 - 4p^2(^3P)4d$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1937.59	900r	1	$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - 4P$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1941.36	5		$4p^3 - 4p^2(^3P)6s$	$2P^{\circ} - 2P$	$\frac{1}{2} - \frac{3}{2}$	M8
As I	1958.82	20		$4p^3 -$	$2P^{\circ} - 2$	$\frac{3}{2} - \frac{5}{2}$	M8
As I	1958.91	40	24	$4p^3 - 4p^2(^3P)6s$	$2P^{\circ} - 2P$	$\frac{3}{2} - \frac{5}{2}$	M8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As I	1960.89	2					
As I	1972.62	800r	1	$4p^3 - 4p^2(^3P)5s$	$^2P^{\circ} - ^1$	$\frac{3}{2} - \frac{3}{2}$	M8
As I	1977.65	3			$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M8
As I	1990.35	200	7	$4p^3 - 4p^2(^3P)6s$	$^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M8
As I	1991.13	100	7	$4p^3 - 4p^2(^1D)5s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M8
As I	1994.89	20	24	$4p^3 - 4p^2(^1D)5s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M8
As I	1995.43	100	23	$4p^3 - 4p^2(^3P)6s$ $4s^2 4p^3 - 4s 4p^4$	$^2P^{\circ} - ^2P$ $^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{1}{2}$ $\frac{1}{2} - \frac{3}{2}$	M8 M8

ARSENIC II (As¹⁺), Z = 33Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2$ 3P_0 (32 electrons)Ionization Potential 150 290 cm⁻¹; 18.633 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As II	701.915	0					
As II	706.44	0		$4p^2 - 4p 8d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-0	L7
As II	713.888	0		$4p^2 - 4p 9s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^{\circ}$	1-2	L7
As II	715.789	0		$4p^2 - 4p 9s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^{\circ}$	2-2	L7
As II	719.303	10		$4p^2 - 4p 7d$	$g^3P - (\frac{1}{2}, \frac{1}{2})^{\circ}$	0-1	L7
As II	719.574	1		$4p^2 - 4p 7d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-0	L7
As II	720.59	5		$4p^2 - 4p 7d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-1	L7
As II	721.409	0		$4p^2 - 4p 7d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-2	L7
As II	726.51	25		$4p^2 - 4p 9s$	$g^3P - (\frac{1}{2}, \frac{1}{2})^{\circ}$	1-0	L7
As II	726.661	0		$4p^2 - 4p 8s$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	2-2	L7
As II	727.272	1		$4p^2 - 4p 8s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^{\circ}$	1-1	L7
As II	727.311	20		$4p^2 - 4p 7d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-2	L7
As II	728.042	25		$4p^2 - 4p 7d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	2-1	L7
As II	729.05	0		$4p^2 - 4p 9s$	$g^3P - (\frac{1}{2}, \frac{3}{2})^{\circ}$	0-1	L7
As II	733.721	0		$4p^2 - 4p 7d$	$g^3P - (\frac{1}{2}, \frac{1}{2})^{\circ}$	2-1	L7
As II	735.09	25		$4p^2 - 4p 7d$	$g^3P - (\frac{1}{2}, \frac{3}{2})^{\circ}$	1-1	L7
As II	735.17	5		$4p^2 - 4p 7d$	$g^3P - (\frac{1}{2}, \frac{3}{2})^{\circ}$	1-2	L7
As II	736.759	1		$4p^2 - 4p 7d$	$g^3P - (\frac{3}{2}, \frac{1}{2})^{\circ}$	2-2	L7
As II	739.990	25		$4p^2 - 4p 6d$	$g^3P - (\frac{1}{2}, \frac{1}{2})^{\circ}$	1-1	L7
As II	742.556	1		$4p^2 - 4p 8s$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	0-1	L7
As II	743.007	25		$4p^2 - 4p 8s$	$g^3P - (\frac{1}{2}, \frac{1}{2})^{\circ}$	1-1	L7
As II	743.101	1		$4p^2 - 4p 7d$	$g^3P - (\frac{1}{2}, \frac{3}{2})^{\circ}$	2-3	L7
As II	743.161	1		$4p^2 - 4p 8s$	$g^3P - (\frac{1}{2}, \frac{1}{2})^{\circ}$	1-0	L7
As II	744.869	2		$4p^2 - 4p 7d$	$g^3P - (\frac{1}{2}, \frac{3}{2})^{\circ}$	2-2	L7
As II	745.855	0		$4p^2 - 4p 7d$	$g^3P - (\frac{1}{2}, \frac{3}{2})^{\circ}$	2-2	L7
As II	745.855	0		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-1	L7
As II	750.64	25		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-0	L7
As II	750.77	75		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-1	L7
As II	750.937	15		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-2	L7
As II	752.680	50		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	1-2	L7
As II	754.176	0		$4p^2 - 4p 6a$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	2-1	L7
As II	754.270	0					
As II	756.92	50		$4p^2 - 4p 9s$	$^1D - (\frac{3}{2}, \frac{1}{2})^{\circ}$	2-1	L7
As II	758.047	50		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	2-3	L7
As II	759.186	50		$4p^2 - 4p 7s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^{\circ}$	0-1	L7
As II	759.366	150		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	2-1	L7
As II	759.366	150		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	2-2	L7
As II	760.766	125					
As II	761.148	30		$4p^2 - 4p 6d$	$g^3P - (\frac{1}{2}, \frac{3}{2})^{\circ}$	0-1	L7
As II	761.239	170		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	2-2	L7
As II	764.209	25		$4p^2 - 4p 6d$	$g^3P - (\frac{3}{2}, \frac{3}{2})^{\circ}$	2-3	L7
As II	766.41	0		$4p^2 - 4p 7s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^{\circ}$	1-1	L7
As II	766.41	0		$4p^2 - 4p 7s$	$g^3P - (\frac{3}{2}, \frac{1}{2})^{\circ}$	1-2	L7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As II	766.97	1		4p ² - 4p6d	g ² P - (1/2, 3/2) ^o	1 - 1	L7
As II	768.091	150		4p ² - 4p6d	g ² P - (1/2, 3/2) ^o	1 - 2	L7
As II	768.697	25		4p ² - 4p7d	¹ D - (3/2, 3/2) ^o	2 - 2	L7
As II	769.60	10		4p ² - 4p7c	¹ D - (3/2, 3/2) ^o	2 - 1	L7
As II	770.76	25		4p ² - 4p7d	¹ D - (3/2, 3/2) ^o	2 - 2	L7
As II	771.561	25		4p ² - 4p6d	g ² P - (1/2, 3/2) ^o	1 - 2	L7
As II	775.198	50		4p ² - 4p6s	g ² P - (3/2, 1/2) ^o	2 - 2	L7
As II	775.759	0		4p ² - 4p6d	g ² P - (1/2, 3/2) ^o	2 - 1	L7
As II	776.91	75		4p ² - 4p6d	g ² P - (1/2, 3/2) ^o	2 - 2	L7
As II	777.06	15		4p ² - 4p7s	g ² P - (1/2, 1/2) ^o	0 - 1	L7
As II	777.57	150		4p ² - 4p6d	g ² P - (1/2, 3/2) ^o	2 - 3	L7
As II	777.71	15		4p ² - 4p8s	¹ D - (3/2, 1/2) ^o	2 - 1	L7
As II	780.46	25		4p ² - 4p6d	g ² P - (1/2, 3/2) ^o	2 - 2	L7
As II	783.542	15		4p ² - 4p7s	g ² P - (1/2, 1/2) ^o	1 - 1	L7
As II	784.26	50		4p ² - 4p7s	g ² P - (1/2, 1/2) ^o	1 - 0	L7
As II	785.799	0		4p ² - 4p7d	¹ D - (1/2, 3/2) ^o	2 - 1	L7
As II	787.224	50		4p ² - 4p7d	¹ D - (1/2, 3/2) ^o	2 - 3	L7
As II	787.37	15		4p ² - 4p7d	¹ D - (1/2, 3/2) ^o	2 - 2	L7
As II	789.288	15		4p ² - 4p7d	¹ D - (1/2, 3/2) ^o	2 - 2	L7
As II	789.841	50		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	0 - 1	L7
As II	792.720	60		4p ² - 4p7s	g ² P - (1/2, 1/2) ^o	2 - 1	L7
As II	795.94	1		4p ² - 4p8s	¹ D - (1/2, 1/2) ^o	2 - 1	L7
As II	796.528	0		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	1 - 1	L7
As II	799.74	75		4p ² - 4p6d	¹ D - (3/2, 3/2) ^o	2 - 1	L7
As II	802.83	170		4p ² - 4p6d	¹ D - (3/2, 3/2) ^o	2 - 3	L7
As II	805.576	110		4p ² - 4p6d	¹ D - (3/2, 3/2) ^o	2 - 2	L7
As II	806.016	0		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	2 - 1	L7
As II	807.58	60		4p ² - 4p6d	¹ D - (3/2, 3/2) ^o	2 - 2	L7
As II	807.68	5		4p ² - 4p6d	¹ D - (3/2, 3/2) ^o	2 - 3	L7
As II	809.720	1		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	0 - 1	L7
As II	814.83	10		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	1 - 2	L7
As II	816.607	80		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	1 - 0	L7
As II	816.755	100		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	1 - 1	L7
As II	818.571	100		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	1 - 2	L7
As II	820.651	10		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	2 - 3	L7
As II	820.868	20		4p ² - 4p7s	¹ D - (3/2, 1/2) ^o	2 - 1	L7
As II	823.417	30		4p ² - 4p7s	¹ D - (3/2, 1/2) ^o	2 - 2	L7
As II	823.998	80		4p ² - 4p5d	g ² P - (1/2, 3/2) ^o	0 - 1	L7
As II	824.055	50		4p ² - 4p6d	¹ D - (1/2, 3/2) ^o	2 - 1	L7
As II	824.763	80		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	2 - 2	L7
As II	825.349	30		4p ² - 4p6d	¹ D - (1/2, 3/2) ^o	2 - 2	L7
As II	826.100	60		4p ² - 4p6d	¹ D - (1/2, 3/2) ^o	2 - 3	L7
As II	826.733	80		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	2 - 1	L7
As II	828.594	125		4p ² - 4p5d	g ² P - (3/2, 3/2) ^o	2 - 2	L7
As II	829.360	50		4p ² - 4p6d	¹ D - (1/2, 3/2) ^o	2 - 2	L7
As II	835.349	150		4p ² - 4p5d	g ² P - (1/2, 3/2) ^o	1 - 2	L7
As II	840.233	80		4s ² 4p ² - 4s4p ²	g ² P - ¹ P ^o	0 - 1	L7
As II	841.625	10		4p ² - 4p5d	g ² P - (1/2, 3/2) ^o	2 - 1	L7
As II	843.215	10		4p ² - 4p7s	¹ D - (1/2, 1/2) ^o	2 - 1	L7
As II	845.789	80		4p ² - 4p5d	g ² P - (1/2, 3/2) ^o	2 - 2	L7
As II	847.809	25		4s ² 4p ² - 4s4p ²	g ² P - ¹ P ^o	1 - 1	L7
As II	848.692	80		4p ² - 4p5d	g ² P - (1/2, 3/2) ^o	1 - 2	L7
As II	849.294	60		4p ² - 4p6s	g ² P - (3/2, 1/2) ^o	0 - 1	L7
As II	854.727	150		4p ² - 4p5c	g ² P - (1/2, 3/2) ^o	2 - 3	L7
As II	857.032	25		4p ² - 4p6s	g ² P - (3/2, 1/2) ^o	1 - 1	L7
As II	858.280	125		4p ² - 4p5d	¹ D - (3/2, 3/2) ^o	2 - 1	L7
As II	859.472	60		4p ² - 4p5d	g ² P - (1/2, 3/2) ^o	2 - 2	L7
As II	859.682	125		4p ² - 4p6s	g ² P - (3/2, 1/2) ^o	1 - 2	L7
As II	861.467	2		4p ² - 4p8s	¹ S - (3/2, 1/2) ^o	0 - 1	L7
As II	861.027	10		4p ² - 4p6s	g ² P - (3/2, 1/2) ^o	2 - 1	L7
As II	870.747	150		4p ² - 4p6s	g ² P - (3/2, 1/2) ^o	2 - 2	L7
As II	871.410	10		4p ² - 4p7d	¹ S - (1/2, 3/2) ^o	0 - 1	L7
As II	871.823	125		4p ² - 4p6s	g ² P - (1/2, 3/2) ^o	0 - 1	L7
As II	874.893	150		4p ² - 4p5d	¹ D - (3/2, 3/2) ^o	2 - 3	L7
As II	879.563	125		4p ² - 4p5d	¹ D - (3/2, 3/2) ^o	2 - 2	L7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As II	879.989	80		4p ² - 4p6s	$g^2P - (3/2, 1/2)^o$	1-1	L7
As II	881.557	125		4p ² - 4p6s	$g^2P - (3/2, 1/2)^o$	1-0	L7
As II	881.805	20		4p ² - 4p5d	$^1D - (3/2, 3/2)^o$	2-1	L7
As II	883.921	125		4p ² - 4p5d	$^1D - (3/2, 3/2)^o$	2-2	L7
As II	886.941	40		4p ² - 4p5d	$^1D - (3/2, 3/2)^o$	2-3	L7
As II	888.584	80		4p ² - 4p6d	$^1S - (3/2, 3/2)^o$	0-1	L7
As II	891.587	125		4p ² - 4p6s	$g^2P - (3/2, 1/2)^o$	2-1	L7
As II	898.768	125		4p ² - 4p5d	$^1D - (3/2, 3/2)^o$	2-1	L7
As II	903.521	150		4p ² - 4p5d	$^1D - (3/2, 3/2)^o$	2-2	L7
As II	905.240	100		4s ² 4p ² - 4s4p ³	$g^2P - ^1D^o$	1-2	L7
As II	913.727	125		4p ² - 4p5d	$^1D - (3/2, 3/2)^o$	2-3	L7
As II	914.746	80		4p ² - 4p7s	$^1S - (3/2, 1/2)^o$	0-1	L7
As II	917.131	100		4s ² 4p ² - 4s4p ³	$g^2P - ^2S^o$	0-1	L7
As II	917.513	150		4s ² 4p ² - 4s4p ³	$g^2P - ^1D^o$	2-2	L7
As II	918.115	150		4s ² 4p ² - 4s4p ³	$^1D - ^1P^o$	2-1	L7
As II	918.706	10		4p ² - 4p6d	$^1S - (3/2, 3/2)^o$	0-1	L7
As II	919.152	150		4p ² - 4p5d	$^1D - (3/2, 3/2)^o$	2-2	L7
As II	928.941	100		4p ² - 4p6s	$^1D - (3/2, 1/2)^o$	2-1	L7
As II	942.585	100		4p ² - 4p7s	$^1S - (3/2, 1/2)^o$	0-1	L7
As II	955.976	125		4p ² - 4p6s	$^1D - (3/2, 1/2)^o$	2-1	L7
As II	961.443	0		4p ² - 4p5d	$^1S - (3/2, 3/2)^o$	0-1	L7
As II	974.712	190		4p ² - 4p4d	$g^2P - ^3P^o$	0-1	L7
As II	984.919	200		4p ² - 4p4d	$g^2P - ^3P^o$	1-1	L7
As II	985.345	220		4p ² - 4p4d	$g^2P - ^3P^o$	1-0	L7
As II	985.847	220		4s ² 4p ² - 4s4p ³	$^1D - ^1D^o$	2-2	L7
As II	987.634	125		4p ² - 4p4d	$g^2P - ^3P^o$	1-2	L7
As II	991.068	0		4p ² - 4p5d	$^1S - (3/2, 3/2)^o$	0-1	L7
As II	995.772	190		4p ² - 4p4d	$g^2P - ^3P^o$	1-1	L7
As II	999.465	190		4p ² - 4p4d	$g^2P - ^3P^o$	2-1	L7
As II	1000.538	220		4p ² - 4p4d	$g^2P - ^1F^o$	2-3	L7
As II	1002.261	250		4p ² - 4p4d	$g^2P - ^3P^o$	2-2	L7
As II	1009.427	220		4p ² - 4p4d	$g^2P - ^3D^o$	0-1	L7
As II	1010.647	190		4p ² - 4p4d	$g^2P - ^3P^o$	2-1	L7
As II	1012.546	125		4p ² - 4p5d	$^1S - (3/2, 3/2)^o$	0-1	L7
As II	1015.375	300		4p ² - 4p4d	$g^2P - ^3D^o$	1-2	L7
As II	1020.379	200		4p ² - 4p4d	$g^2P - ^3D^o$	1-1	L7
As II	1021.965	350		4p ² - 4p4d	$g^2P - ^3D^o$	2-3	L7
As II	1030.846	200		4p ² - 4p4d	$g^2P - ^3D^o$	2-2	L7
As II	1036.004	100		4p ² - 4p4d	$g^2P - ^3D^o$	2-1	L7
As II	1037.169	160		4s ² 4p ² - 4s4p ³	$^1S - ^1P^o$	0-1	L7
As II	1051.005	150		4p ² - 4p6s	$^1S - (3/2, 1/2)^o$	0-1	L7
As II	1081.090	190		4p ² - 4p4d	$^1D - ^3P^o$	2-1	L7
As II	1082.350	350		4p ² - 4p4d	$^1D - ^1F^o$	2-1	L7
As II	1084.370	190		4p ² - 4p4d	$^1D - ^3P^o$	2-2	L7
As II	1085.729	150		4p ² - 4p6s	$^1S - (3/2, 1/2)^o$	0-1	L7
As II	1094.183	225		4p ² - 4p4d	$^1D - ^3P^o$	2-1	L7
As II	1107.476	300		4p ² - 4p4d	$^1D - ^3D^o$	2-3	L7
As II	1117.903	200		4p ² - 4p4d	$^1D - ^3D^o$	2-2	L7
As II	1123.977	225		4p ² - 4p4d	$^1D - ^3D^o$	2-1	L7
As II	1139.395	500		4p ² - 4p4d	$g^2P - ^3F^o$	1-2	L7
As II	1149.306	600		4p ² - 4p4d	$g^2P - ^3F^o$	2-3	L7
As II	1156.908	10		4s ² 4p ² - 4s4p ³	$^1S - ^3S^o$	0-1	L7
As II	1158.908	300		4p ² - 4p4d	$g^2P - ^3F^o$	2-2	L7
As II	1181.506	550		4s ² 4p ² - 4s4p ³	$g^2P - ^3P^o$	0-1	L7
As II	1189.870	550		4s ² 4p ² - 4s4p ³	$g^2P - ^3P^o$	1-2	L7
As II	1196.383	600		4s ² 4p ² - 4s4p ³	$g^2P - ^3P^o$	1-0	L7
As II	1196.561	600		4s ² 4p ² - 4s4p ³	$g^2P - ^3P^o$	1-1	L7
As II	1207.441	350		4p ² - 4p5s	$g^2P - (3/2, 1/2)^o$	0-1	L7
As II	1211.170	800		4s ² 4p ² - 4s4p ³	$g^2P - ^3P^o$	2-2	L7
As II	1218.099	800		4s ² 4p ² - 4s4p ³	$g^2P - ^3P^o$	2-1	L7
As II	1218.95	225		4p ² - 4p4d	$g^2P - ^1D^o$	1-2	L7
As II	1223.149	350		4p ² - 4p5s	$^1S - (3/2, 1/2)^o$	1-1	L7
As II	1241.311	750		4p ² - 4p4d	$^1D - ^3D^o$	2-2	L7
As II	1243.081	950		4p ² - 4p5s	$^3P - (3/2, 1/2)^o$	1-2	L7
As II	1245.668	850		4p ² - 4p5s	$g^2P - (3/2, 1/2)^o$	2-1	L7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As II	1247.949	0		4s4p ³ - 4s ² 4p ⁷ p	⁴ S° - ³ / ₂ [¹ / ₂]	2-1	L7
As II	1250.058	300		4p ³ - 4p4d	¹ S° - ³ P°	0-1	L7
As II	1252.916	5		4s4p ³ - 4s ² 4p ⁷ p	⁴ S° - ³ / ₂ [¹ / ₂]	2-3	L7
As II	1258.585	800		4p ³ - 4p4d	¹ D° - ³ F°	2-3	L7
As II	1263.770	950		4p ³ - 4p5s	² P° - (¹ / ₂ , ¹ / ₂)°	0-1	L7
As II	1266.340	800		4p ³ - 4p5s	² P° - (³ / ₂ , ¹ / ₂)°	2-2	L7
As II	1267.585	800		4p ³ - 4p4d	¹ S° - ¹ P°	0-1	L7
As II	1270.110	5		4p ³ - 4p4d	¹ D° - ³ F°	2-2	L7
As II	1280.987	700		4p ³ - 4p5s	² P° - (¹ / ₂ , ¹ / ₂)°	1-1	L7
As II	1287.538	700		4p ³ - 4p5s	² P° - (³ / ₂ , ¹ / ₂)°	1-0	L7
As II	1305.701	700		4p ³ - 4p5s	² P° - (¹ / ₂ , ¹ / ₂)°	2-1	L7
As II	1307.74	350		4p ³ - 4p4d	¹ S° - ³ D°	0-1	L7
As II	1333.147	750		4s ³ 4p ² - 4s4p ³	¹ D° - ³ P°	2-2	L7
As II	1341.549	950		4s ³ 4p ² - 4s4p ³	¹ D° - ³ P°	2-1	L7
As II	1355.933	750		4s ³ 4p ² - 4s4p ³	² P° - ³ D°	0-1	L7
As II	1369.770	950		4p ³ - 4p4d	¹ D° - ¹ D°	2-2	L7
As II	1373.650	800		4s ³ 4p ² - 4s4p ³	² P° - ³ D°	1-2	L7
As II	1375.074	1600		4p ³ - 4p5s	¹ D° - (³ / ₂ , ¹ / ₂)°	2-1	L7
As II	1375.783	750		4s ² 4p ³ - 4s4p ³	² P° - ³ D°	1-1	L7
As II	1394.64	800		4s ² 4p ³ - 4s4p ³	² P° - ³ D°	2-3	L7
As II	1400.306	800		4p ³ - 4p5s	¹ D° - (³ / ₂ , ¹ / ₂)°	2-2	L7
As II	1402.114	10		4s ³ 4p ² - 4s4p ³	² P° - ³ D°	1-2	L7
As II	1464.323	5		4s ² 4p ³ - 4s4p ³	² P° - ³ D°	2-1	L7
As II	1419.855	0		4s4p ³ - 4s ² 4p4f	⁴ S° - ³ / ₂ [¹ / ₂]	2-2	L7
As II	1420.624	0		4s4p ³ - 4s ² 4p4f	⁴ S° - ³ / ₂ [³ / ₂]	2-1	L7
As II	1431.817	0		4s4p ³ - 4s ² 4p4f	⁴ S° - ³ / ₂ [¹ / ₂]	2-3	L7
As II	1433.053	0		4s4p ³ - 4s ² 4p6p	⁴ S° - ³ / ₂ [¹ / ₂]	2-1	L7
As II	1448.593	500		4p ³ - 4p5s	¹ D° - (¹ / ₂ , ¹ / ₂)°	2-1	L7
As II	1493.259	0		4s4p ³ - 4s ² 4p7f	³ D° - ¹ / ₂ [¹ / ₂]	2-3	L7
As II	1496.598	0		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [¹ / ₂]	1-2	L7
As II	1497.547	0		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [³ / ₂]	1-1	L7
As II	1498.058	0		4s4p ³ - 4s ² 4p4f	⁴ S° - ¹ / ₂ [¹ / ₂]	2-3	L7
As II	1499.108	0		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [¹ / ₂]	2-2	L7
As II	1499.168	0		4s4p ³ - 4s ² 4p4f	⁴ S° - ¹ / ₂ [³ / ₂]	2-3	L7
As II	1500.074	0		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [³ / ₂]	2-1	L7
As II	1502.615	0		4s4p ³ - 4s ² 4p7f	³ D° - ¹ / ₂ [³ / ₂]	3-2	L7
As II	1504.20	150		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [³ / ₂]	2-2	L7
As II	1505.556	2		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [¹ / ₂]	2-3	L7
As II	1507.145	5		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [¹ / ₂]	2-3	L7
As II	1514.260	2		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [³ / ₂]	3-3	L7
As II	1515.207	20		4s4p ³ - 4s ² 4p6f	³ D° - ³ / ₂ [¹ / ₂]	3-4	L7
As II	1558.884	500		4s ² 4p ³ - 4s4p ³	¹ D° - ³ D°	2-3	L7
As II	1568.225	225		4s ² 4p ³ - 4s4p ³	¹ D° - ³ D°	2-2	L7
As II	1569.385	10		4s4p ³ - 4s ² 4p6f	³ D° - ¹ / ₂ [³ / ₂]	1-2	L7
As II	1570.993	500		4s ² 4p ³ - 4s4p ³	¹ D° - ³ D°	2-1	L7
As II	1572.644	10		4s4p ³ - 4s ² 4p6f	³ D° - ¹ / ₂ [¹ / ₂]	2-3	L7
As II	1582.406	5		4s4p ³ - 4s ² 4p6f	³ D° - ¹ / ₂ [³ / ₂]	3-4	L7
As II	1611.927	225		4s ² 4p ³ - 4s4p ³	¹ S° - ³ P°	0-1	L7
As II	1629.565	0		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [³ / ₂]	1-1	L7
As II	1631.725	0		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [¹ / ₂]	2-2	L7
As II	1634.298	4		4p5s - 4p9p	(³ / ₂ , ¹ / ₂)° - ³ / ₂ [¹ / ₂]	1-0	L7
As II	1637.033	0		4s4p ³ - 4s ² 4p7p	³ D° - ³ / ₂ [¹ / ₂]	2-1	L7
As II	1637.470	10		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [³ / ₂]	1-2	L7
As II	1639.979	5		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [¹ / ₂]	2-3	L7
As II	1640.491	1		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [³ / ₂]	2-2	L7
As II	1643.619	5		4s4p ³ - 4s ² 4p7p	³ D° - ³ / ₂ [³ / ₂]	2-2	L7
As II	1645.590	1		4s4p ³ - 4s ² 4p7p	³ D° - ³ / ₂ [¹ / ₂]	2-3	L7
As II	1647.527	10		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [¹ / ₂]	2-3	L7
As II	1650.319	1		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [³ / ₂]	3-3	L7
As II	1650.842	0		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [¹ / ₂]	3-2	L7
As II	1656.004	5		4s4p ³ - 4s ² 4p7p	³ D° - ³ / ₂ [¹ / ₂]	3-3	L7
As II	1656.704	50		4s4p ³ - 4s ² 4p5f	³ D° - ³ / ₂ [³ / ₂]	3-4	L7
As II	1660.554	500		4p ² - 4p5s	¹ S° - (³ / ₂ , ¹ / ₂)°	0-1	L7
As II	1714.069	0		4p5s - 4p6f	(¹ / ₂ , ¹ / ₂)° - ¹ / ₂ [¹ / ₂]	1-2	L7
As II	1716.962	1		4s4p ³ - 4s ² 4p7p	³ D° - ¹ / ₂ [³ / ₂]	1-2	L7

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As II	1719.802	50		4s4p ³ - 4s ² 4p5f	³ D° - ½[½]	1-2	L7
As II	1722.680	2		4p5s - 4p8p	(¾, ½)° - ¾[½]	1-0	L7
As II	1723.852	0		4s4p ³ - 4s ² 4p5f	³ D° - ½[½]	2-3	L7
As II	1725.846	1		4s4p ³ - 4s ² 4p5f	³ D° - ½[½]	2-3	L7
As II	1731.671	0		4s4p ³ - 4s ² 4p7p	³ D° - ½[½]	3-2	L7
As II	1732.236	0		4p4d - 4p7f	¹ D° - ½[½]	2-3	L7
As II	1735.081	0		4s4p ³ - 4s ² 4p5f	³ D° - ½[½]	3-4	L7
As II	1751.945	5		4p4d - 4p6f	¹ D° - ¾[¾]	2-3	L7
As II	1768.985	225		4p ² - 4p5s	¹ S - (½, ½)°	0-1	L7
As II	1787.885	0		4s4p ³ - 4s ² 4p6f	³ P° - ¾[¾]	1-2	L7
As II	1789.643	5		4s4p ³ - 4s ² 4p6f	³ P° - ¾[¾]	0-1	L7
As II	1794.567	0		4s4p ³ - 4s ² 4p7f	³ P° - ½[½]	2-3	L7
As II	1805.028	0		4s4p ³ - 4s ² 4p6f	³ P° - ¾[¾]	2-2	L7
As II	1812.350	5		4s4p ³ - 4s ² 4p6f	³ P° - ¾[¾]	2-3	L7
As II	1814.660	0		4s4p ³ - 4s ² 4p6f	³ P° - ¾[¾]	2-3	L7
As II	1820.009	0		4p4d - 4p8f	³ F° - ¾[¾]	4-5	L7
As II	1839.978	5		4p4d - 4p6f	¹ D° - ½[½]	2-3	L7
As II	1860.342	350		4s ² 4p ² - 4s4p ³	³ P° - ⁵ S°	1-2	L7
As II	1891.278	50		4p5s - 4p7p	(¾, ½)° - ¾[½]	1-0	L7
As II	1894.661	1		4p4d - 4p7f	³ F° - ¾[¾]	4-5	L7
As II	1912.938	500		4s ² 4p ² - 4s4p ³	³ P° - ⁵ S°	2-2	L7
As II	1933.530	0		4p4d - 4p5f	¹ D° - ¾[¾]	2-2	L7
As II	1937.869	0		4p4d - 4p7p	¹ D° - ¾[¾]	2-2	L7
As II	1941.876	1		4s4p ³ - 4s ² 4p4f	³ D° - ¾[¾]	1-2	L7
As II	1943.305	0		4p4d - 4p5f	³ D° - ¾[¾]	2-3	L7
As II	1943.317	40		4s4p ³ - 4s ² 4p4f	³ D° - ¾[¾]	1-1	L7
As II	1946.137	1		4p4d - 4p6f	³ F° - ¾[¾]	2-3	L7
As II	1947.572	0		4s4p ³ - 4s ² 4p4f	³ D° - ¾[¾]	2-1	L7
As II	1951.393	0		4p4d - 4p7f	³ F° - ½[½]	3-2	L7
As II	1952.541	0		4s4p ³ - 4s ² 4p6p	³ D° - ¾[¾]	1-2	L7
As II	1956.835	0		4s4p ³ - 4s ² 4p6p	³ D° - ¾[¾]	2-2	L7
As II	1965.036	3		4p4d - 4p6f	³ F° - ¾[¾]	3-4	L7
As II	1968.660	20		4s4p ³ - 4s ² 4p4f	³ D° - ¾[¾]	2-3	L7
As II	1968.855	20		4s4p ³ - 4s ² 4p4f	³ D° - ¾[¾]	2-2	L7
As II	1970.953	0		4s4p ³ - 4s ² 4p6p	³ D° - ¾[¾]	2-1	L7
As II	1971.580	0		4s4p ³ - 4s ² 4p6p	³ D° - ¾[¾]	3-2	L7
As II	1975.270	1		4s4p ³ - 4s ² 4p4f	³ D° - ¾[¾]	3-4	L7
As II	1979.755	10		4s4p ³ - 4s ² 4p5f	³ P° - ¾[¾]	1-2	L7
As II	1980.992	2		4s4p ³ - 4s ² 4p5f	³ P° - ¾[¾]	1-1	L7
As II	1981.466	10		4s4p ³ - 4s ² 4p5f	³ P° - ¾[¾]	0-1	L7
As II	1983.581	100		4s4p ³ - 4s ² 4p6p	³ D° - ¾[¾]	1-2	L7
As II	1983.787	3		4s4p ³ - 4s ² 4p4f	³ D° - ¾[¾]	3-2	L7
As II	1988.018	20		4s4p ³ - 4s ² 4p6p	³ D° - ¾[¾]	2-2	L7
As II	1988.955	100		4s4p ³ - 4s ² 4p4f	³ D° - ¾[¾]	2-3	L7
As II	1992.682	5		4s4p ³ - 4s ² 4p5f	³ P° - ¾[¾]	1-2	L7
As II	1998.340	10		4s4p ³ - 4s ² 4p5f	³ P° - ¾[¾]	2-2	L7

ARSENIC III (As^{2+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2 \text{P}_{1/2}^0$ (31 electrons)
 Ionization Potential $228\,670 \text{ cm}^{-1}$; 28.351 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As III	603.8	90		4p - 5d	$g^2 P^0 - ^2D$	$\frac{1}{2} - \frac{3}{2}$	L4
As III	614.4	90		4p - 5d	$g^2 P^0 - ^2D$	$\frac{3}{2} - \frac{5}{2}$	L4
As III	614.7	15		4p - 5d	$g^2 P^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	L4
As III	849.9	450		4p - 4d	$g^2 P^0 - ^2D$	$\frac{1}{2} - \frac{3}{2}$	L4
As III	866.3	300		$4s^2 4p - 4s 4p^2$	$g^2 P^0 - ^2P$	$\frac{1}{2} - \frac{3}{2}$	L4
As III	871.1	500		4p - 4d	$g^2 P^0 - ^2D$? $\frac{3}{2} - \frac{3}{2}$	R10
As III	871.7	750		4p - 4d	$g^2 P^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	L4
As III	877.7	350		$4s^2 4p - 4s 4p^2$	$g^2 P^0 - ^2P$? $\frac{3}{2} - \frac{1}{2}$	R10
As III	889.0	600		$4s^2 4p - 4s 4p^2$	$g^2 P^0 - ^2P$	$\frac{3}{2} - \frac{3}{2}$	L4, R10
As III	900.9	300		$4s^2 4p - 4s 4p^2$	$g^2 P^0 - ^2P$? $\frac{3}{2} - \frac{1}{2}$	R10
As III	927.6	600		$4s^2 4p - 4s 4p^2$	$g^2 P^0 - ^2S$	$\frac{1}{2} - \frac{1}{2}$	L4
As III	937.2	600		4p - 5s	$g^2 P^0 - ^2S$	$\frac{1}{2} - \frac{1}{2}$	L4
As III	953.6	600		$4s^2 4p - 4s 4p^2$	$g^2 P^0 - ^2S$	$\frac{3}{2} - \frac{1}{2}$	L4
As III	963.8	600		4p - 5s	$g^2 P^0 - ^2S$	$\frac{3}{2} - \frac{1}{2}$	L4
As III	1172.2	360		$4s^2 4p - 4s 4p$	$g^2 P^0 - ^2D$	$\frac{1}{2} - \frac{3}{2}$	L4
As III	1209.3	450		$4s^2 4p - 4s 4p^2$	$g^2 P^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	L4
As III	1214.0	90		$4s^2 4p - 4s 4p^2$	$g^2 P^0 - ^2D$	$\frac{3}{2} - \frac{3}{2}$	L4
As III	1269.0	150		$4s 4p^2 - 4s^2 4f$	$^2D - ^2F^0$	$\frac{3}{2} - \frac{3}{2}$	L4
As III	1274.3	240		$4s 4p^2 - 4s^2 4f$	$^2D - ^2F^0$	$\frac{5}{2} - \frac{3}{2}$	L4

ARSENIC IV (As^{3+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 \text{S}_0$ (30 electrons)
 Ionization Potential $404\,369 \text{ cm}^{-1}$; 50.13 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As IV	530.3	100		4s 4p - 4s 6s	$^1P^0 - ^1S$	1 - 0	R11
As IV?	537.1	150					R11
As IV	550.0	50		4s 4p - 4s 5d	$^1P^0 - ^1D$	1 - 2	R11
As IV	655.9	20		4s 4p - 4s 5s	$^3P^0 - ^1S$	1 - 0	R11
As IV	692.9	250		4s 4p - 4s 5s	$^3P^0 - ^3S$	0 - 1	R11
As IV	698.5	350		4s 4p - 4s 5s	$^3P^0 - ^3S$	1 - 1	R11
As IV	711.1	400		4s 4p - 4s 5s	$^3P^0 - ^3S$	2 - 1	R11
As IV	741.9	400		4s 4p - 4s 4d	$^3P^0 - ^3D$	0 - 1	R11
As IV	747.6	450		4s 4p - 4s 4d	$^3P^0 - ^3D$	1 - 2	R11
As IV	748.3	400		4s 4p - 4s 4d	$^3P^0 - ^3D$	1 - 1	R11
As IV	760.8	500		4s 4p - 4s 4d	$^3P^0 - ^3D$	2 - 3	R11
As IV	762.8	200		4s 4p - 4s 4d	$^3P^0 - ^3D$	2 - 1	R11
As IV	851.7	500		4s 4p - 4s 5s	$^1P^0 - ^1S$	1 - 0	R11
As IV	892.7	500		$4s^2 - 4s 4p$	$g^1 S - ^1P^0$	0 - 1	R11
As IV	925.0	50		4s 4p - 4s 5s	$^1P^0 - ^1S$	1 - 1	R11
As IV	930.8	400		4s 4p - 4p ²	$^3P^0 - ^3P$	1 - 2	R11
As IV	941.9	250		4s 4d - 4s 4f	$^1D - ^1F^0$	2 - 3	R11
As IV	946.4	450		4s 4p - 4p ²	$^3P^0 - ^3P$	0 - 1	R11
As IV	953.2	400		4s 4p - 4p ²	$^3P^0 - ^3P$	2 - 2	R11
As IV	956.9	450		4s 4p - 4p ²	$^3P^0 - ^3P$	1 - 1	R11
As IV	971.1	500		4s 4p - 4p ²	$^3P^0 - ^3P$	1 - 0	R11
As IV	974.6	450		4s 4p - 4s 4d	$^3P^0 - ^1D$	1 - 2	R11
As IV	980.6	500		4s 4p - 4p ²	$^3P^0 - ^3P$	2 - 1	R11
As IV	999.2	450		4s 4p - 4s 4d	$^3P^0 - ^1D$	2 - 2	R11
As IV	999.4	100		4p ² - 4s 4f	$^3P^0 - ^3F^0$	2 - 2	R11

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As IV	1003.4	400		4s4p - 4p ²	¹ P° - ¹ S	1 - 0	R11
As IV	1079.5	350		4s4p - 4p ²	¹ P° - ¹ D	1 - 2	R11
As IV	1299.3	500		4s ² - 4s4p	g ¹ S - ³ P°	0 - 1	R11
As IV	1333.3	100		4s4d - 4s4f	³ D - ¹ F°	2 - 3	R11
As IV	1336.9	20		4s4d - 4s4f	³ D - ¹ F°	3 - 3	R11
As IV	1342.7	350		4s4d - 4s5p	¹ D - ¹ P°	2 - 1	R11
As IV	1347.5	450		4s4d - 4s4f	³ D - ³ F°	3 - 4	R11
As IV	1351.3	350		4s4d - 4s4f	³ D - ³ F°	2 - 3	R11
As IV	1355.9	300		4s4d - 4s4f	³ D - ³ F°	1 - 2	R11
As IV	1355.1	100		4s4d - 4s4f	³ D - ³ F°	3 - 3	R11
As IV	1356.4	100		4s4d - 4s4f	³ D - ³ F°	2 - 2	R11
As IV	1375.1	500b		4s4d - 4s5p	¹ D - ³ P°	2 - 2	R11
As IV	1381.8	300		4s4p - 4p ²	¹ P° - ³ P°	1 - 2	R11
As IV	1390.7	20		4s4d - 4s5p	¹ D - ³ P°	2 - 1	R11
As IV	1435.9	200		4p ² - 4s5p	³ P° - ¹ P°	2 - 1	R11
As IV	1440.0	100		4s4p - 4p ²	¹ P° - ³ P°	1 - 1	R11
As IV	1472.5	50		4s4p - 4p ²	¹ P° - ³ P°	1 - 0	R11
As IV	1473.0	50		4p ² - 4s5p	³ P° - ³ P°	2 - 2	R11
As IV	1480.6	450		4s4p - 4s4d	¹ P° - ¹ D	1 - 2	R11

ARSENIC V (As⁴⁺), Z = 33Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s ²S_{1/2} (29 electrons)Ionization Potential 505 136 cm⁻¹; 62.63 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As V	600.7	150		4p - 5s	² P° - ² S	1/2 - 1/2	S2
As V	616.0	200		4p - 5s	² P° - ² S	3/2 - 1/2	S2
As V	715.5	350		4p - 4d	² P° - ² D	1/2 - 3/2	S2
As V	734.8	400		4p - 4d	² P° - ² D	3/2 - 3/2	S2
As V	737.2	250		4p - 4d	² P° - ² D	5/2 - 3/2	S2
As V	987.7	500		4s - 4p	g ³ S - ² P°	1/2 - 3/2	S2
As V	1029.5	500		4s - 4p	g ³ S - ² P°	1/2 - 1/2	S2
As V	1051.6	200		4d - 4f	² D - ² F°	3/2 - 3/2	S2
As V	1056.6	250		4d - 4f	² D - ² F°	5/2 - 3/2	S2

ARSENIC VI (As⁵⁺), Z = 33Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰ ¹S₀ (28 electrons)Ionization Potential 1 028 800 cm⁻¹; 127.6 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As VI	220.0	800		3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ³ D°	0 - 1	K26
As VI	221.0	1000		3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ¹ P°	0 - 1	K26
As VI	226.8	100		3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ³ P°	0 - 1	K26
As VI	232.2	100					K26

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

ARSENIC VII (As⁶⁺), Z = 33
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 \ ^2D_{3/2}$ (27 electrons)
 Ionization Potential [1 242 000] cm⁻¹; [154] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
As VII	173.82	600		3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	3/2 - 3/2	Z2
As VII	174.60	1000b		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P ^o	3/2 - 3/2	Z2
As VII	174.70	1000b		3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	3/2 - 3/2	Z2
As VII	175.20	600		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	3/2 - 3/2	Z2
As VII	175.46	1000		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	3/2 - 3/2	Z2
As VII	175.56	1000		3d ⁹ - 3d ⁸ (¹ G)4p	ga ² D - x ² F ^o	3/2 - 3/2	Z2
As VII	175.84	800		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P ^o	3/2 - 3/2	Z2
As VII	176.32	900		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - y ² P ^o	3/2 - 3/2	Z2
As VII	176.96	600		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - x ² D ^o	3/2 - 3/2	Z2
As VII	177.23	1000		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - x ² D ^o	3/2 - 3/2	Z2
As VII	177.58	900		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	3/2 - 3/2	Z2
As VII	178.00	800		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	3/2 - 3/2	Z2
As VII	178.62	900		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² F ^o	3/2 - 3/2	Z2
As VII	178.69	700		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	3/2 - 3/2	Z2
As VII	179.38	600		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - z ² P ^o	3/2 - 3/2	Z2
As VII	179.32	400		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	3/2 - 3/2	Z2
As VII	186.52	900		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² D ^o	3/2 - 3/2	Z2
As VII	180.79	900b		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ² P ^o	3/2 - 3/2	Z2
As VII	181.08	400		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ² P ^o	3/2 - 3/2	Z2
As VII	181.57	800		3d ⁹ - 3d ⁸ (¹ D)4p	ga ² D - y ² F ^o	3/2 - 3/2	Z2
As VII	182.51	900		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	3/2 - 3/2	Z2
As VII	182.68	800b		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ² P ^o	3/2 - 3/2	Z2
As VII	182.97	900		3d ⁹ - 3d ⁸ (³ P)4p	ga ² D - z ² P ^o	3/2 - 3/2	Z2
As VII	183.14	400		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	3/2 - 3/2	Z2
As VII	183.68	1000		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	3/2 - 3/2	Z2
As VII	184.05	800		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² G ^o	3/2 - 3/2	Z2
As VII	184.29	800		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	3/2 - 3/2	Z2
As VII	184.43	700		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	3/2 - 3/2	Z2
As VII	185.06	700		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	3/2 - 3/2	Z2
As VII	185.19	900		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	3/2 - 3/2	Z2
As VII	185.66	800		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	3/2 - 3/2	Z2
As VII	186.25	700		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² D ^o	3/2 - 3/2	Z2
As VII	187.38	900		3d ⁹ - 3d ⁸ (³ F)4p	ga ² D - z ² F ^o	3/2 - 3/2	Z2

ARSENIC VIII (As⁷⁺), Z = 33
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 \ ^3F_4$ (26 electrons)
 Ionization Potential [1 508 000] cm⁻¹; [187] eV

ARSENIC IX (As^{8+}), $Z = 33$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 \ ^4F_{3/2}$ (25 electrons)Ionization Potential [1 791 000] cm^{-1} ; [222] eVARSENIC X (As^{9+}), $Z = 33$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 \ ^5D_4$ (24 electrons)Ionization Potential [2 089 000] cm^{-1} ; [259] eVARSENIC XI (As^{10+}), $Z = 33$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)Ionization Potential [2 420 000] cm^{-1} ; [300] eVARSENIC XII (As^{11+}), $Z = 33$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)Ionization Potential [2 726 000] cm^{-1} ; [338] eVARSENIC XIII (As^{12+}), $Z = 33$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 \ ^4F_{3/2}$ (21 electrons)Ionization Potential [3 275 000] cm^{-1} ; [379] eV

ARSENIC XIV (As^{13+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^3F_2$ (20 electrons)
 Ionization Potential [3 396 000] cm^{-1} ; [421] eV

ARSENIC XV (As^{14+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d \ ^2D_{3/2}$ (19 electrons)
 Ionization Potential [3 726 400] cm^{-1} ; [462] eV

ARSENIC XVI (As^{15+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1S_0$ (18 electrons)
 Ionization Potential [4 791 100] cm^{-1} ; [594] eV

ARSENIC XVII (As^{16+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 \ ^2P_{3/2}^o$ (17 electrons)
 Ionization Potential [5 081 500] cm^{-1} ; [630] eV

ARSENIC XVIII (As^{17+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
 Ionization Potential [5 404 100] cm^{-1} ; [670] eV

ARSENIC XIX (As^{18+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [5 840 000] cm^{-1} ; [724] eV

ARSENIC XX (As^{19+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [6 202 600] cm^{-1} ; [769] eV

ARSENIC XXI (As^{20+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}$ (13 electrons)
 Ionization Potential [6 557 500] cm^{-1} ; [813] eV

ARSENIC XXII (As^{21+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential [7 340 000] cm^{-1} ; [910] eV

ARSENIC XXIII (As^{22+}), $Z = 33$
 Ground State $1s^2 2s^2 2p^6 3s \ ^2S_{1/2}$ (11 electrons)
 Ionization Potential [7 686 700] cm^{-1} ; [953] eV

ARSENIC XXIV (As^{23+}), $Z = 33$
Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
Ionization Potential [19 132 000] cm^{-1} ; [2372] eV

ARSENIC XXV (As^{24+}), $Z = 33$
Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}^o$ (9 electrons)
Ionization Potential [19 954 000] cm^{-1} ; [2474] eV

ARSENIC XXVI (As^{25+}), $Z = 33$
Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
Ionization Potential [21 019 000] cm^{-1} ; [2606] eV

ARSENIC XXVII (As^{26+}), $Z = 33$
Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}^o$ (7 electrons)
Ionization Potential [22 326 000] cm^{-1} ; [2768] eV

ARSENIC XXVIII (As^{27+}), $Z = 33$
Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
Ionization Potential [23 552 000] cm^{-1} ; [2920] eV

ARSENIC XXIX (As^{28+}), $Z = 33$
Ground State $1s^2 2s^2 2p^3 \text{P}_{1/2}^0$ (5 electrons)
Ionization Potential [24 722 000] cm^{-1} ; [3065] eV

ARSENIC XXX (As^{29+}), $Z = 33$
Ground State $1s^2 2s^2 \text{S}_0$ (4 electrons)
Ionization Potential [26 198 000] cm^{-1} ; [3248] eV

ARSENIC XXXI (As^{30+}), $Z = 33$
Ground State $1s^2 2s \text{S}_{1/2}^2$ (3 electrons)
Ionization Potential [27 466 000] cm^{-1} ; [3409] eV

ARSENIC XXXII (As^{31+}), $Z = 33$
Ground State $1s^2 \text{S}_0$ (2 electrons)
Ionization Potential [116 510 000] cm^{-1} ; [14445] eV

ARSENIC XXXIII (As^{32+}), $Z = 33$
Ground State $1s \text{S}_{1/2}^2$ (1 electron)
Ionization Potential [121 196 000] cm^{-1} ; [15026] eV

SELENIUM I (Se⁰⁺), Z = 34
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^4 \ ^3P_2$ (34 e⁻lectrons)
 Ionization Potential 78 658.22 cm⁻¹; 9.752 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se I	1313.53	60		$4p^4 - 4p^3(^4S^o)6d$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1316.26	60		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - 3^o$	2 - 2	R23
Se I	1322.06	20		$4p^4 - 4p^3(^4S^o)9s$	$g^3P - ^3S^o$	2 - 1	R23
Se I	1326.83	40		$4p^4 - 4p^3(^4S^o)7d$	$g^3P - ^3D^o$	2 - 1	R23
Se I	1327.80	20		$4p^4 - 4p^3(^4S^o)7d$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1328.75	80		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - 2^o$	1 - 1	R23
Se I	1330.55	80		$4p^4 - 4p^3(^4S^o)7d$	$g^3P - ^3D^o$	1 - 1	R23
Se I?	1342.04	80					R23
Se I	1345.54	80		$4p^4 - 4p^3(^4S^o)8s$	$g^3P - ^3S^o$	2 - 1	R23
Se I	1346.58	10		$4p^4 - 4p^3(^4S^o)8d$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1347.50	20		$4p^4 - 4p^3(^4S^o)8s$	$g^3P - ^3S^o$	2 - 2	R23
Se I	1348.40	100		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - 1^o$	2 - 2	R23
Se I	1351.62	80		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - 3^o$	1 - 2	R23
Se I?	1353.02	140					R23
Se I	1353.86	140		$4p^4 - 4p^3(^4S^o)6d$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1354.63	100		$4p^4 - 4p^3(^4S^o)6d$	$g^3P - ^3D^o$	2 - 2	R23
Se I	1357.79	10		$4p^4 - 4p^3(^4S^o)9s$	$g^3P - ^3S^o$	1 - 1	R23
Se I	1359.7	60		$4p^4 - 4p^3(^4S^o)6d$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1363.80	20		$4p^4 - 4p^3(^4S^o)7d$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1366.78	20		$4p^4 - 4p^3(^4S^o)7d$	$g^3P - ^3D^o$	1 - 1	R23
Se I	1367.91	10		$4p^4 - 4p^3(^4S^o)9s$	$g^3P - ^3S^o$	0 - 1	R23
Se I	1373.03	40		$4p^4 - 4p^3(^4S^o)7d$	$g^3P - ^3D^o$	0 - 1	R23
Se I	1375.03	40		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - 2^o$	0 - 1	R23
Se I	1377.04	40		$4p^4 - 4p^3(^4S^o)7d$	$g^3P - ^3D^o$	0 - 1	R23
Se I	1377.98	200	11	$4p^4 - 4p^3(^3P^o)5s$	$g^3P - 1^oP^o$	2 - 1	R23
Se I?	1379.50	10					R23
Se I	1382.56	60		$4p^4 - 4p^3(^4S^o)8s$	$g^3P - ^3S^o$	1 - 1	R23
Se I	1384.63	40		$4p^4 - 4p^3(^4S^o)8s$	$g^3P - ^3S^o$	1 - 2	R23
Se I	1385.54	160		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - 1^o$	1 - 2	R23
Se I	1390.99	120		$4p^4 - 4p^3(^4S^o)7s$	$g^3P - ^3S^o$	2 - 1	R23
Se I	1391.27	80		$4p^4 - 4p^3(^4S^o)6d$	$g^3P - ^3D^o$	1 - 1	R23
Se I	1392.13	100		$4p^4 - 4p^3(^4S^o)6d$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1393.0	80		$4p^4 - 4p^3(^4S^o)8s$	$g^3P - ^3S^o$	0 - 1	R23
Se I	1395.43	200	8	$4p^4 - 4p^3(^3P^o)5s$	$g^3P - ^3P^o$	2 - 2	R23
Se I	1395.38	200	10	$4p^4 - 4p^3(^4S^o)7s$	$g^3P - ^3S^o$	2 - 2	R23
Se I	1397.5	40		$4p^4 - 4p^3(^4S^o)6d$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1401.92	80		$4p^4 - 4p^3(^4S^o)6d$	$g^3P - ^3D^o$	0 - 1	R23
Se I?	1402.63	20					R23
Se I	1404.45	160	8	$4p^4 - 4p^3(^3P^o)5s$	$g^3P - ^3P^o$	2 - 1	R23
Se I	1405.37	200	9	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1406.37	200	9	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	2 - 1	R23
Se I	1406.60	200	9	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	2 - 2	R23
Se I	1415.84	160	11	$4p^4 - 4p^3(^3P^o)5s$	$g^3P - 1^oP^o$	1 - 1	R23
Se I	1420.64	160		$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1427.87	120		$4p^4 - 4p^3(^3P^o)5s$	$g^3P - 1^oP^o$	0 - 1	R23
Se I	1430.58	120		$4p^4 - 4p^3(^4S^o)7s$	$g^3P - ^3S^o$	1 - 1	R23
Se I	1435.28	240	3	$4p^4 - 4p^3(^3P^o)5s$	$g^3P - ^3P^o$	1 - 2	R23
Se I	1435.75	240	10	$4p^4 - 4p^3(^4S^o)7s$	$g^3P - ^3S^o$	1 - 2	R23
Se I	1441.81	100		$4p^4 - 4p^3(^4S^o)7s$	$g^3P - ^3S^o$	0 - 1	R23
Se I	1444.85	200	8	$4p^4 - 4p^3(^3P^o)5s$	$g^3P - ^3P^o$	1 - 1	R23
Se I	1446.78	200	9	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	1 - 1	R23
Se I	1446.98	200	9	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1449.15	300	8	$4p^4 - 4p^3(^3P^o)5s$	$g^3P - ^3P^o$	1 - 0	R23
Se I	1456.31	240	8	$4p^4 - 4p^3(^3P^o)5s$	$g^3P - ^3P^o$	0 - 1	R23
Se I	1458.29	160	9	$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	0 - 1	R23
Se I	1461.99	120		$4p^4 - 4p^3(^4S^o)5d$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1496.44	20		$4p^4 - 4p^3(^3D^o)4d$	$^3D - 4^o$	2 - 3	R23
Se I	1500.91	300	7	$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^3S^o$	2 - 1	R23
Se I	1502.57	40		$4p^4 - 4p^3(^4S^o)8d$	$^1D - ^3D^o$	2 - 3	R23
Se I	1506.09	60		$4p^4 - 4p^3(^3D^o)4d$	$^1D - 3^o$	2 - 2	R23

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se I?	1511.27	40					
Se I	1515.33	160		$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^4S^o$	2 - 2	R23
Se I	1519.99	80		$4p^4 - 4p^3(^4S^o)7d$	$^1D - ^3D^o$	2 - 1	R23
Se I	1521.20	60		$4p^4 - 4p^3(^4S^o)7s$	$^1D - ^3D^o$	2 - 2	R23
Se I	1522.45	120		$4p^4 - 4p^3(^3D^o)4d$	$^1D - 2^o$	2 - 1	R23
Se I	1524.88	120		$4p^4 - 4p^3(^4S^o)7d$	$^1D - ^3D^o$	2 - 1	R23
Se I	1530.39	500	6	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1531.33	300	6	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 1	R23
Se I	1531.84	400	6	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 2	R23
Se I	1547.12	240	7	$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^4S^o$	1 - 1	R23
Se I	1548.29	160		$4p^4 - 4p^3(^3D^o)4d$	$^1D - 1^o$	2 - 2	R23
Se I	1555.55	80		$4p^4 - 4p^3(^4S^o)6d$	$^1D - ^3D^o$	2 - 3	R23
Se I	1556.54	20		$4p^4 - 4p^3(^4S^o)6d$	$^1D - ^3D^o$	2 - 2	R23
Se I	1560.28	240	7	$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^4S^o$	0 - 1	R23
Se I	1562.50	40		$4p^4 - 4p^3(^4S^o)6s$	$g^3P - ^4S^o$	1 - 2	R23
Se I	1563.28	40		$4p^4 - 4p^3(^4S^o)6d$	$^1D - ^3D^o$	2 - 1	R23
Se I	1575.26	300	5	$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	2 - 2	R23
Se I	1577.61	300	4	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1577.90	300	4	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2 - 2	R23
Se I	1579.49	300	6	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 1	R23
Se I	1580.04	400	6	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1587.46	300	19	$4p^4 - 4p^3(^3P^o)5s$	$^1D - 1P^o$	2 - 1	R23
Se I	1593.19	300	6	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	0 - 1	R23
Se I	1604.70	80		$4p^4 - 4p^3(^4S^o)7s$	$^1D - ^3S^o$	2 - 1	R23
Se I	1606.46	500	3	$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	2 - 3	R23
Se I	1610.72	200	17	$4p^4 - 4p^3(^3P^o)5s$	$^1D - ^3P^o$	2 - 2	R23
Se I	1611.26	200	18	$4p^4 - 4p^3(^4S^o)7s$	$^1D - ^4S^o$	2 - 2	R23
Se I	1617.35	400	3	$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	2 - 2	R23
Se I	1617.21	300	3	$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	2 - 1	R23
Se I	1622.73	200	17	$4p^4 - 4p^3(^3P^o)5s$	$^1D - ^3P^o$	2 - 1	R23
Se I	1623.90	100		$4p^4 - 4p^3(^4S^o)5d$	$^1D - ^3D^o$	2 - 3	R23
Se I	1625.19	140		$4p^4 - 4p^3(^4S^o)5d$	$^1D - ^3D^o$	2 - 1	R23
Se I	1625.45	120		$4p^4 - 4p^3(^4S^o)5d$	$^1D - ^3D^o$	2 - 7	R23
Se I	1626.25	240	5	$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1628.85	160	4	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 1	R23
Se I	1629.06	120	4	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1 - 2	R23
Se I?	1635.80	20					
Se I	1643.39	300	4	$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	0 - 1	R23
Se I	1671.15	500	3	$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	1 - 2	R23
Se I	1675.27	500	3	$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	1 - 1	R23
Se I?	1688.79	60					
Se I	1690.70	500	3	$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	0 - 1	R23
Se I?	1699.90	80					
Se I?	1706.70	40					
Se I?	1708.04	60					
Se I?	1742.75	80					
Se I?	1745.30	60					
Se I?	1750.89	120					
Se I?	1751.88	60					
Se I	1752.94	120		$4p^4 - 4p^3(^4S^o)6s$	$^1E - ^3S^o$	2 - 1	R23
Se I?	1759.24	160					
Se I	1772.64	100		$4p^4 - 4p^3(^4S^o)6s$	$^1D - ^3S^o$	2 - 2	R23
Se I?	1790.48	60					
Se I	1793.29	500	16	$4p^4 - 4p^3(^4S^o)4d$	$^1D - ^3D^o$	2 - 3	R23
Se I	1794.55	100	16	$4p^4 - 4p^3(^4S^o)4d$	$^1D - ^3D^o$	2 - 1	R23
Se I	1795.28	600	16	$4p^4 - 4p^3(^4S^o)4d$	$^1D - ^3D^o$	2 - 2	R23
Se I?	1796.04	120					
Se I?	1822.15	160					
Se I?	1828.65	60					
Se I?	1830.41	90					
Se I?	1849.55	80					
Se I?	1850.51	60					
Se I?	1852.02	60					
Se I	1855.20	600	15	$4p^4 - 4p^3(^3D^o)5s$	$^1D - ^1D^o$	2 - 2	R23
Se I	1858.84	500	14	$4p^4 - 4p^3(^4S^o)4d$	$^1D - ^3D^o$	2 - 2	R23

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se I	1859.69	100		$4p^4 - 4p^3(^4S^o)4d$	$^1S - ^3D^o$	0 - 1	R23
Se I	1893.50	120		$4p^4 - 4p^3(^2D^o)4d$	$^1S - ^2^o$	0 - 1	R23
Se I	1898.555	800	13	$4p^4 - 4p^3(^2D^o)5s$	$^1D - ^3D^o$	2 - 3	R23
Se I	1913.788	700	13	$4p^4 - 4p^3(^2D^o)5s$	$^1D - ^3D^o$	2 - 2	R23
Se I	1919.190	600	13	$4p^4 - 4p^3(^2D^o)5s$	$^1D - ^3D^o$	2 - 1	R23
Se I	1962.901	1000	2	$4p^4 - 4p^3(^4S^o)5s$	$g^2P - ^2S^o$	2 - 1	R23
Se I	1995.112	300	22	$4p^4 - 4p^3(^2P^o)5s$	$^1S - ^1P^o$	0 - 1	R23

SELENIUM II (Se^{1+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^3 \ ^4S_{3/2}$ (33 electrons)
 Ionization Potential $170\,900\text{ cm}^{-1}$; 21.19 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se II	694.83	100		$4p^3 -$	$g^4S^o - 36$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	697.65	300		$4p^3 -$	$g^4S^o - 35$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	709.57	700	6	$4p^3 -$	$g^4S^o - 30$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	710.47	50		$4p^3 -$	$g^4S^o - 29$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	721.88	20		$4p^3 - 4p^2(^2P)6s$	$g^4S^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	726.41	50	5	$4p^3 - 4p^2(^2P)6s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	737.30	50	5	$4p^3 - 4p^2(^2P)6s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	746.02	50	5	$4p^3 - 4p^2(^2P)6s$	$g^4S^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	774.43	200		$4p^3 -$	$^3D^o - 33$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	775.09	50		$4p^3 -$	$g^4S^o - 22$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	782.09	20		$4p^3 -$	$g^4S^o - 20$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	782.66	50		$4p^3 - 4p^2(^2P)6s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	783.84	100		$4p^3 -$	$^3D^o - 29$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	786.49	400		$4p^3 - 4p^2(^2P)6s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	797.69	300		$4p^3 - 4p^2(^2P)6s$	$^2D^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	798.79	20		$4p^3 - 4p^2(^2P)5d$	$^3D^o - ^4F$? $\frac{3}{2} - \frac{3}{2}$	G21, B7
Se II	800.54	100		$4p^3 -$	$^3D^o - 27$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	801.59	300		$4p^3 -$	$^3D^o - 25$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	814.86	20		$4p^3 -$	$g^4S^o - 16$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	816.99	300		$4p^3 -$	$^3D^o - 25$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	820.68	300		$4p^3 - 4p^2(^2P)6s$	$^2D^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	828.48	800	13	$4p^3 -$	$^3D^o - 24$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	832.74	900	13	$4p^3 -$	$^2D^o - 24$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	838.43	50		$4p^3 -$	$^2P^o - 33$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	844.00	400		$4p^3 -$	$^2P^o - 34$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	849.66	400		$4p^3 -$	$^2P^o - 29$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	854.46	50		$4p^3 - 4p^2(^2P)6s$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	855.81	100		$4p^3 -$	$^2P^o - 29$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	864.59	20		$4p^3 -$	$^2P^o - 27$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	865.90	50		$4p^3 - 4p^2(^2P)6s$	$^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	M2
Se II	867.83	300		$4p^3 -$	$^2D^o - 22$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	871.02	200		$4p^3 -$	$^2P^o - 27$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	871.83	400		$4p^3 -$	$^2D^o - 20$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	872.27	50		$4p^3 - 4p^2(^2P)6s$	$^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	882.61	600		$4p^3 -$	$^1D^o - 19$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	883.77	50		$4p^3 -$	$^2P^o - 25$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	887.48	500		$4p^3 -$	$^3D^o - 19$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	888.06	200		$4p^3 - 4p^2(^2P)6s$	$^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	G21, B7
Se II	890.59	600		$4p^3 -$	$^2P^o - 25$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	894.99	50		$4p^3 - 4p^2(^2P)6s$	$^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se II	906.63	800	4	$4p^3$	$g^4S^{\circ} - 11$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	907.81	200		$4p^3 - 4p^2(^3P)6s$	$^3P^{\circ} - 4P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	912.89	900	12	$4p^3$	$^3D^{\circ} - 17$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	917.94	200		$4p^3$	$^3D^{\circ} - 16$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	918.84	400		$4p^3$	$g^4S^{\circ} - 10$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	921.12	500		$4p^3$	$^3D^{\circ} - 15$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	922.90	50		$4p^3 - 4p^2(^1D)5s$	$g^4S^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	926.38	200		$4p^3$	$^3D^{\circ} - 15$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	943.61	200		$4p^3$	$g^4S^{\circ} - 9$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	953.62	200		$4p^3$	$g^4S^{\circ} - 8$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	951.26	300		$4p^3$	$^3P^{\circ} - 22$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	953.88	400		$4p^3$	$^3P^{\circ} - 20$	$\frac{1}{2} - \frac{1}{2}$	M2
Se II	961.77	200		$4p^3$	$^3P^{\circ} - 20$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	974.94	300		$4p^3$	$^3P^{\circ} - 19$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	983.94	600	3	$4p^3$	$g^4S^{\circ} - 5$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	986.71	50		$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	997.06	200		$4s^2 4p^3 - 4s 4p^4$	$g^4S^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	997.14	100		$4p^3$	$g^4S^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1011.15	200		$4p^3$	$^2P^{\circ} - 17$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1011.84	300		$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1013.40	900	2	$4p^3$	$^2P^{\circ} - 16$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1014.01	900	11	$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1022.11	100		$4p^3$	$^2D^{\circ} - 12$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1029.56	600		$4p^3$	$^3P^{\circ} - 15$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1033.60	1000	2	$4p^3 - 4p^2(^3P)5s$	$^2D^{\circ} - 11$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1035.16	300		$4p^3$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1038.36	300		$4p^3$	$^2D^{\circ} - 11$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1045.31	400		$4p^3$	$^2P^{\circ} - 13$	$\frac{1}{2} - \frac{1}{2}$	M2
Se II	1047.67	100		$4p^3$	$^2D^{\circ} - 10$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1049.51	1000		$4p^3$	$^2P^{\circ} - 13$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1049.65	1000	2	$4p^3 - 4p^2(^1D)5s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	K19
Se II	1050.57	200		$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M2, K19
Se II	1052.09	300		$4p^3 - 4p^2(^1D)5s$	$^2D^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1057.41	900	10	$4p^3$	$^2D^{\circ} - 10$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1077.54	400		$4p^3 - 4p^2(^1D)5s$	$^2D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1085.88	500		$4p^3$	$^2D^{\circ} - 9$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1090.43	100		$4p^3$	$^2D^{\circ} - 8$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1097.82	800	9	$4p^3$	$^2D^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1099.97	300		$4p^3$	$^2D^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1119.04	100		$4p^3$	$^2D^{\circ} - 6$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1129.79	50		$4p^3$	$^2P^{\circ} - 12$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1130.48	100		$4p^3$	$^2P^{\circ} - 12$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1133.89	100		$4p^3$	$^2D^{\circ} - 5$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1138.36	50		$4p^3 - 4p^2(^3P)5s$	$^2D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1141.94	900	7	$4p^3$	$^2D^{\circ} - 5$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1155.99	700	8	$4p^3 - 4p^2(^3P)5s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1156.91	800	1	$4s^2 4p^3 - 4s 4p^4$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1157.31	400		$4s^2 4p^3 - 4s 4p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1166.53	500	7	$4p^3$	$^2P^{\circ} - 11$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1168.53	800	1	$4p^3 - 4p^2(^3P)5s$	$^2D^{\circ} - ^2P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1170.76	200		$4s^2 4p^3 - 4s 4p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1177.31	100		$4p^3 - 4p^2(^1D)5s$	$^2P^{\circ} - ^2D$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1178.05	400		$4p^3$	$^2P^{\circ} - 11$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1182.65	300		$4p^3 - 4p^2(^3P)5s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1183.99	200		$4p^3 - 4p^2(^1D)5s$	$^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1192.29	1000	1	$4p^3 - 4p^2(^1D)5s$	$^2P^{\circ} - ^2D$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1196.40	200		$4s^2 4p^3 - 4s 4p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1199.72	50		$4p^3 - 4p^2(^3P)5s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1205.25	300		$4p^3$	$^2D^{\circ} - 1$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1205.69	700	17	$4p^3 - 4p^2(^3P)5s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1218.01	400		$4p^3$	$^2P^{\circ} - 9$	$\frac{1}{2} - \frac{1}{2}$	M2
Se II	1218.27	200	17	$4p^3 - 4p^2(^3P)5s$	$^2D^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1221.94	200	16	$4p^3$	$^2P^{\circ} - 9$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1224.63	300		$4p^3$	$^2P^{\circ} - 7$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1229.04	200		$4p^3$	$^2P^{\circ} - 6$	$\frac{1}{2} - \frac{3}{2}$	M2
				$4p^3$	$^2P^{\circ} - 8$	$\frac{3}{2} - \frac{1}{2}$	M2

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se II	1234.83	700	16	$4p^2 -$	$2P^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1237.61	300		$4p^2 -$	$2P^{\circ} - 6$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1276.84	200		$4p^2 - 4p^2(^3P)5s$	$2P^{\circ} - 2P$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1286.41	300		$4p^2 -$	$2P^{\circ} - 5$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1290.97	600	14	$4p^2 - 4p^2(^2P)5s$	$2P^{\circ} - 2P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1294.41	300	15	$4s^2 4p^3 - 4s 4p^4$	$2P^{\circ} - 2P$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1308.89	800	15	$4s^2 4p^3 - 4s 4p^4$	$2P^{\circ} - 2P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1318.25	700	14	$4p^2 - 4p^2(^3P)5s$	$2P^{\circ} - 2P$	$\frac{1}{2} - \frac{1}{2}$	M2
Se II	1333.32	300		$4p^2 - 4p^2(^2P)5s$	$2P^{\circ} - 2P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1337.23	50		$4p^2 - 4p^2(^2P)5s$	$2P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1347.31	100		$4p^2 -$	$2P^{\circ} - 3$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1356.57	50		$4p^2 - 4p^2(^2P)5s$	$2P^{\circ} - 4P$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1360.86	50		$4p^2 -$	$2P^{\circ} - 1$	$\frac{1}{2} - \frac{1}{2}$	M2
Se II	1364.83	200		$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1372.51	100		$4p^2 - 4p^2(^2P)5s$	$2P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1380.96	100		$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1392.81	50		$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1401.01	50		$4p^2 - 4p^2(^2P)5s$	$2P^{\circ} - 4P$	$\frac{3}{2} - \frac{1}{2}$	M2
Se II	1414.25	200		$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1426.55	500		$4s^2 4p^2 - 4s 4p^4$	$2D^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1577.29	100		$4s^2 4p^2 - 4s 4p^4$	$2P^{\circ} - 4P$	$\frac{1}{2} - \frac{1}{2}$	K19
Se II	1598.95	100		$4s^2 4p^2 - 4s 4p^4$	$2P^{\circ} - 4P$	$\frac{1}{2} - \frac{3}{2}$	M2
Se II	1621.23	400		$4s^2 4p^2 - 4s 4p^4$	$2P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	M2
Se II	1667.15	200		$4s^2 4p^2 - 4s 4p^4$	$2P^{\circ} - 4P$	$\frac{3}{2} - \frac{3}{2}$	M2

SELENIUM III (Se^{2+}), $Z = 34$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2 \ ^3P_0$ (32 electrons)Ionization Potential $248\ 583\ cm^{-1}$; $30.820\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se III	517.57	200		$4p^2 - 4p 5d$	$^3P^{\circ} - ^3P^{\circ}$	1 - 1	R14
Se III	518.17	50		$4p^2 - 4p 5d$	$^3P^{\circ} - ^3P^{\circ}$	1 - 2	R14
Se III	522.05	100		$4p^2 - 4p 5d$	$^3P^{\circ} - ^1D^{\circ}$	1 - 2	R14
Se III	523.53	50		$4p^2 - 4p 5d$	$^3P^{\circ} - ^3P^{\circ}$	2 - 1	R14
Se III	524.01	200		$4p^2 - 4p 5d$	$^3P^{\circ} - ^3D^{\circ}$	0 - 1	R14
Se III	524.15	300		$4p^2 - 4p 5d$	$^3P^{\circ} - ^2P^{\circ}$	2 - 2	R14
Se III	525.17	50		$4p^2 - 4p 6s$	$^3P^{\circ} - ^1P^{\circ}$	1 - 1	R14
Se III	526.43	400		$4p^2 - 4p 5d$	$^3P^{\circ} - ^3D^{\circ}$	2 - 3	R14
Se III	531.14	300		$4p^2 - 4p 5d$	$^3P^{\circ} - ^3D^{\circ}$	1 - 2	R14
Se III	533.07	100		$4p^2 - 4p 6s$	$^3P^{\circ} - ^3P^{\circ}$	2 - 2	R14
Se III	537.38	50		$4p^2 - 4p 5d$	$^3P^{\circ} - ^3D^{\circ}$	2 - 2	R14
Se III	538.53	200		$4p^2 - 4p 6s$	$^3P^{\circ} - ^3P^{\circ}$	1 - 1	R14
Se III	539.31	50		$4p^2 - 4p 6s$	$^3P^{\circ} - ^2P^{\circ}$	1 - 0	R14
Se III	544.03	200		$4p^2 - 4p 5d$	$^1D^{\circ} - ^1F^{\circ}$	2 - 3	R14
Se III	545.00	100		$4p^2 - 4p 6s$	$^3P^{\circ} - ^3P^{\circ}$	2 - 1	R14
Se III	550.40	50		$4p^2 - 4p 5d$	$^1D^{\circ} - ^3P^{\circ}$	2 - 2	R14
Se III	554.73	100		$4p^2 - 4p 5d$	$^1D^{\circ} - ^1D^{\circ}$	2 - 2	R14
Se III	558.26	100		$4p^2 - 4p 6s$	$^1D^{\circ} - ^1P^{\circ}$	2 - 1	R14
Se III	565.04	50		$4p^2 - 4p 5d$	$^1D^{\circ} - ^3D^{\circ}$	2 - 2	R14
Se III	566.24	20		$4p^2 - 4p 5d$	$^1D^{\circ} - ^3F^{\circ}$	2 - 3	R14
Se III	573.44	50		$4p^2 - 4p 6s$	$^1D^{\circ} - ^2P^{\circ}$	2 - 1	R14
Se III?	674.47	500					R15
Se III	684.56	100		$4p^2 -$	$^3P^{\circ} - X^{\circ}$? 1 - 1	B1
Se III	690.89	50		$4p^2 - 4p 4d$	$^3P^{\circ} - ^1F^{\circ}$? 2 - 3	B7
Se III	695.02	200		$4p^2 -$	$^3P^{\circ} - X^{\circ}$? 2 - 1	B1

Element	Wavelength	Intensity	Multiplic	Configuration	Term	J - J	References	
Se III	700.51	20		4p ² - 4p4d	g ² P - ³ P°	0 - 1	B1	
Se III	709.16	700		4p ² - 4p4d	g ² P - ³ P°	1 - 1	B1	
Se III	709.40	700		4p ² - 4p4d	g ² P - ³ P°	1 - 2	B1	
Se III	711.04	600		4p ² - 4p4d	g ² P - ³ D°	0 - 1	B1	
Se III	711.38	600		4p ² - 4p4d	g ² P - ³ P°	1 - 0	B1	
Se III	719.97	600		4p ² - 4p4d	g ² P - ³ D°	1 - 1	B1	
Se III	720.33	600		4p ² - 4p4d	g ² P - ³ P°	2 - 1	B1	
Se III	720.65	700		4p ² - 4p4d	g ² P - ³ P°	2 - 2	B1	
Se III	724.27	900		4p ² - 4p4d	g ² P - ³ D°	2 - 3	B1	
Se III	726.42	800		4p ² - 4p4d	g ² P - ³ D°	1 - 2	B1	
Se III	727.51	100		4p ² - 4p4d	g ² P - ¹ D°	1 - 2	B1	
Se III	730.25	200		4p ² - 4p4d	g ² P - ¹ P°	0 - 1	F1	
Se III	731.54	300		4p ² - 4p4d	g ² P - ³ D°	2 - 1	B1	
Se III	737.23	700		4p ² - 4p4d	¹ D - ¹ F°	2 - 3	B1	
Se III	738.18	300		4p ² - 4p4d	g ² P - ³ D°	2 - 2	B1	
Se III	739.51	300		4p ² - 4p4d	g ² P - ¹ D°	2 - 2	B1	
Se III	739.64	500		4p ² - 4p4d	g ² P - ¹ P°	1 - 1	B1	
Se III	741.94	700		4p ² -	¹ D - X°	?	2 - 1	B1
Se III	751.84	600		4p ² - 4p4d	g ² P - ¹ P°	2 - 1	B1	
Se III	759.54	200		4p ² - 4p5s	g ² P - ¹ P°	0 - 1	B1	
Se III	769.74	100		4p ² - 4p5s	g ² P - ¹ P°	1 - 1	B1	
Se III	770.89	600		4p ² - 4p4d	¹ D - ³ P°	2 - 1	B1	
Se III	775.31	50		4p ² - 4p4d	¹ D - ³ D°	2 - 3	B1	
Se III	777.31	800		4p ² - 4p5s	g ² P - ³ P°	1 - 2	B1	
Se III	782.96	200		4p ² - 4p5s	g ² P - ¹ P°	2 - 1	B1	
Se III	783.66	300		4p ² - 4p4d	¹ D - ³ D°	2 - 1	B1	
Se III	788.77	600		4p ² - 4p5s	g ² P - ³ P°	0 - 1	B1	
Se III	790.80	700		4p ² - 4p5s	g ² P - ³ P°	2 - 2	B1	
Se III	791.29	50		4p ² - 4p4d	¹ D - ³ D°	2 - 2	B1	
Se III	792.58	500		4p ² - 4p4d	¹ D - ¹ D°	2 - 2	B1	
Se III	799.76	400		4p ² - 4p5s	g ² P - ³ P°	1 - 1	B1	
Se III	803.01	600		4p ² - 4p5s	g ² P - ³ P°	1 - 0	B1	
Se III	807.04	500		4p ² - 4p4d	¹ D - ¹ P°	2 - 1	B1	
Se III	814.04	600		4p ² - 4p5s	g ² P - ³ P°	2 - 1	B1	
Se III	817.60	400		4p ² - 4p4d	g ² P - ³ F°	1 - 2	B1	
Se III	823.91	600		4p ² - 4p4d	g ² P - ³ F°	2 - 3	B1	
Se III?	828.47	600					R14	
Se III?	833.14	500					R14	
Se III?	836.06	500					R14	
Se III	843.01	900		4p ² - 4p5s	¹ D - ¹ P°	2 - 1	B1	
Se III	852.10	300		4p ² - 4p5s	¹ D - ³ P°	2 - 2	B1	
Se III	879.15	700		4p ² - 4p5s	¹ D - ³ P°	2 - 1	B1	
Se III?	882.13	500					R14	
Se III?	887.45	300					R14	
Se III	890.68	300		4p ² - 4p4d	¹ D - ³ F°	2 - 3	B1	
Se III	900.79	100		4p ² - 4p4d	¹ D - ³ F°	2 - 2	B1	
Se III	938.16	600		4s ² 4p ² - 4s4p ³	g ² P - ³ P°	0 - 1	B1	
Se III	953.74	800		4s ² 4p ² - 4s4p ³	g ² P - ³ P°	1 - 1	B1	
Se III	954.44	700		4s ² 4p ² - 4s4p ³	g ² P - ³ P°	1 - 2	B1	
Se III	954.74	700		4s ² 4p ² - 4s4p ³	g ² P - ³ P°	1 - 0	B1	
Se III	974.11	600		4s ² 4p ² - 4s4p ³	g ² P - ³ P°	2 - 1	B1	
Se III	974.84	900		4s ² 4p ² - 4s4p ³	g ² P - ³ P°	2 - 2	B1	
Se III?	1000.36	600					R14	
Se III	1068.87	100		4s ² 4p ² - 4s4p ³	¹ D - ³ P°	2 - 1	B1	
Se III	1069.72	100		4s ² 4p ² - 4s4p ³	¹ D - ³ P°	2 - 2	B1	
Se III	1079.76	800		4s ² 4p ² - 4s4p ³	g ² P - ³ D°	2 - 3	B1	
Se III	1097.82	600		4s ² 4p ² - 4s4p ³	g ² P - ³ D°	0 - 1	B1	
Se III	1099.10	900		4s ² 4p ² - 4s4p ³	g ² P - ³ D°	1 - 2	B1	
Se III	1119.17	1000		4s ² 4p ² - 4s4p ³	g ² P - ³ D°	1 - 1	B1	
Se III	1126.28	300		4s ² 4p ² - 4s4p ³	g ² P - ³ D°	2 - 2	B1	
Se III?	1206.53	600					R14	
Se III	1254.79	20		4s ² 4p ² - 4s4p ³	¹ D - ³ D°	?	2 - 2	B1
Se III	1534.9	200		4s4p ² - 4s ² 4p ³ 5p	³ D° - ³ P	2 - 2	R14	
Se III	1571.5	300		4s4p ² - 4s ² 4p ³ 5p	³ D° - ³ P	2 - 1	R14	
Se III	1644.87	100		4s4p ² - 4s ² 4p ³ 5p	³ D° - ³ D	2 - 2	R14	

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se III	1829.6	100		$4s4p^2 - 4s^24p5p$	$^3P^o - ^1D$	2 - 2	R14
Se III?	1845.0	300					R14
Se III	1893.2	500		$4s4p^2 - 4s^24p5p$	$^3P - ^3S$	0 - 1	R14
Se III	1894.4	400		$4s4p^2 - 4s^24p5p$	$^3P^o - ^3S$	2 - 1	R14
Se III	1897.2	400		$4s4p^2 - 4s^24p5p$	$^3P^o - ^3S$	1 - 1	R14
Se III	1947.1	500		$4s4p^2 - 4s^24p5p$	$^3P^o - ^2P$	2 - 2	R14
Se III	1950.0	500		$4s4p^2 - 4s^24p5p$	$^3P^o - ^2P$	1 - 2	R14
Se III	1993.0	200		$4s4p^2 - 4s^24p5p$	$^3P^o - ^3D$	2 - 3	R14

SELENIUM IV (Se^{3+}), $Z = 34$ Ground State $1s^22s^22p^63s^23p^63d^{10}4s^24p^2P_{1/2}^o$ (31 electrons)Ionization Potential $346\ 375\ cm^{-1}$; $42.944\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se IV?	630.7	400					R14
Se IV?	631.0	300					R14
Se IV?	631.1	300					R14
Se IV	636.0	800		$4p - 5s$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	R12
Se IV?	640.5	300					R14
Se IV?	640.9	400					R14
Se IV?	642.7	500					R14
Se IV?	644.8	400					R14
Se IV	652.7	900		$4p - 4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	R12
Se IV	654.2	800		$4p - 5s$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R12
Se IV	670.1	1000		$4p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{5}{2}$	R12
Se IV	671.9	800		$4p - 4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	R12
Se IV	722.8	700		$4s^24p - 4s4p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	R12
Se IV	734.6	800		$4s^24p - 4s4p^2$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	R12
Se IV	746.4	1000		$4s^24p - 4s4p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	R12
Se IV	759.0	800		$4s^24p - 4s4p^2$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	R12
Se IV	776.5	800		$4s^24p - 4s4p^2$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	R12
Se IV?	782.8	500					R14
Se IV	796.8	400		$4s4p^2 - 4s^24f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{5}{2}$	R12
Se IV?	798.1	600					R14
Se IV	800.1	500		$4s4p^2 - 4s^24f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{7}{2}$	R12
Se IV	803.8	800		$4s^24p - 4s4p^2$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R12
Se IV	959.6	900		$4s^24p - 4s4p^2$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	R12
Se IV	996.7	1000		$4s^24p - 4s4p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	R12
Se IV	1001.6	400		$4s^24p - 4s4p^2$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	R12
Se IV	1018.0	200		$5p - 7s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	R12
Se IV	1030.6	200		$5p - 7s$	$^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	R12
Se IV	1150.8	100		$4s4p^2 - 4s^25p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	R12
Se IV	1157.4	500		$4s4p^2 - 4s^25p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	R12
Se IV	1166.8	400		$4s4p^2 - 4s^25p$	$^2D - ^2P^o$	$\frac{3}{2} - \frac{1}{2}$	R12
Se IV	1307.2	700		$4d - 4f$	$^2D - ^2F^o$	$\frac{3}{2} - \frac{3}{2}$	R12
Se IV	1314.4	800		$4d - 4f$	$^2D - ^2F^o$	$\frac{5}{2} - \frac{7}{2}$	R12
Se IV?	1885.3	200					R14
Se IV?	1887.7	200					R14
Se IV?	1920.3	600					R14
Se IV	1967.3	400		$5p - 6s$	$^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	R12

SELENIUM V (Se^{4+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 \ ^1S_0$ (30 electrons)
 Ionization Potential [551 000] cm^{-1} ; [68.3] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se V	505.9	200		$4s 4p - 4s 5s$	$^3P^{\circ} - ^3S$	0-1	S2
Se V	510.0	300		$4s 4p - 4s 5s$	$^3P^{\circ} - ^3S$	1-1	S2
Se V	519.6	400		$4s 4p - 4s 5s$	$^3P^{\circ} - ^3S$	2-1	S2
Se V	596.0	500		$4s 4p - 4s 4d$	$^3P^{\circ} - ^3D$	0-1	S2
Se V	601.0	400		$4s 4p - 4s 4d$	$^3P^{\circ} - ^3D$	1-2	S2
Se V	601.7	400		$4s 4p - 4s 4d$	$^3P^{\circ} - ^3D$	1-1	S2
Se V	613.0	500		$4s 4p - 4s 4d$	$^3P^{\circ} - ^3D$	2-3	S2
Se V	614.3	400		$4s 4p - 4s 4d$	$^3P^{\circ} - ^3D$	2-2	S2
Se V	615.1	190		$4s 4p - 4s 4d$	$^3P^{\circ} - ^3D$	2-1	S2
Se V	642.3	200		$4s 4p - 4s 5s$	$^1P^{\circ} - ^3S$	1-1	R12
Se V	674.6	800		$4s 4d - 4s 4f$	$^1D - ^1F^{\circ}$? 2-3	R15
Se V	785.8	500		$4s 4p - 4p^2$	$^3P^{\circ} - ^3P$	1-2	S2
Se V	804.3	500		$4s 4p - 4p^2$	$^3P^{\circ} - ^3P$	0-1	S2
Se V	808.7	700		$4s 4p - 4p^2$	$^3P^{\circ} - ^3P$	2-2	S2
Se V	814.8	600		$4s 4p - 4p^2$	$^3P^{\circ} - ^3P$	1-1	S2
Se V	820.7	700		$4s 4p - 4s 4d$	$^3P^{\circ} - ^1D$	1-2	R12
Se V	830.3	600		$4s 4p - 4p^2$	$^3P^{\circ} - ^3P$	1-0	S2
Se V	839.5	400		$4s 4p - 4p^2$	$^3P^{\circ} - ^3P$	2-1	S2
Se V	845.8	900		$4s 4p - 4s 4d$	$^3P^{\circ} - ^1D$	2-2	R12
Se V	1094.7	900		$4s^2 - 4s 4p$	$g^1S - ^3P^{\circ}$	0-1	R12
Se V	1151.0	700		$4s 4p - 4p^2$	$^1P^{\circ} - ^3P$	1-2	R12
Se V	1227.6	1000		$4s 4p - 4s 4d$	$^1P^{\circ} - ^1D$	1-2	R12

SELENIUM VI (Se^{5+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s \ ^2S_{1/2}$ (29 electrons)
 Ionization Potential 658 994 cm^{-1} ; 81.70 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se VI	452.8	200		$4p - 5s$	$^2P^{\circ} - ^2S$	$\frac{1}{2} - \frac{1}{2}$	S2
Se VI	464.8	200		$4p - 5s$	$^2P^{\circ} - ^2S$	$\frac{3}{2} - \frac{1}{2}$	S2
Se VI	588.0	400		$4p - 4d$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	S2
Se VI	605.9	400		$4p - 4d$	$^2P^{\circ} - ^1D$	$\frac{3}{2} - \frac{3}{2}$	S2
Se VI	608.4	300		$4p - 4d$	$^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	S2
Se VI?	634.5	400					R15
Se VI	844.2	500		$4s - 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	S2
Se VI	886.8	500		$4s - 4p$	$g^2S - ^2P^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	S2

SELENIUM VII (Se^{6+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} \ ^1S_0$ (28 electrons)
 Ionization Potential $1\ 253\ 300\ \text{cm}^{-1}$; $155.4\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se VII	172.0	500		$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^3D^o$	0 - 1	K26
Se VII	172.9	700		$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^1P^o$	1 - 1	K26
Se VII	176.8	40		$3d^{10} - 3d^9(^2D)4p$	$g^1S - ^3P^o$	0 - 1	K26
Se VII	180.2	80		$3d^9(^2D)4s - 3d^9(^2D)5p$	$^3D - ^3D^o$	3 - 3	K26
Se VII?	561.3	50					R15
Se VII?	563.7	50					R15
Se VII?	572.0	100					R15
Se VII?	591.3	50					R15
Se VII?	599.9	200					R15
Se VII?	607.2	50					R15
Se VII?	611.1	300					R15
Se VII?	613.6	300					R15
Se VII?	622.5	300					R15
Se VII?	626.5	200					R15
Se VII?	635.8	400					R15
Se VII?	643.0	200					R15
Se VII?	655.1	50					R15
Se VII?	665.4	100					R15
Se VII?	678.9	300					R15
Se VII?	680.5	50					R15
Se VII?	684.2	100					R15
Se VII?	686.5	100					R15
Se VII?	687.5	200					R15
Se VII?	696.0	100					R15
Se VII?	699.4	200					R15
Se VII?	705.3	400					R15
Se VII?	714.1	100					R15
Se VII?	716.7	100					R15
Se VII?	721.0	300					R15
Se VII?	728.9	100					R15
Se VII?	756.5	50					R15
Se VII	759.8	200		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^1D - ^3D^o$? 2 - 2	R15, K8
Se VII	778.2	400		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$? 3 - 4	R15, K8
Se VII?	798.5	20					R15
Se VII	817.5	200		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$? 2 - 2	R15, K8
Se VII?	818.6	200					R15
Se VII	819.0	100		$3d^9(^2D)4s - 3d^9(^2D)4p$	$^3D - ^3F^o$? 2 - 3	R15, K8
Se VII?	840.4	50					R15
Se VII?	854.4	600					R15
Se VII?	860.6	300					R15

SELENIUM VIII (Se^{7+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 \ ^2D_{5/2}$ (27 electrons)
 Ionization Potential $[1\ 541\ 000]\ \text{cm}^{-1}$; $[191]\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se VIII	140.92	400		$3d^9 - 3d^8(^2G)4p$	$ga^2D - y^2P^o$	$\frac{7}{2} - \frac{7}{2}$	Z2
Se VIII	141.09	800		$3d^9 - 3d^8(^1G)4p$	$ga^2D - x^2F^o$	$\frac{7}{2} - \frac{7}{2}$	Z2
Se VIII	141.38	500		$3d^9 - 3d^8(^3P)4p$	$ga^2D - x^2D^o$	$\frac{7}{2} - \frac{7}{2}$	Z2
Se VIII	141.68	800		$3d^9 - 3d^8(^3P)4p$	$ga^2D - x^2D^o$	$\frac{7}{2} - \frac{7}{2}$	Z2
Se VIII	141.82	800		$3d^9 - 3d^8(^1G)4p$	$ga^2D - x^2F^o$	$\frac{7}{2} - \frac{7}{2}$	Z2

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Se VIII	142.01	700		$3d^9 - 3d^9(^2P)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{1}{2}$	Z2
Se VIII	142.28	900		$3d^9 - 3d^9(^2P)4p$	$ga^2D - y^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Z2
Se VIII	142.75	800		$3d^9 - 3d^9(^2P)4p$	$ga^2D - x^2D^o$	$\frac{3}{2} - \frac{5}{2}$	Z2
Se VIII	143.10	700		$3d^9 - 3d^9(^2P)4p$	$ga^2D - x^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Z2
Se VIII	143.44	800		$3d^9 - 3d^9(^1D)4p$	$ga^2D - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$	Z2
Se VIII	143.89	700		$3d^9 - 3d^9(^1D)4p$	$ga^2D - y^2F^o$	$\frac{5}{2} - \frac{3}{2}$	Z2
Se VIII	143.94	400		$3d^9 - 3d^9(^1D)4p$	$ga^2D - y^2D^o$	$\frac{5}{2} - \frac{3}{2}$	Z2
Se VIII	144.55	300		$3d^9 - 3d^9(^1D)4p$	$ga^2D - z^2P^o$	$\frac{3}{2} - \frac{3}{2}$	Z2
Se VIII	144.89	300		$3d^9 - 3d^9(^1D)4p$	$ga^2D - y^2D^o$	$\frac{3}{2} - \frac{5}{2}$	Z2
Se VIII	145.41	800		$3d^9 - 3d^9(^1D)4p$	$ga^2D - y^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Z2
Se VIII	145.59	600		$3d^9 - 3d^9(^2P)4p$	$ga^2D - z^4P^o$	$\frac{5}{2} - \frac{5}{2}$	Z2
Se VIII	145.78	300		$3d^9 - 3d^9(^2P)4p$	$ga^2D - z^4P^o$	$\frac{5}{2} - \frac{3}{2}$	Z2
Se VIII	146.22	600		$3d^9 - 3d^9(^1D)4p$	$ga^2D - y^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Z2
Se VIII	146.42	800		$3d^9 - 3d^9(^2F)4p$	$ga^2D - z^2F^o$	$\frac{5}{2} - \frac{5}{2}$	Z2
Se VIII	146.92	300		$3d^9 - 3d^9(^2F)4p$	$ga^2D - z^2D^o$	$\frac{5}{2} - \frac{3}{2}$	Z2
Se VIII	147.09	500		$3d^9 - 3d^9(^2P)4p$	$ga^2D - z^4P^o$	$\frac{5}{2} - \frac{5}{2}$	Z2
Se VIII	147.23	400		$3d^9 - 3d^9(^2P)4p$	$ga^2D - z^4P^o$	$\frac{3}{2} - \frac{3}{2}$	Z2
Se VIII	147.29	800		$3d^9 - 3d^9(^2F)4p$	$ga^2D - z^2F^o$	$\frac{5}{2} - \frac{3}{2}$	Z2
Se VIII	147.58	700		$3d^9 - 3d^9(^2F)4p$	$ga^2D - z^2G^o$	$\frac{5}{2} - \frac{3}{2}$	Z2
Se VIII	147.78	800		$3d^9 - 3d^9(^2F)4p$	$ga^2D - z^2D^o$	$\frac{5}{2} - \frac{5}{2}$	Z2
Se VIII	147.95	400		$3d^9 - 3d^9(^2P)4p$	$ga^2D - z^2F^o$	$\frac{3}{2} - \frac{3}{2}$	Z2
Se VIII	148.48	1000		$3d^9 - 3d^9(^2P)4p$	$ga^2D - z^4F^o$	$\frac{5}{2} - \frac{5}{2}$	Z2
Se VIII	148.81	800		$3d^9 - 3d^9(^2P)4p$	$ga^2D - z^4F^o$	$\frac{5}{2} - \frac{3}{2}$	Z2
Se VIII	149.34	700		$3d^9 - 3d^9(^2P)4p$	$ga^2D - z^2D^o$	$\frac{3}{2} - \frac{3}{2}$	Z2
Se VIII	150.30	700		$3d^9 - 3d^9(^2F)4p$	$ga^2D - z^4F^o$	$\frac{3}{2} - \frac{3}{2}$	Z2

SELENIUM IX (Se^{8+}), $Z = 34$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 \ ^3F_4$ (26 electrons)Ionization Potential [1 831 000] cm^{-1} ; [227] eVSELENIUM X (Se^{9+}), $Z = 34$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 \ ^4F_{9/2}$ (25 electrons)Ionization Potential [2 129 000] cm^{-1} ; [264] eV

SELENIUM XI (Se^{10+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 \ ^5D_4$ (24 electrons)
 Ionization Potential [2 452 000] cm^{-1} ; [304] eV

SELENIUM XII (Se^{11+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)
 Ionization Potential [2 799 000] cm^{-1} ; [347] eV

SELENIUM XIII (Se^{12+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)
 Ionization Potential [3 129 000] cm^{-1} ; [388] eV

SELENIUM XIV (Se^{13+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 \ ^4F_{3/2}$ (21 electrons)
 Ionization Potential [3 751 000] cm^{-1} ; [431] eV

SELENIUM XV (Se^{14+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^3F_2$ (20 electrons)
 Ionization Potential [3 831 000] cm^{-1} ; [475] eV

SELENIUM XVI (Se^{15+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 D_{3/2}$ (19 electrons)
 Ionization Potential [4 186 100] cm^{-1} ; [519] eV

SELENIUM XVII (Se^{16+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 {}^1S_0$ (18 electrons)
 Ionization Potential [5 299 200] cm^{-1} ; [657] eV

SELENIUM XVIII (Se^{17+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 {}^2P_{3/2}$ (17 electrons)
 Ionization Potential [5 605 800] cm^{-1} ; [695] eV

SELENIUM XIX (Se^{18+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 {}^3P_2$ (16 electrons)
 Ionization Potential [5 936 400] cm^{-1} ; [736] eV

SELENIUM XX (Se^{19+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 {}^4S_{3/2}$ (15 electrons)
 Ionization Potential [6 396 000] cm^{-1} ; [793] eV

SELENIUM XXI (Se^{20+}), $Z = 34$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
Ionization Potential [6 767 200] cm^{-1} ; [839] eV

SELENIUM XXII (Se^{21+}), $Z = 34$
Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}$ (13 electrons)
Ionization Potential [7 146 300] cm^{-1} ; [886] eV

SELENIUM XXIII (Se^{22+}), $Z = 34$
Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
Ionization Potential [7 961 000] cm^{-1} ; [987] eV

SELENIUM XXIV (Se^{23+}), $Z = 34$
Ground State $1s^2 2s^2 2p^6 3s \ ^2S_{1/2}$ (11 electrons)
Ionization Potential [8 364 200] cm^{-1} ; [1037] eV

SELENIUM XXV (Se^{24+}), $Z = 34$
Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
Ionization Potential [20 632 000] cm^{-1} ; [2558] eV

SELENIUM XXVI (Se^{25+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
 Ionization Potential [21 463 000] cm^{-1} ; [2661] eV

SELENIUM XXVII (Se^{26+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^4 \ ^3T_2$ (8 electrons)
 Ionization Potential [22 568 000] cm^{-1} ; [2798] eV

SELENIUM XXVIII (Se^{27+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
 Ionization Potential [23 915 000] cm^{-1} ; [2965] eV

SELENIUM XXIX (Se^{28+}), $Z = 34$
 Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
 Ionization Potential [25 189 000] cm^{-1} ; [3123] eV

SELENIUM XXX (Se^{29+}), $Z = 34$
 Ground State $1s^2 2s^2 2p \ ^2P_{1/2}$ (5 electrons)
 Ionization Potential [26 407 000] cm^{-1} ; [3274] eV

SELENIUM XXXI (Se^{30+}), $Z = 34$
Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
Ionization Potential [27 932 000] cm^{-1} ; [3463] eV

SELENIUM XXXII (Se^{31+}), $Z = 34$
Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
Ionization Potential [29 303 000] cm^{-1} ; [3633] eV

SELENIUM XXXIII (Se^{32+}), $Z = 34$
Ground State $1s^2 \ ^1S_0$ (2 electrons)
Ionization Potential [123 930 000] cm^{-1} ; [15365] eV

SELENIUM XXXIV (Se^{33+}), $Z = 34$
Ground State $1s \ ^2S_{1/2}$ (1 electron)
Ionization Potential [128 762 000] cm^{-1} ; [15964] eV

BROMINE I (Br^{I}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^5 \ ^2P_{3/2}$ (35 electrons)
 Ionization Potential $95\,284.8\text{ cm}^{-1}$; 11.814 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	Reference
Br I	1067.559	1		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1067.805	1		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1068.256	1		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1068.849	0		$4p^5 - 4p^4(^3P); 1s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1073.912	2		$4p^5 - 4p^4(^2P)6d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1074.243	2		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1074.803	1		$4p^5 - 4p^4(^3P)10s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1075.345	1		$4p^5 - 4p^4(^3P)6d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1076.964	1		$4p^5 - 4p^4(^3P)8d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1077.873	1		$4p^5 - 4p^4(^3P)8d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1078.124	1		$4p^5 - 4p^4(^3P)8d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1078.242	2		$4p^5 - 4p^4(^3P)8d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1079.320	2		$4p^5 - 4p^4(^3P)8d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1080.882	2		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1084.810	1		$4p^5 - 4p^4(^3P)9s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1085.050	1		$4p^5 - 4p^4(^3P)9s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1085.896	0		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1087.468	2		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1087.687	2		$4p^5 - 4p^4(^1D)5s$	$g^2P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1087.819	1		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1089.039	2		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1089.203	1		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1089.322	1		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1090.623	3		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1094.722	3		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1095.481	3		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1096.788	3		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1098.881	3		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1101.347	2		$4p^5 - 4p^4(^3P)8s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1101.456	2		$4p^5 - 4p^4(^3P)8s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1101.498	5		$4p^5 - 4p^4(^1D)6s$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1103.924	2		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1104.168	2		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1105.460	2		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1105.844	2		$4p^5 - 4p^4(^3P)6d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1105.994	2		$4p^5 - 4p^4(^3P)6d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1107.442	2		$4p^5 - 4p^4(^3P)8s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1107.512	2		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1109.422	1		$4p^5 - 4p^4(^3P)10d$	$g^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1110.904	3		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1111.579	2		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1111.751	2		$4p^5 - 4p^4(^3P)6d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1112.743	1		$4p^5 - 4p^4(^3P)6d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1115.448	2		$4p^5 - 4p^4(^3P)9d$	$g^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1116.105	2		$4p^5 - 4p^4(^3P)9d$	$g^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1118.173	3		$4p^5 - 4p^4(^3P)6d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1119.140	2		$4p^5 - 4p^4(^3P)10s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1119.725	3		$4p^5 - 4p^4(^3P)6d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1121.473	3		$4p^5 - 4p^4(^3P)8d$	$g^2P^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1121.839	2		$4p^5 - 4p^4(^3P)8d$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1124.038	3		$4p^5 - 4p^4(^3P)8d$	$g^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1125.728	4		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1129.979	2		$4p^5 - 4p^4(^3P)9s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1131.171	2		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1132.822	3		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1133.116	4		$4p^5 - 4p^4(^1D)5s$	$g^2P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1133.251	2		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1134.306	5		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1134.888	4		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1136.294	5		$4p^5 - 4p^4(^3P)7d$	$g^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{1}{2}$	T1

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br I	1139.350	3		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1139.544	3		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1140.732	1		$4p^5 - 4p^4(^3P)7s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1141.564	2		$4p^5 - 4p^4(^3P)7s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1145.268	2		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1145.854	2		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1147.689	2		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1147.943	2		$4p^5 - 4p^4(^3P)8s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1150.312	2		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1151.381	3		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1152.418	3		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1152.833	2		$4p^5 - 4p^4(^3P)6d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T1
Er I	1152.989	2		$4p^5 - 4p^4(^3P)6d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1154.640	1		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1159.030	2		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1160.332	3		$4p^5 - 4p^4(^3P)6d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1168.542	3		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1170.479	3		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1173.827	4		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1177.233	5		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1178.895	6		$4s^2 4p^5 - 4s 4p^6$	$g^2P^o - ^2S$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1182.171	3		$4p^5 - 4p^4(^3P)7s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1186.161	3		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1189.279	10		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1189.378	5		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1189.498	10		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1194.413	4		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^2F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1196.370	4		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1196.477	4		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1198.371	6		$4p^5 - 4p^4(^3P)5d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1203.353	4		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1209.756	8		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1210.734	10		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1216.006	8		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1221.128	10		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1221.870	9		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1223.240	10		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^2F$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1224.408	12		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4F$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1226.899	12		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1228.049	8		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1232.431	75		$4s^2 4p^5 - 4s 4p^6$	$g^2P^o - ^2S$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1243.897	12		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1249.589	8		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1251.664	15		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1255.799	10		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1259.199	15		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1261.058	12		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1266.200	12		$4p^5 - 4p^4(^3P)6s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1279.477	10		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1286.259	10		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1309.908	30		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1316.735	30		$4p^5 - 4p^4(^3P)4d$	$g^2P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1317.372	10		$4p^5 - 4p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1317.695	20		$4p^5 - 4p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1384.598	120		$4p^5 - 4p^4(^1D)5s$	$g^2P^o - ^2D$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1449.903	30	2	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1488.452	500	2	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^2P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1495.132	0	1	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{1}{2}$	T1
Br I	1531.743	300	2	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1540.654	250	1	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1574.841	300	2	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^2P$	$\frac{1}{2} - \frac{3}{2}$	T1
Br I	1576.387	200	1	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^4P$	$\frac{3}{2} - \frac{3}{2}$	T1
Br I	1582.312	250	1	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{1}{2}$	T1
Br I	1633.404	750	1	$4p^5 - 4p^4(^3P)5s$	$g^2P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	T1

BROMINE II (Br^{1+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^4 \ ^3P_2$ (34 electrons)
 Ionization Potential $175\ 870\ \text{cm}^{-1}$; $21.8\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br II	711.68	300		$4p^4 - 4p^3(^4S^{\circ})5d$	$g^3P - ^3D^{\circ}$	2-2	R4
Br II	713.65	50		$4p^4 - 4p^3(^4S^{\circ})5d$	$g^3P - ^3D^{\circ}$	2-2	R4
Br II	718.05	20		$4p^4 - 4p^3(^4S^{\circ})5d$	$g^3P - ^3D^{\circ}$	2-3	R4
Br II	726.71	100		$4p^4 - 4p^3(^4S^{\circ})6s$	$g^3P - ^3S^{\circ}$	2-1	R4
Br II	727.94	100		$4p^4 - 4p^3(^4S^{\circ})5d$	$g^3P - ^3D^{\circ}$	1-2	R4
Br II	730.00	100		$4p^4 - 4p^3(^4S^{\circ})5d$	$g^3P - ^3D^{\circ}$	1-2	R4
Br II	737.37	150		$4p^4 - 4p^3(^4S^{\circ})5d$	$g^3P - ^3D^{\circ}$	0-1	R4
Br II	740.78	200		$4p^4 -$	$g^3P - ^1D^{\circ}$	1-1	R4
Br II	743.7	10		$4p^4 - 4p^3(^4S^{\circ})6s$	$g^3P - ^3S^{\circ}$	1-1	R16
Br II	815.48	250		$4p^4 - 4p^3(^2P^{\circ})5s$	$g^3P - ^3P^{\circ}$	2-2	R4
Br II	822.67	50		$4p^4 - 4p^3(^2P^{\circ})5s$	$g^3P - ^3P^{\circ}$	2-1	R4
Br II	836.90	150		$4p^4 - 4p^3(^2P^{\circ})5s$	$g^3P - ^3P^{\circ}$	1-2	R4
Br II	844.47	20		$4p^4 - 4p^3(^2P^{\circ})5s$	$g^3P - ^3P^{\circ}$	1-1	R4
Br II	847.35	50		$4p^4 - 4p^3(^2P^{\circ})5s$	$g^3P - ^3P^{\circ}$	1-0	R4
Br II	849.52	100		$4p^4 - 4p^3(^2P^{\circ})5s$	$g^3P - ^3P^{\circ}$	0-1	R4
Br II	856.29	350		$4p^4 - 4p^3(^2P^{\circ})5s$	$g^3P - ^1P^{\circ}$	2-1	R4
Br II	885.48	100		$4p^4 - 4p^3(^2D^{\circ})5s$	$g^3P - ^1D^{\circ}$	2-2	R4
Br II	889.23	1000		$4p^4 - 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	2-3	R4
Br II	889.7	20		$4p^4 - 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$? 2-1	R16
Br II	896.64	500		$4p^4 - 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	2-2	R4
Br II	906.00	500		$4p^4 - 4p^3(^2D^{\circ})5s$	$g^3P - ^3D^{\circ}$	2-3	R4
Br II	910.73	200		$4p^4 - 4p^3(^2D^{\circ})5s$	$g^3P - ^1D^{\circ}$	1-2	R4
Br II	911.72	250		$4p^4 - 4p^3(^2D^{\circ})5s$	$g^3P - ^3D^{\circ}$	2-2	R4
Br II	915.26	200		$4p^4 - 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	1-1	R4
Br II	921.16	250		$4p^4 - 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	0-1	R4
Br II	922.56	300		$4p^4 - 4p^3(^4S^{\circ})4d$	$g^3P - ^3D^{\circ}$	1-2	R4
Br II	938.6	500		$4p^4 - 4p^3(^2D^{\circ})5s$	$g^3P - ^3D^{\circ}$? 1-2	L1, K8
Br II	940.79	150		$4p^4 - 4p^3(^2D^{\circ})5s$	$g^3P - ^3D^{\circ}$	1-1	R4
Br II	947.1	20		$4p^4 - 4p^3(^2D^{\circ})5s$	$g^3P - ^3D^{\circ}$	0-1	R16
Br II	948.97	1000		$4p^4 - 4p^3(^2P^{\circ})5s$	$^1D - ^1P^{\circ}$	2-1	R4
Br II	984.93	500		$4p^4 - 4p^3(^2D^{\circ})5s$	$^1D - ^1D^{\circ}$	2-2	R4
Br II	1012.1	500		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^{\circ}$? 2-1	L1, K8
Br II	1015.54	1000		$4p^4 - 4p^3(^3S^{\circ})5s$	$p^3P - ^3S^{\circ}$	2-1	R4
Br II	1017.56	20		$4p^4 - 4p^3(^2D^{\circ})5s$	$^1D - ^1D^{\circ}$	2-2	R4
Br II	1049.00	1000		$4p^4 - 4p^3(^4S^{\circ})5s$	$g^3P - ^3S^{\circ}$	1-1	R4
Br II	1053.0	50		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^{\circ}$? 0-1	L1, K8
Br II	1056.77	250		$4p^4 - 4p^3(^4S^{\circ})5s$	$g^3P - ^3S^{\circ}$	0-1	R4
Br II	1064.66	450		$4p^4 - 4p^3(^4S^{\circ})5s$	$g^3P - ^3S^{\circ}$	2-2	R4
Br II	1071.8	750		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^{\circ}$? 1-2	L1, K8
Br II	1101.47	50		$4p^4 - 4p^3(^4S^{\circ})5s$	$g^3P - ^3S^{\circ}$	1-2	R4

BROMINE III (Br^{2+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^3 \ ^4S_{3/2}$ (33 electrons)
 Ionization Potential $289\ 529\ \text{cm}^{-1}$; $35.9\ \text{eV}$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br III	665.54	1000		$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	R13
Br III	677.19	1000		$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	677.70	800		$4p^3 - 4p^2 4d$	$g^4S^{\circ} - 7$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	687.68	900		$4p^3 - 4p^2(^3P)5s$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	R13
Br III	688.80	300		$4p^3 - 4p^2 4d$	$g^4S^{\circ} - 6$	$\frac{3}{2} - \frac{3}{2}$	R13

Element	Wave length	Intensity	Multiplet	Configuration	Term	J - J	References
Br III	696.99	700		$4p^2 - 4p^2(^1D)5s$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	706.98	400		$4p^2 - 4p^2(^1D)5s$	$^3D^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	736.33	800		$4p^2 - 4p^2(^3P)5s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	745.42	400		$4p^2 - 4p^2(^3P)5s$	$^3D^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	759.87	300		$4p^2 - 4p^2(^1D)5s$	$^3P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	R13
Br III	769.63	500		$4p^2 - 4p^2(^1D)5s$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	774.18	300		$4p^2 - 4p^2(^1D)5s$	$^3P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	798.76	400		$4p^2 - 4p^2(^3P)5s$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	809.52	300		$4p^2 - 4p^2(^3P)5s$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	817.79	500		$4p^2 - 4p^2(^3P)5s$	$^3P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	R13
Br III	1295.3	1000		$4s^2 4p^2 - 4s 4p^4$	$^3P^{\circ} - ^3S$? $\frac{1}{2} - \frac{1}{2}$	L1, K8
Br III	1308.6	500		$4s^2 4p^2 - 4s 4p^4$	$^3D^{\circ} - ^3D$? $\frac{3}{2} - \frac{3}{2}$	L1, K8
Br III?	1313.3	500					L1
Br III	1324.8	500		$4s^2 4p^2 - 4s 4p^4$	$^3P^{\circ} - ^3S$? $\frac{3}{2} - \frac{1}{2}$	L1, K8
Br III?	1328.1	750					L1
Br III	1330.5	500		$4s^2 4p^2 - 4s 4p^4$	$^3D^{\circ} - ^3D$? $\frac{3}{2} - \frac{3}{2}$	L1, K8
Br III	1590.3	25		$4s^2 4p^2 - 4s 4p^4$	$^3P^{\circ} - ^3D$? $\frac{3}{2} - \frac{3}{2}$	L1, K8
Br III	1593.1	150		$4s^2 4p^2 - 4s 4p^4$	$^3P^{\circ} - ^3D$? $\frac{3}{2} - \frac{3}{2}$	L1, K8

BROMINE IV (Br^{3+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2 \ ^3P_0$ (32 electrons)
 Ionization Potential [387 000] cm^{-1} ; [48] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br IV	538.25	200		$4p^2 - 4p 5s$	$g^3P - ^1P^{\circ}$	1 - 1	R8
Br IV	545.43	500		$4p^2 - 4p 5s$	$g^3P - ^3P^{\circ}$	1 - 2	R8
Br IV	549.75	900		$4p^2 - 4p 5s$	$g^3P - ^3P^{\circ}$	0 - 1	R8
Br IV	554.48	800		$4p^2 - 4p 5s$	$g^3P - ^3P^{\circ}$	2 - 2	R8
Br IV	557.94	600		$4p^2 -$	$g^2P - 3^{\circ}$	1 - 2	R8
Br IV	559.74	900		$4p^2 - 4p 5s$	$g^3P - ^3P^{\circ}$	1 - 1	R8
Br IV	563.79	900		$4p^2 - 4p 5s$	$g^3P - ^3P^{\circ}$	1 - 0	R8
Br IV	563.92	800		$4p^2 - 4p 4d$	$g^3P - ^3P^{\circ}$	1 - 1	R8
Br IV	557.40	500		$4p^2 -$	$g^2P - 3^{\circ}$	2 - 1	R8
Br IV	569.13	1000		$4p^2 - 4p 4d$	$g^3P - ^3P^{\circ}$	1 - 0	R8
Br IV	569.27	600		$4p^2 - 4p 5s$	$g^3P - ^3P^{\circ}$	2 - 1	R8
Br IV	572.26	300		$4p^2 -$	$g^2P - 2^{\circ}$	1 - 2	R8
Br IV	573.59	800		$4p^2 - 4p 4d$	$g^3P - ^3P^{\circ}$	2 - 1	R8
Br IV	576.57	1000		$4p^2 - 4p 4d$	$g^3P - ^3P^{\circ}$	1 - 2	R8
Br IV	582.22	600		$4p^2 -$	$g^2P - 2^{\circ}$	2 - 1	R8
Br IV	585.08	900		$4p^2 - 4p 5s$	$^1D - ^1P^{\circ}$	2 - 1	R8
Br IV	586.69	1000		$4p^2 - 4p 4d$	$g^3P - ^3P^{\circ}$	2 - 2	R8
Br IV	592.03	900		$4p^2 - 4p 4d$	$g^3P - ^3D^{\circ}$	0 - 1	R8
Br IV	599.60	800		$4p^2 - 4p 4d$	$g^3P - ^3D^{\circ}$	1 - 2	R8
Br IV	600.08	800		$4p^2 - 4p 4d$	$g^3P - ^3D^{\circ}$	2 - 3	R8
Br IV	601.26	1000		$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3D^{\circ}$	2 - 3	R8
Br IV	603.65	500		$4p^2 - 4p 4d$	$g^3P - ^3D^{\circ}$	1 - 1	R8
Br IV	605.74	500		$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^{\circ}$	1 - 0	R8
Br IV	607.02	600		$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^{\circ}$	1 - 1	R8
Br IV	608.56	800		$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^{\circ}$	1 - 2	R8
Br IV	610.55	200		$4p^2 - 4p 4d$	$g^3P - ^3D^{\circ}$	2 - 2	R8
Br IV	618.25	500		$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^{\circ}$	2 - 1	R8
Br IV	619.86	700		$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3P^{\circ}$	2 - 2	R8
Br IV	625.50	400		$4p^2 -$	$^1D - 2^{\circ}$	2 - 2	R8
Br IV	636.12	1000		$4s^2 4p^2 - 4s 4p^3$	$g^3P - ^3D^{\circ}$	1 - 2	R8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br IV	642.22	1000		$4s^2 4p^2 - 4s 4p^2$	$g^2 P - ^2 D^{\circ}$	2 - 2	R8
Br IV	646.15	100		$4p^2 - 4p 4d$	$^1 D - ^3 D^{\circ}$	2 - 3	R8
Br IV	649.78	600		$4s^2 4p^2 - 4s 4p^2$	$g^2 P - ^2 D^{\circ}$	0 - 1	R8
Br IV	658.28	100		$4p^2 - 4p 4d$	$^1 D - ^3 D^{\circ}$	2 - 2	R8
Br IV	663.19	200		$4p^2 - 4p 4d$	$^1 D - ^2 D^{\circ}$	2 - 1	R8
Br IV	663.80	1000		$4s^2 4p^2 - 4s 4p^2$	$g^2 P - ^2 D^{\circ}$	1 - 1	R8
Br IV	677.24	500		$4s^2 4p^2 - 4s 4p^2$	$g^2 P - ^2 D^{\circ}$	2 - 1	R8
Br IV	718.50	1000		$4p^2 -$	$g^2 P - 1^{\circ}$	0 - 1	R8
Br IV	735.66	1000		$4p^2 -$	$g^2 P - 1^{\circ}$	1 - 0	R8

BROMINE V (Br^{4+}), $Z = 35$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2 P_{1/2}^{\circ}$ (31 electrons)Ionization Potential [481 600] cm^{-1} ; [59.7] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br V	468.36	500		$4p - 5s$	$g^2 P^{\circ} - ^2 S$	$\frac{1}{2} - \frac{1}{2}$	R9
Br V	482.11	1000		$4p - 5s$	$g^2 P^{\circ} - ^2 S$	$\frac{3}{2} - \frac{1}{2}$	R9
Br V	532.00	1000		$4p - 4d$	$g^2 P^{\circ} - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	R9
Br V	547.94	1000		$4p - 4d$	$g^2 P^{\circ} - ^2 D$	$\frac{3}{2} - \frac{1}{2}$	R9
Br V	549.81	600		$4p - 4d$	$g^2 P^{\circ} - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	R9
Br V	621.11	1000		$4s^2 4p - 4s 4p^2$	$g^2 P^{\circ} - ^2 P$	$\frac{1}{2} - \frac{3}{2}$	R9
Br V	632.30	900		$4s^2 4p - 4s 4p^2$	$g^2 P^{\circ} - ^2 P$	$\frac{1}{2} - \frac{1}{2}$	R9
Br V	645.49	1000		$4s^2 4p - 4s 4p^2$	$g^2 P^{\circ} - ^2 P$	$\frac{3}{2} - \frac{3}{2}$	R9
Br V	657.60	600		$4s^2 4p - 4s 4p^2$	$g^2 P^{\circ} - ^2 P$	$\frac{3}{2} - \frac{1}{2}$	R9
Br V	813.40	600		$4s^2 4p - 4s 4p^2$	$g^2 P^{\circ} - ^2 D$	$\frac{1}{2} - \frac{3}{2}$	R9
Br V	850.79	800		$4s^2 4p - 4s 4p^2$	$g^2 P^{\circ} - ^2 D$	$\frac{3}{2} - \frac{1}{2}$	R9
Br V	855.79	100		$4s^2 4p - 4s 4p^2$	$g^2 P^{\circ} - ^2 D$	$\frac{3}{2} - \frac{3}{2}$	R9

BROMINE VI (Br^{5+}), $Z = 35$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 1S_0$ (30 electrons)Ionization Potential [714 800] cm^{-1} ; [88.6] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br VI	499.20	400		$4s 4p - 4s 4d$	$^2 P^{\circ} - ^2 D$	0 - 1	R9
Br VI	503.70	800		$4s 4p - 4s 4d$	$^3 P^{\circ} - ^2 D$	1 - 2	R9
Br VI	504.52	600		$4s 4p - 4s 4d$	$^3 P^{\circ} - ^2 D$	1 - 1	R9
Br VI	515.16	800		$4s 4p - 4s 4d$	$^3 P^{\circ} - ^2 D$	2 - 3	R9
Br VI	515.45	800		$4s 4p - 4s 4d$	$^3 P^{\circ} - ^2 D$	2 - 2	R9
Br VI	517.29	100		$4s 4p - 4s 4d$	$^3 P^{\circ} - ^2 D$	2 - 1	R9
Br VI	661.05	1000		$4s^2 - 4s 4p$	$g^1 S - ^1 P^{\circ}$	0 - 1	R9
Br VI	678.14	500		$4s 4p - 4p^2$	$^3 P^{\circ} - ^3 P$	1 - 2	R9
Br VI	698.81	600		$4s 4p - 4p^2$	$^3 P^{\circ} - ^3 P$	0 - 1	R9
Br VI	701.46	800		$4s 4p - 4p^2$	$^2 P^{\circ} - ^2 P$	2 - 2	R9

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br VI	709.31	400		4s4p - 4p ³	³ P° - ³ P	1 - 1	R9
Br VI	726.16	600		4s4p - 4p ³	³ P° - ³ P	1 - 0	R9
Br VI	734.91	600		4s4p - 4p ³	³ P° - ³ P	2 - 1	R9
Br VI	939.57	800		4s ² - 4s4p	g ¹ S - ³ P°	0 - 1	R9

BROMINE VII (Br⁶⁺), Z = 35Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s ²S_{1/2} (29 electrons)Ionization Potential [814 600] cm⁻¹; [101] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br VII	502.69	400		4p - 4d	² P° - ² D	½ - ¾	R9
Br VII	520.26	400		4p - 4d	² P° - ² D	¾ - ¾	R9
Br VII	522.60	50		4p - 4d	² P° - ² D	¾ - ¾	K9
Br VII	736.09	1000		4s - 4p	g ² S - ³ P°	½ - ¾	R9
Br VII	779.58	800		4s - 4p	g ² S - ³ P°	½ - ½	R9

BROMINE VIII (Br⁷⁺), Z = 35Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰ ¹S₀ (28 electrons)Ionization Potential 1 554 700 cm⁻¹; 192.8 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br VIII	138.9	750		3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ³ D°	0 - 1	K26
Br VIII	139.8	750		3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ¹ P°	0 - 1	K26
Br VIII	142.5 P			3d ¹⁰ - 3d ⁹ (² D)4p	g ¹ S - ³ P°	0 - 1	M22

BROMINE IX (Br⁸⁺), Z = 35Ground State 1s²2s²2p⁶3s²3p⁶3d⁹ ²D_{5/2} (27 electrons)Ionization Potential [1 871 000] cm⁻¹; [232] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Br IX	104.85			3p ⁶ 3d ⁹ - 3p ⁵ 3d ¹⁰	g ³ D - ² P°	¾ - ½	M22
Br IX	109.59			3p ⁶ 3d ⁹ - 3p ⁵ 3d ¹⁰	g ² D - ² P°	½ - ¾	M22
Br IX	110.66			3p ⁶ 3d ⁹ - 3p ⁵ 3d ¹⁰	g ³ D - ² P°	¾ - ¾	M22

BROMINE X (Br^{9+}), $Z = 35$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 \ ^3F_4$ (26 electrons)
Ionization Potential [2 178 000] cm^{-1} ; [270] eV

BROMINE XI (Br^{10+}), $Z = 35$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 \ ^4F_{9/2}$ (25 electrons)
Ionization Potential [2 500 000] cm^{-1} ; [310] eV

BROMINE XII (Br^{11+}), $Z = 35$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 \ ^5D_4$ (24 electrons)
Ionization Potential [2 839 000] cm^{-1} ; [352] eV

BROMINE XIII (Br^{12+}), $Z = 35$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 \ ^6S_{5/2}$ (23 electrons)
Ionization Potential [3 210 000] cm^{-1} ; [398] eV

BROMINE XIV (Br^{13+}), $Z = 35$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)
Ionization Potential [3 557 000] cm^{-1} ; [441] eV

BROMINE XV (Br^{14+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 \ ^4F_{3/2}$ (21 electrons)
 Ionization Potential [4 251 000] cm^{-1} ; [486] eV

BROMINE XVI (Br^{15+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 \ ^4F_2$ (20 electrons)
 Ionization Potential [4 299 000] cm^{-1} ; [533] eV

BROMINE XVII (Br^{16+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d \ ^2D_{3/2}$ (19 electrons)
 Ionization Potential [4 670 100] cm^{-1} ; [579] eV

BROMINE XVIII (Br^{17+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1S_0$ (18 electrons)
 Ionization Potential [5 839 700] cm^{-1} ; [724] eV

BROMINE XIX (Br^{18+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 \ ^2P_{3/2}^o$ (17 electrons)
 Ionization Potential [6 146 200] cm^{-1} ; [762] eV

BROMINE XX (Br^{19+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
 Ionization Potential [6 501 100] cm^{-1} ; [806] eV

BROMINE XXI (Br^{20+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}$ (15 electrons)
 Ionization Potential [6 969 000] cm^{-1} ; [864] eV

BROMINE XXII (Br^{21+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
 Ionization Potential [7 364 100] cm^{-1} ; [913] eV

BROMINE XXIII (Br^{22+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}$ (13 electrons)
 Ionization Potential [7 751 300] cm^{-1} ; [961] eV

BROMINE XXIV (Br^{23+}), $Z = 35$
 Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
 Ionization Potential [8 614 000] cm^{-1} ; [1068] eV

BROMINE XXV (Br^{24+}), $Z = 35$
Ground State $1s^2 2s^2 2p^6 3s^2 S_{1/2}$ (11 electrons)
Ionization Potential [9 033 600] cm^{-1} ; [1120] eV

BROMINE XXVI (Br^{25+}), $Z = 35$
Ground State $1s^2 2s^2 2p^6 {}^1S_0$ (10 electrons)
Ionization Potential [22 197 000] cm^{-1} ; [2752] eV

BROMINE XXVII (Br^{26+}), $Z = 35$
Ground State $1s^2 2s^2 2p^5 {}^2P_{3/2}^o$ (9 electrons)
Ionization Potential [23 028 000] cm^{-1} ; [2855] eV

BROMINE XXVIII (Br^{27+}), $Z = 35$
Ground State $1s^2 2s^2 2p^4 {}^3P_2$ (8 electrons)
Ionization Potential [24 173 000] cm^{-1} ; [2997] eV

BROMINE XXIX (Br^{28+}), $Z = 35$
Ground State $1s^2 2s^2 2p^3 {}^4S_{3/2}$ (7 electrons)
Ionization Potential [25 568 000] cm^{-1} ; [3170] eV

BROMINE XXX (Br²⁹⁺), Z = 35
Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
Ionization Potential [26 891 000] cm⁻¹; [3334] eV

BROMINE XXXI (Br³⁰⁺), Z = 35
Ground State $1s^2 2s^2 2p \ ^2P_{1/2}^o$ (5 electrons)
Ionization Potential [28 149 000] cm⁻¹; [3490] eV

BROMINE XXXII (Br³¹⁺), Z = 35
Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
Ionization Potential [29 714 000] cm⁻¹; [3684] eV

BROMINE XXXIII (Br³²⁺), Z = 35
Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
Ionization Potential [31 174 000] cm⁻¹; [3865] eV

BROMINE XXXIV (Br³³⁺), Z = 35
Ground State $1s^2 \ ^1S_0$ (2 electrons)
Ionization Potential [131 577 000] cm⁻¹; [16313] eV

BROMINE XXXV (Br^{34+}), $Z = 35$
Ground State $1s\ ^2S_{1/2}$ (1 electron)
Ionization Potential [136 577 009] cm^{-1} ; [16933] eV

Kr

Kr

KRYPTON, Z = 36

Unclassified Lines

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr	430.15	50					S6
Kr	434.28	100					S6
Kr	435.01	60					S6
Kr	440.27	80					S6
Kr	442.33	50					S6
Kr	443.88	60					S6
Kr	445.33	150					S6
Kr	448.61	120					S6
Kr	449.12	120					S6
Kr	458.61	60					S6
Kr	461.91	100					S6
Kr	462.35	120					S6
Kr	466.44	150					S6
Kr	469.26	100					S6
Kr	471.19	120					S6
Kr	473.55	80					S6
Kr	475.68	100					S6
Kr	479.34	120					S6
Kr	481.43	120					S6
Kr	487.35	60					S6
Kr	489.59	80					S6
Kr	492.56	50					S6
Kr	493.89	100					S6
Kr	495.72	200					S6
Kr	498.01	150					S6
Kr	499.72	150					S6
Kr	503.66	150					S6
Kr	514.85	80					S6
Kr	515.36	60					S6
Kr	517.70	50					S6
Kr	521.15	60					S6
Kr	525.33	150					S6
Kr	535.71	60					S6
Kr	536.14	80					S6
Kr	539.59	120					S6
Kr	540.35	200					S6
Kr	547.37	60					S6
Kr	551.48	300					S6
Kr	563.53	400					S6
Kr	573.65	300					S6
Kr	578.47	60					S6
Kr	582.42	80					S6
Kr	588.08	800					S6
Kr	594.84	300					S6
Kr	604.89	60					S6
Kr	606.79	120					S6
Kr	610.89	80					S6
Kr	617.27	600					S6
Kr	626.06	150					S6
Kr	626.49	300					S6
Kr	627.75	300					S6
Kr	641.86	50					S6
Kr	645.77	400					S6
Kr	652.90	400					S6
Kr	674.29	250					S6
Kr	690.86	120					S6
Kr	691.73	300					S6
Kr	693.48	300					S6
Kr	700.58	80					S6
Kr	710.72	200					S6

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr	733.17	50					S6
Kr	738.90	400					S6
Kr	744.28	150					S6
Kr	750.25	80					S6
Kr	776.81	150					S6
Kr	781.64	150					S6
Kr	794.11	150					S6
Kr	810.20	600					S6
Kr	822.57	100					S6
Kr	883.00	60					S6
Kr	898.39	200					S6
Kr	918.34	300					S6
Kr	927.37	120					S6
Kr	931.47	250					S6
Kr	944.28	60					S6

KRYPTON I (Kr^{0+}), $Z = 36$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 \ ^1S_0$ (36 electrons)Ionization Potential: $112\ 914.5\ cm^{-1}$; $13.999\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr I	923.713			$4p^6 - 4p^5(^2P^o)6d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E6, M22
Kr I	928.711			$4p^6 - 4p^5(^2P^o)6d$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	E6, M22
Kr I	945.441	50	10	$4p^6 - 4p^5(^1P^o)7s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E6, B30
Kr I	946.535	50	9	$4p^6 - 4p^5(^2P^o)5d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E6, B30
Kr I	951.056	20	7	$4p^6 - 4p^5(^2P^o)6s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E6, B30
Kr I	953.404	50	5	$4p^6 - 4p^5(^2P^o)4d$	$g^1S - \frac{1}{2}[\frac{3}{2}]^o$	0 - 1	E6, B30
Kr I	963.374	50	8	$4p^6 - 4p^5(^2P^o)5d$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	E6, B30
Kr I	1001.061	100	6	$4p^6 - 4p^5(^1P^o)6s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E6, B30
Kr I	1003.550	100	4	$4p^6 - 4p^5(^2P^o)4d$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E6, B30
Kr I	1030.023	100	3	$4p^6 - 4p^5(^2P^o)4d$	$g^1S - \frac{3}{2}[\frac{1}{2}]^o$	0 - 1	E6, B30
Kr I	1164.867	200	2	$4p^6 - 4p^5(^1P^o)5s$	$g^1S - \frac{1}{2}[\frac{1}{2}]^o$	0 - 1	E6, B30
Kr I	1235.838	650	1	$4p^6 - 4p^5(^2P^o)5s$	$g^1S - \frac{3}{2}[\frac{3}{2}]^o$	0 - 1	E6, B30

KRYPTON II (Kr^{1+}), $Z = 36$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^5 \ ^2P_{3/2}^o$ (35 electrons)Ionization Potential $196\ 474.8\ cm^{-1}$; $24.359\ eV$

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr II	551.328	40		$4p^5 - 4p^4(^2P)8s$	$g^2P^o - 4P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	559.315	120		$4p^5 - 4p^4(^2P)7s$	$g^2P^o - 2P$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	560.792	40		$4p^5 - 4p^4(^1D)5d$	$g^2P^o - 2D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	561.932	40		$4p^5 - 4p^4(^3P)7s$	$g^2P^o - 2P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	562.792	46		$4p^5 - 4p^4(^1D)5d$	$g^2P^o - 2P$	$\frac{3}{2} - \frac{3}{2}$	M17

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr II	570.013	240		$4p^5 - 4p^4(^3P)6d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	575.907	80		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	576.653	40		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	576.998	20		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	579.101	20		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	579.414	40		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	580.345	20		$4p^5 - 4p^4(^1D)5d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	581.219	40		$4p^5 - 4p^4(^1D)6s$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	581.500	120		$4p^5 - 4p^4(^1D)6s$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	585.688	80		$4p^5 - 4p^4(^1D)5d$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	585.269	40		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	589.265	200		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	594.286	40		$4p^5 - 4p^4(^3P)7s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	595.539	320		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	596.956	160		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	598.643	40		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	598.805	200		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	598.978	160		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	599.954	200		$4p^5 - 4p^4(^1D)6s$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	605.331	200		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	605.547	200		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	605.782	120		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	608.134	240		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	613.374	200		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^3F$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	615.138	200		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	615.227	200		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	617.065	320		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	617.758	240		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	618.048	240		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	618.511	240		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	618.882	240		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	619.385	240		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	619.548	200		$4p^5 - 4p^4(^1S)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	621.074	320		$4p^5 - 4p^4(^1S)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	621.911	280		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	625.901	200		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4F$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	633.380	280		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	634.272	240		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	636.152	280		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	636.630	280		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	638.215	280		$4p^5 - 4p^4(^3P)5d$	$g^2P^{\circ} - ^4D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	638.960	240		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	639.263	280		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	640.871	280		$4p^5 - 4p^4(^1S)4d$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	643.399	200		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3S$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	655.681	280		$4p^5 - 4p^4(^3P)6s$	$g^2P^{\circ} - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	657.095	360		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	658.649	320		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	665.879	280		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	668.835	320		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	681.133	280		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	682.800	320		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	685.820	240		$4p^5 - 4p^4(^1S)5s$	$g^2P^{\circ} - ^3S$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	690.572	200		$4p^5 - 4p^4(^1D)4d$	$g^2P^{\circ} - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	712.042	360		$4p^5 - 4p^4(^1S)5s$	$g^2P^{\circ} - ^3S$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	729.404	480	8	$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	742.825	280	8	$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^3D$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	743.125	280	7	$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	752.045	400		$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^3F$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	752.078	200	7	$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	761.175	600		$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	763.977	480		$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^3P$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	766.265	480	5	$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	771.027	600	5	$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^4F$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	772.112	240	7	$4p^5 - 4p^4(^3P)4d$	$g^2P^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	M17

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr II	773.688	480	8	$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	782.096	600	6	$4p^5 - 4p^4(^1D)5s$	$g^3P^o - ^3D$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	783.724	480	7	$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	793.617	280		$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	796.668	240		$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	799.087	366	5	$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^4F$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	805.507	240	7	$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	818.149	480	6	$4p^5 - 4p^4(^1D)5s$	$g^3P^o - ^3D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	821.154	360	4	$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	826.434	400	3	$4p^5 - 4p^4(^3P)5s$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	830.375	480	4	$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^4D$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	844.064	480	3	$4p^5 - 4p^4(^3P)5s$	$g^3P^o - ^3P$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	850.319	400	2	$4p^5 - 4p^4(^3P)5s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	859.037	400	4	$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	864.821	480	4	$4p^5 - 4p^4(^3P)4d$	$g^3P^o - ^4D$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	868.871	480	2	$4p^5 - 4p^4(^3P)5s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	884.141	600	3	$4p^5 - 4p^4(^3P)5s$	$g^3P^o - ^3P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	886.300	800	1	$4p^5 - 4p^4(^3P)5s$	$g^3P^o - ^4P$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	891.006	720	2	$4p^5 - 4p^4(^3P)5s$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	911.394	600	2	$4p^5 - 4p^4(^3P)5s$	$g^3P^o - ^4P$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	917.427	1000	1	$4s^2 4p^5 - 4s 4p^6$	$g^3P^o - ^3S$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	964.971	1000	1	$4s^2 4p^5 - 4s 4p^6$	$g^3P^o - ^3S$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1330.948	20		$4s 4p^6 - 4s^2 4p^4(^3P)6f$	$^3S - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1331.402	20		$4s 4p^6 - 4s^2 4p^4(^3P)6f$	$^3S - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1413.894	20		$4p^4(^3P)4d - 4p^4(^3P)9f$	$^4D - 2[4]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1422.512	40		$4p^4(^3P)5s - 4p^4(^3P)5f$	$^4P - 1[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1435.085	120		$4s 4p^6 - 4s^2 4p^4(^3P)5f$	$^3S - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1435.676	40		$4s 4p^6 - 4s^2 4p^4(^3P)5f$	$^3S - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1444.343	120		$4p^4(^3P)4d - 4p^4(^3P)8f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1464.072	40		$4p^4(^3P)4d - 4p^4(^3P)8f$	$^4D - 1[4]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1466.460	20		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 1[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1468.021	20		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1490.928	40		$4p^4(^3P)4d - 4p^4(^3P)7f$	$^4D - 2[4]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1491.104	200		$4p^4(^3P)4d - 4p^4(^3P)7f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1495.769	120		$4p^4(^3P)4d - 4p^4(^3P)7f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1514.585	20		$4p^4(^3P)4d - 4p^4(^3P)10f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1525.486	20		$4p^4(^3P)5s - 4p^4(^3P)6f$	$^3P - 2[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1539.075	20		$4p^4(^3P)4d - 4p^4(^3P)9f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1568.050	20		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1569.135	240		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1571.876	20		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[2]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1572.340	40		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1573.404	80		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1574.103	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1574.340	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1574.733	120		$4p^4(^3P)4d - 4p^4(^3P)8f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1575.375	20		$4p^4(^3P)5s - 4p^4(^3P)5f$	$^4P - 2[2]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1576.155	20		$4p^4(^3P)4d - 4p^4(^3P)8f$	$^4F - 2[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1579.513	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1579.731	240		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 0[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1584.563	20		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[1]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1586.093	20		$4p^4(^3P)4d - 4p^4(^3P)9f$	$^4F - 2[5]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1586.170	120		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[2]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1586.621	80		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1589.384	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 1[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1592.565	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1593.946	240		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 1[2]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1594.895	120		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 1[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1598.082	160		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 1[4]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1599.492	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 1[2]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1603.721	20		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[1]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1606.026	40		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^4D - 2[2]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1608.902	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 1[3]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1613.853	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4D - 1[2]^\circ$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1613.898	80		$4p^4(^3P)5s - 4p^4(^3P)5f$	$^3P - 1[2]^\circ$	$\frac{1}{2} - \frac{3}{2}$	M17

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J	References
Kr II	1614.274	200		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 1[2]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1623.948	120		$4p^4(3P)4d - 4p^4(3P)8f$	$4F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1629.867	200		$4p^4(3P)4d - 4p^4(3P)7f$	$4F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{11}{2}$	M17
Kr II	1632.037	160		$4p^4(3P)4d - 4p^4(3P)7f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1634.396	160		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 1[2]^{\circ}$	$\frac{1}{2} - \frac{5}{2}$	M17
Kr II	1637.981	40		$4p^4(3P)5s - 4p^4(3P)5f$	$4P - 2[1]^{\circ}$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	1638.807	200		$4p^4(1D)5s - 4p^4(3P)6f$	$2D - 1[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1650.630	120		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 1[4]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1658.358	40		$4p^4(3P)5s - 4p^4(3P)4f$	$4P - 1[3]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1668.416	20		$4s4p^6 - 4s^24p^4(1S)5p$	$2S - 2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1674.571	80		$4s4p^6 - 4s^24p^4(3P)4f$	$2S - 2[1]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1677.055	160		$4s4p^6 - 4s^24p^4(3P)4f$	$2S - 2[1]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1682.321	120		$4p^4(3P)4d - 4p^4(3P)7f$	$4F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1684.645	20		$4p^4(3P)4d - 4p^4(3P)7f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1687.456	80		$4s4p^6 - 4s^24p^4(1S)5p$	$2S - 2P^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1697.189	20		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 1[3]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M17
Kr II	1699.297	160		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 1[4]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M17
Kr II	1713.509	40		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[2]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1716.582	40		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[1]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1716.657	80		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[3]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1718.431	40		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1719.638	240		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[4]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1719.908	120		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[2]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M17
Kr II	1720.208	360		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[4]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1721.632	120		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[2]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M17
Kr II	1722.701	20		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1722.936	200		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{11}{2}$	M17
Kr II	1724.864	200		$4p^4(3P)4d - 4p^4(3P)5f$	$4F - 2[3]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M17
Kr II	1725.982	120		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1726.078	280		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[4]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1727.854	20		$4p^4(3P)4d - 4p^4(3P)8f$	$2F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1733.649	20		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[1]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1733.681	20		$4p^4(3P)5s - 4p^4(3P)5f$	$2P - 2[1]^{\circ}$	$\frac{1}{2} - \frac{5}{2}$	M17
Kr II	1734.567	80		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[1]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1738.804	160		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[2]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1738.861	40		$4p^4(3P)5s - 4p^4(3P)5f$	$2P - 2[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1742.093	240		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1749.687	40		$4s4p^6 - 4s^24p^4(3P)6p$	$2S - 4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1754.821	20		$4p^4(3P)4d - 4p^4(3P)6f$	$2F - 1[3]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1757.384	40		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[1]^{\circ}$	$\frac{1}{2} - \frac{5}{2}$	M17
Kr II	1758.077	120		$4p^4(3P)4d - 4p^4(3P)6f$	$2F - 1[4]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1758.265	80		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[1]^{\circ}$	$\frac{1}{2} - \frac{5}{2}$	M17
Kr II	1762.686	120		$4p^4(3P)4d - 4p^4(3P)5f$	$4D - 2[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1769.546	20		$4p^4(1D)5s - 4p^4(3P)6f$	$2D - 2[1]^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	1781.888	200		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1782.594	80		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1783.997	80		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1785.419	40		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1794.421	40		$4p^4(3P)4d - 4p^4(3P)7f$	$2F - 2[5]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1797.020	40		$4p^4(3P)4d - 4p^4(3P)6f$	$2F - 1[3]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M17
Kr II	1797.515	40		$4p^4(3P)5s - 4p^4(3P)4f$	$4P - 2[2]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1804.070	40		$4p^4(3P)5s - 4p^4(3P)4f$	$4P - 2[3]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1808.713	40		$4p^4(3P)5s - 4p^4(3P)4f$	$4P - 2[4]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1809.454	20		$4p^4(1D)5s - 4p^4(3P)5f$	$2D - 1[3]^{\circ}$	$\frac{5}{2} - \frac{7}{2}$	M17
Kr II	1811.674	40		$4p^4(3P)4d - 4p^4(3P)5f$	$4F - 1[3]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1817.602	200		$4p^4(3P)4d - 4p^4(3P)5f$	$4F - 1[4]^{\circ}$	$\frac{3}{2} - \frac{9}{2}$	M17
Kr II	1830.842	40		$4p^4(3P)4d - 4p^4(3P)6f$	$4P - 2[1]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1833.847	40		$4p^4(3P)4d - 4p^4(3P)6f$	$4P - 2[2]^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1842.091	120		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[4]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1850.093	80		$4p^4(3P)4d - 4p^4(3P)6f$	$4P - 1[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1850.773	80		$4p^4(3P)4d - 4p^4(3P)5f$	$2F - 0[3]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1852.603	20		$4p^4(3P)4d - 4p^4(3P)6f$	$4P - 1[4]^{\circ}$	$\frac{3}{2} - \frac{7}{2}$	M17
Kr II	1867.889	40		$4p^4(3P)5s - 4p^4(3P)4f$	$4P - 2[1]^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M17
Kr II	1868.662	120		$4p^4(3P)4d - 4p^4(3P)6f$	$4F - 2[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17
Kr II	1870.645	80		$4p^4(3P)4d - 4p^4(3P)5f$	$4F - 1[3]^{\circ}$	$\frac{3}{2} - \frac{5}{2}$	M17

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr II	1871.619	80		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1873.761	80		$4p^4(^3P)5s - 4p^4(^3P)4f$	$^4P - 2[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1875.296	20		$4p^4(^3P)5s - 4p^4(^3P)6p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1875.999	200		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 1[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1876.491	20		$4p^4(^3P)5s - 4p^4(^3P)4f$	$^4P - 2[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1877.613	40		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 0[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1878.041	240		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 0[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1878.256	40		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^3P - 2[1]^o$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1878.830	160		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 0[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1879.141	40		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^3P - 2[1]^o$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	1881.418	20		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^3P - 2[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1888.783	160		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1889.679	80		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1895.408	20		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^3P - 2[1]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1897.457	160		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1898.048	200		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 0[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1898.631	40		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^3P - 2[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1899.501	40		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1899.629	160		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1901.490	280		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1902.778	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[5]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1903.193	360		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[5]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1906.543	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 1[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1907.356	160		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1907.760	120		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^3F - 2[5]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1909.788	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3P - 0[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1909.840	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1910.421	20		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1910.539	200		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1911.797	80		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^3F - 2[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1914.673	40		$4p^4(^3P)5s - 4p^4(^3P)6p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1917.387	80		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1918.567	40		$4p^4(^3P)5s - 4p^4(^3P)6p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1919.199	160		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3F - 0[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1919.522	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3F - 0[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1920.467	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3P - 1[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1931.277	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3P - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1931.565	240		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1933.784	120		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1933.852	80		$4p^4(^3P)5s - 4p^4(^3P)4f$	$^3P - 1[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1938.427	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3P - 1[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1939.037	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3P - 1[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1940.112	20		$4p^4(^3P)5s - 4p^4(^3P)6p$	$^4P - ^4P^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1941.944	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3F - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1943.765	40		$4p^4(^3P)4d - 4p^4(^3P)6f$	$^3D - 1[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1946.677	20		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3F - 1[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1948.752	240		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3F - 1[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1956.412	40		$4p^4(^3P)5s - 4p^4(^3P)4f$	$^4P - 2[1]^o$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1957.542	20		$4p^4(^3D)5s - 4p^4(^3P)5f$	$^3D - 2[1]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1958.427	40		$4p^4(^3F)5s - 4p^4(^3P)6p$	$^4P - ^4D^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1961.863	40		$4p^4(^3D)5s - 4p^4(^3P)5f$	$^3D - 2[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1963.361	240		$4p^4(^3P)4d - 4p^4(^3P)4f$	$^4D - 1[2]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1969.278	40		$4p^4(^3P)5s - 4p^4(^3P)4f$	$^4P - 2[2]^o$	$\frac{1}{2} - \frac{3}{2}$	M17
Kr II	1970.125	80		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3F - 0[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1974.015	20		$4p^4(^3P)5s - 4p^4(^1S)5p$	$^4P - ^2P^o$	$\frac{1}{2} - \frac{1}{2}$	M17
Kr II	1975.251	280		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[5]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1976.252	40		$4p^4(^3D)5s - 4p^4(^3P)5f$	$^3D - 2[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1978.904	80		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1981.264	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1981.653	40		$4p^4(^3P)5s - 4p^4(^1S)5p$	$^3P - ^2P^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1982.866	120		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1983.634	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4F - 2[4]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1990.341	20		$4p^4(^3P)5s - 4p^4(^3P)4f$	$^3P - 2[1]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1992.464	40		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^4P - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17
Kr II	1993.763	120		$4p^4(^3P)4d - 4p^4(^3P)5f$	$^3F - 1[3]^o$	$\frac{3}{2} - \frac{3}{2}$	M17

KRYPTON III (Kr²⁺), Z = 36
 Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p⁴ ³P₂ (34 electrons)
 Ionization Potential 298 020 cm⁻¹; 36.95 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr III	447.77	20		4p ⁴ - 4p ³ (² D°)5d	¹ D - ¹ F°	? 2-1	S6, K8
Kr III	453.06	80		4p ⁴ - 4p ³ (⁴ S°)5d	g ³ P - ³ D°	? 2-3	S6, K8
Kr III	457.23	50		4p ⁴ - 4p ³ (² D°)5d	¹ D - ¹ D°	? 2-2	S6, K8
Kr III	462.79	150		4p ⁴ - 4p ³ (² P°)6s	¹ S - ³ P°	? 0-1	S6, K8
Kr III	467.35	300		4p ⁴ - 4p ³ (⁴ S°)5d	g ³ P - ³ D°	? 0-1	S6, K8
Kr III	474.09	100		4p ⁴ - 4p ³ (⁴ S°)6s	g ³ P - ³ S°	? 1-2	S6, K8
Kr III	516.38	80		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ P°	2-2	B30
Kr III	525.69	80		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ P°	2-1	B30
Kr III	528.809	100		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ P°	1-2	M17
Kr III	530.308	200		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ¹ D°	2-2	M17
Kr III	531.255	50		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ¹ P°	2-1	M17
Kr III	538.54	160		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ P°	1-1	B30
Kr III	540.79	100		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ P°	0-1	B30
Kr III	540.860	300		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ D°	2-3	M17
Kr III	543.417	250		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ¹ D°	1-2	M17
Kr III	544.410	200		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ¹ P°	1-1	M17
Kr III	546.549	250		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ¹ F°	2-3	M17
Kr III	546.687	150		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ¹ P°	0-1	M17
Kr III	548.654	150		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ D°	2-1	M17
Kr III	551.685	200		4p ⁴ - 4p ³ (² P°)5s	g ³ P - ¹ P°	2-1	M17
Kr III	554.796	250		4p ⁴ - 4p ³ (² P°)5s	g ³ P - ³ P°	2-2	M17
Kr III	558.642	250		4p ⁴ - 4p ³ (² P°)4d	¹ D - ³ P°	2-2	M17
Kr III	560.984	200		4p ⁴ - 4p ³ (² P°)5s	g ³ P - ³ P°	2-1	M17
Kr III	562.69	100		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ D°	1-1	B30
Kr III	565.128	200		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ D°	0-1	M17
Kr III	565.645	300		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ D°	2-2	M17
Kr III	565.88	80		4p ⁴ - 4p ³ (² P°)5s	g ³ P - ¹ P°	1-1	B30
Kr III	569.160	300		4p ⁴ - 4p ³ (² P°)5s	g ³ P - ³ P°	1-2	M17
Kr III	570.735	50		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ F°	2-2	M17
Kr III	571.98	300		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ F°	2-3	B30
Kr III	573.231	250		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ D°	2-3	M17
Kr III	574.958	100		4p ⁴ - 4p ³ (² P°)4d	¹ D - ¹ D°	2-2	M17
Kr III	575.72	100		4p ⁴ - 4p ³ (² P°)5s	g ³ P - ³ P°	1-0	B30
Kr III	576.08	80		4p ⁴ - 4p ³ (² P°)4d	¹ D - ¹ P°	2-1	B30
Kr III	578.09	10		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ S°	2-1	B30
Kr III	578.212	150		4p ⁴ - 4p ³ (² P°)5s	g ³ P - ³ P°	0-1	M17
Kr III	579.831	300		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ D°	2-2	M17
Kr III	580.580	250		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ D°	1-2	M17
Kr III	585.141	300		4p ⁴ - 4p ³ (² D°)5s	g ³ P - ¹ D°	2-2	M17
Kr III	585.955	300		4p ⁴ - 4p ³ (² P°)4d	g ³ P - ³ F°	1-2	M17
Kr III	587.378	50		4p ⁴ - 4p ³ (² P°)4d	¹ D - ³ D°	2-3	M17
Kr III	587.536	50		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ D°	2-1	M17
Kr III	593.703	300		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ S°	1-1	M17
Kr III	594.098	300		4p ⁴ - 4p ³ (² P°)4d	¹ D - ¹ F°	2-3	M17
Kr III	595.53	140		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ D°	1-2	B30
Kr III	596.412	300		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ S°	0-1	M17
Kr III	596.584	200		4p ⁴ - 4p ³ (² P°)4d	¹ D - ³ D°	2-1	M17
Kr III	597.19	120		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ¹ P°	1-1	B30
Kr III	600.172	400		4p ⁴ - 4p ³ (² P°)5s	¹ D - ¹ P°	2-1	M17
Kr III	601.142	250		4p ⁴ - 4p ³ (² D°)5s	g ³ P - ¹ D°	1-2	M17
Kr III	603.667	300		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ D°	1-1	M17
Kr III	603.856	200		4p ⁴ - 4p ³ (² P°)5s	¹ D - ³ P°	2-2	M17
Kr III	604.365	150		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ¹ D°	2-2	M17
Kr III	605.863	500		4p ⁴ - 4p ³ (² D°)5s	g ³ P - ³ D°	2-3	M17
Kr III	606.466	350		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ³ D°	0-1	M17
Kr III	611.115	500		4p ⁴ - 4p ³ (² D°)5s	g ³ P - ³ D°	2-2	M17
Kr III	611.19	160		4p ⁴ - 4p ³ (² P°)5s	¹ D - ³ P°	2-1	B30
Kr III	612.488	150		4p ⁴ - 4p ³ (² D°)5s	g ³ P - ³ D°	2-1	M17
Kr III	616.725	350		4p ⁴ - 4p ³ (² P°)4d	¹ D - ³ D°	2-2	M17
Kr III	621.451	400		4p ⁴ - 4p ³ (² D°)4d	g ³ P - ¹ D°	1-2	M17

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr III	622.795	450		$4p^4 - 4p^3(^3P^o)4d$	$^1D - ^3F^o$	2-2	M17
Kr III	624.27	60		$4p^4 - 4p^3(^3P^o)4d$	$^1D - ^3F^o$	2-3	B30
Kr III	625.016	500		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - ^3G^o$	2-3	M17
Kr III	625.760	300		$4p^4 - 4p^3(^3D^o)4d$	$^1D - ^3D^o$	2-3	M17
Kr III	628.588	450		$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	1-2	M17
Kr III	630.040	500		$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	1-1	M17
Kr III	631.559	200		$4p^4 - 4p^3(^3D^o)4d$	$^1D - ^3S^o$	2-1	M17
Kr III	633.090	350		$4p^4 - 4p^3(^3D^o)5s$	$g^3P - ^3D^o$	0-1	M17
Kr III	633.630	250		$4p^4 - 4p^3(^3D^o)4d$	$^1D - ^3D^o$	2-2	M17
Kr III	636.35	20		$4p^4 - 4p^3(^3P^o)4d$	$^1S - ^3P^o$	0-1	B30
Kr III	639.983	500		$4p^4 - 4p^3(^3D^o)5s$	$^1D - ^1D^o$	2-2	M17
Kr III	642.84	20		$4p^4 - 4p^3(^3D^o)4d$	$^1D - ^3D^o$	2-1	B30
Kr III	644.52	20		$4p^4 - 4p^3(^3P^o)4d$	$^1S - ^1P^o$	0-1	B30
Kr III	646.412	600		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - ^3F^o$	2-3	M17
Kr III	651.201	500		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - ^3F^o$	2-2	M17
Kr III	659.718	500		$4p^4 - 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	2-1	M17
Kr III	664.855	300		$4p^4 - 4p^3(^3D^o)5s$	$^1D - ^3D^o$	2-3	M17
Kr III	670.301	150		$4p^4 - 4p^3(^3P^o)4d$	$^1S - ^3D^o$	0-1	M17
Kr III	670.820	150		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2-1	M17
Kr III	671.06	140		$4p^4 - 4p^3(^3D^o)4d$	$g^3P - ^3F^o$	1-2	B30
Kr III	671.182	150		$4p^4 - 4p^3(^3D^o)5s$	$^1D - ^3D^o$	2-2	M17
Kr III	672.335	400		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2-3	M17
Kr III	672.852	350		$4p^4 - 4p^3(^3D^o)5s$	$^1D - ^3D^o$	2-1	M17
Kr III	674.835	250		$4p^4 - 4p^3(^3P^o)5s$	$^1S - ^1P^o$	0-1	M17
Kr III	676.568	350		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2-2	M17
Kr III	680.126	350		$4p^4 - 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	1-1	M17
Kr III	683.683	350		$4p^4 - 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	0-1	M17
Kr III	686.254	450		$4p^4 - 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	2-2	M17
Kr III	687.985	450		$4p^4 - 4p^3(^3D^o)4d$	$^1D - ^3G^o$	2-3	M17
Kr III	691.930	450		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1-1	M17
Kr III	695.610	500		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	0-1	M17
Kr III	698.052	300		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1-2	M17
Kr III	704.843	250		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^1P^o$	2-1	M17
Kr III	708.365	500		$4p^4 - 4p^3(^4S^o)5s$	$g^3P - ^3S^o$	1-2	M17
Kr III	714.003	500		$4p^4 - 4p^3(^3D^o)4d$	$^1D - ^3F^o$	2-3	M17
Kr III	714.77	40		$4p^4 - 4p^3(^3D^o)4d$	$^1S - ^3S^o$	0-1	B30
Kr III	719.843	100		$4p^4 - 4p^3(^3D^o)4d$	$^1S - ^1P^o$	0-1	M17
Kr III	722.04	1000b		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	2-3	B30
Kr III	729.25	40		$4p^4 - 4p^3(^3D^o)4d$	$^1S - ^3D^o$	0-1	S6, K8
Kr III	730.267	100		$4p^4 - 4p^3(^4S^o)5s$	$^1D - ^3S^o$	2-1	M17
Kr III	732.257	250		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^1P^o$	0-1	M17
Kr III	743.901	200		$4p^4 - 4p^3(^4S^o)4d$	$^1D - ^3D^o$	2-1	M17
Kr III	745.765	150		$4p^4 - 4p^3(^4S^o)4d$	$^1D - ^3D^o$	2-3	M17
Kr III	746.700	300		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1-1	M17
Kr III	746.83	100		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	1-0	B30
Kr III	750.99	80		$4p^4 - 4p^3(^4S^o)4d$	$g^3P - ^3D^o$	0-1	B30
Kr III	768.132	50		$4p^4 - 4p^3(^3D^o)5s$	$^1S - ^3D^o$	0-1	M17
Kr III	785.968	600		$4s^2 4p^4 - 4s 4p^5$	$^1D - ^1P^o$	2-1	M17
Kr III	807.583	100		$4p^4 - 4p^3(^4S^o)4d$	$^1D - ^3D^o$	2-1	M17
Kr III	837.662	500		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^o$	2-1	M17
Kr III	854.73	500		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^o$	1-0	B30
Kr III	862.582	600		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^o$	2-2	M17
Kr III	870.842	400		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^o$	1-1	M17
Kr III	876.676	500		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^o$	0-1	M17
Kr III	897.806	750		$4s^2 4p^4 - 4s 4p^5$	$g^3P - ^3P^o$	1-2	M17
Kr III	919.146	150		$4s^2 4p^4 - 4s 4p^5$	$^1S - ^1P^o$	0-1	M17
Kr III	948.843	50		$4p^4 - 4p^3(^4S^o)4d$	$^1S - ^3D^o$	0-1	M17
Kr III	954.775	250		$4s^2 4p^4 - 4s 4p^5$	$^1D - ^3P^o$	2-1	M17
Kr III	987.289	500		$4s^2 4p^4 - 4s 4p^5$	$^1D - ^3P^o$	2-2	M17
Kr III	1158.737	300		$4s^2 4p^4 - 4s 4p^5$	$^1S - ^3P^o$	0-1	M17
Kr III	1206.35	100		$4s 4p^5 - 4s^2 4p^3(^3D^o)5p$	$^3P^o - ^3P$	2-1	B30
Kr III	1216.90	100		$4s 4p^5 - 4s^2 4p^3(^3D^o)5p$	$^3P^o - ^3P$	2-2	B30
Kr III	1258.74	60		$4s 4p^5 - 4s^2 4p^3(^3D^o)5p$	$^3P^o - ^3P$	1-1	B30
Kr III	1259.31	60		$4s 4p^5 - 4s^2 4p^3(^3D^o)5p$	$^3P^o - ^3P$	1-0	B30
Kr III	1265.32	80		$4s 4p^5 - 4s^2 4p^3(^3D^o)5p$	$^3P^o - ^3F$	2-3	B30

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr III	1270.20	100		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^2P^{\circ} - ^2P$	1 - 2	B30
Kr III	1278.94	20		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^2P^{\circ} - ^1P$	2 - 1	B30
Kr III	1283.31	60		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^2P^{\circ} - ^2F$	2 - 2	B30
Kr III	1283.86	60		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^1P^{\circ} - ^2D$	2 - 3	B30
Kr III	1293.99	60		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^2P^{\circ} - ^2P$	0 - 1	B30
Kr III	1302.59	40		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^2P^{\circ} - ^2D$	2 - 2	B30
Kr III	1342.68	20		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^2P^{\circ} - ^2F$	1 - 2	B30
Kr III	1363.85	40		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^2P^{\circ} - ^2D$	1 - 2	B30
Kr III	1377.83	40		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^2P^{\circ} - ^1P$	0 - 1	B30
Kr III	1400.90	20		$4p^2(^4S^{\circ})4d - 4p^2(^2P^{\circ})5p$	$^2D^{\circ} - ^2D$	2 - 3	B30
Kr III	1423.55	20		$4s4p^5 - 4s^24p^2(^2P^{\circ})5p$	$^1P^{\circ} - ^1D$	1 - 2	B30
Kr III	1483.43	40		$4s4p^5 - 4s^24p^2(^2P^{\circ})5p$	$^1P^{\circ} - ^1P$	1 - 1	B30
Kr III	1558.80	40		$4s4p^5 - 4s^24p^2(^4S^{\circ})5p$	$^2F^{\circ} - ^2F$	2 - 2	B30
Kr III	1569.89	40		$4s4p^5 - 4s^24p^2(^4S^{\circ})5p$	$^2P^{\circ} - ^2P$	2 - 1	B30
Kr III	1638.82	60		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^1P^{\circ} - ^1D$	1 - 2	B30
Kr III	1647.36	40		$4s4p^5 - 4s^24p^2(^4S^{\circ})5p$	$^2P^{\circ} - ^2P$	1 - 2	B30
Kr III	1659.81	40		$4s4p^5 - 4s^24p^2(^4S^{\circ})5p$	$^2P^{\circ} - ^2P$	1 - 1	B30
Kr III	1721.64	20		$4s4p^5 - 4s^24p^2(^4S^{\circ})5p$	$^2P^{\circ} - ^2F$	0 - 1	B30
Kr III	1914.09	60		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^1P^{\circ} - ^1P$	1 - 1	B30
Kr III	1923.88	10		$4s4p^5 - 4s^24p^2(^2D^{\circ})5p$	$^1P^{\circ} - ^2F$	1 - 2	B30

KRYPTON IV (Kr^{3+}), $Z = 35$ Ground State $1s^22s^22p^63s^23p^63d^{10}4s^24p^3\ ^4S_{3/2}$ (33 electrons)Ionization Potential [427 500] cm^{-1} ; [53] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr IV	805.76	140		$4s^24p^3 - 4s4p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{1}{2}$	B30
Kr IV	816.82	360		$4s^24p^3 - 4s4p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B30
Kr IV	842.04	440		$4s^24p^3 - 4s4p^4$	$g^4S^{\circ} - ^4P$	$\frac{3}{2} - \frac{3}{2}$	B30
Kr IV	1087.29 P			$4s4p^4 - 4s^24p^2(^2P)5p$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M22
Kr IV	1109.62 P			$4s4p^4 - 4s^24p^2(^2P)5p$	$^4P - ^4S^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M22
Kr IV	1110.64 P			$4s4p^4 - 4s^24p^2(^2P)5p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M22
Kr IV	1114.95 P			$4s4p^4 - 4s^24p^2(^2P)5p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M22
Kr IV	1157.78 P			$4s4p^4 - 4s^24p^2(^2P)5p$	$^4P - ^4P^{\circ}$	$\frac{3}{2} - \frac{3}{2}$	M22
Kr IV	1176.49 P			$4s4p^4 - 4s^24p^2(^2P)5p$	$^4P - ^4D^{\circ}$	$\frac{3}{2} - \frac{1}{2}$	M22
Kr IV	1247.93 P			$4s4p^4 - 4s^24p^2(^2P)5p$	$^4P - ^4D^{\circ}$	$\frac{1}{2} - \frac{3}{2}$	M22

KRYPTON V (Kr^{4+}), $Z = 36$ Ground State $1s^22s^22p^63s^23p^63d^{10}4s^24p^2\ ^3P_0$ (32 electrons)Ionization Potential [524 300] cm^{-1} ; [65] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr V?	472.16	150					F21, S6
Kr V	484.39	100		$4p^2 - 4p4d$	$g^2P - ^2P^{\circ}$? 0 - 1	S6, K8
Kr V	496.25	250		$4p^2 - 4p4d$	$g^2P - ^2P^{\circ}$? 2 - 2	S6, K8
Kr V	500.77	120		$4p^2 - 4p4d$	$g^2P - ^2P^{\circ}$? 1 - 0	S6, K8
Kr V	507.20	200		$4p^2 - 4p4d$	$g^2P - ^2P^{\circ}$? 2 - 1	S6, K8

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr V	548.04	60		4p ² - 4p4d	¹ D - ³ P°	? 2 - 1	S6, K8
Kr V	637.87	120		4p ² - 4p4d	¹ S - ³ P°	? 0 - 1	S6, K8
Kr V?	708.85	600				.	F21, S6

KRYPTON VI (Kr⁵⁺), Z = 36Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²4p²P_{1/2}° (31 electrons)Ionization Potential [633 300] cm⁻¹; [78.5] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr VI	450.20	200		4p - 4d	g ² P° - ² D	½ - ¾	F21, S6
Kr VI	465.27	400		4p - 4d	g ² P° - ² D	¾ - ½	F21, S6
Kr VI	544.03	600		4s ² 4p - 4s4p ²	g ² P° - ² P	½ - ¾	F21, S6
Kr VI	554.52	500		4s ² 4p - 4s4p ²	g ² P° - ² P	½ - ½	F21, S6
Kr VI	569.13	800		4s ² 4p - 4s4p ²	g ² P° - ² P	¾ - ¾	F21, S6
Kr VI	580.63	600		4s ² 4p - 4s4p ²	g ² P° - ² P	¾ - ½	F21, S6
Kr VI	705.84	1000		4s ² 4p - 4s4p ²	g ² P° - ² D	½ - ¾	F21, S6
Kr VI	742.83	1000		4s ² 4p - 4s4p ²	g ² P° - ² D	¾ - ½	F21, S6
Kr VI	748.68	? 150		4s ² 4p - 4s4p ²	g ² P° - ² D	¾ - ¾	K8, S6, F21

KRYPTON VII (Kr⁶⁺), Z = 36Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²1S₀ (30 electrons)Ionization Potential [895 500] cm⁻¹; [111.0] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr VII	585.37	1000		4s ² - 4s4p	g ¹ S - ¹ P°	0 - 1	F21, S6
Kr VII	618.67	400		4s4p - 4p ²	³ P° - ³ P	2 - 2	F21, S6
Kr VII	793.44	600		4s ² - 4s4p	g ¹ S - ³ P°	? 0 - 1	S6, K8
Kr VII	852.00	100		4s4p - 4p ²	¹ P° - ³ P	? 1 - 2	S6, K8

KRYPTON VIII (Kr⁷⁺), Z = 36
 Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰4s²S_{1/2} (29 electrons)
 Ionization Potential [992 100] cm⁻¹; [123] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr VII	468.20	80		4p - 5d	³ P° - ³ D	? ½ - ¾	S6, K8
Kr VIII	490.67	150		4p - 4d	³ P° - ³ D	? ¾ - ¾	S6, K8
Kr VIII	614.86	200		4p - 5s	³ P° - ³ S	? ½ - ½	S6, K8
Kr VIII	651.57	400		4s - 4p	³ S - ³ P°	½ - ¾	F21, S6
Kr VIII	654.19	300		4p - 5s	³ P° - ³ S	? ¾ - ¾	S6, K8
Kr VIII	695.91	800		4s - 4p	³ S - ³ P°	½ - ½	F21, S6

KRYPTON IX (Kr⁸⁺), Z = 36
 Ground State 1s²2s²2p⁶3s²3p⁶3d¹⁰1S₀ (28 electrons)
 Ionization Potential 1 862 400 cm⁻¹; 230.9 eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr IX	75.45			3d ¹⁰ - 3d ⁹ (³ D)4f	^g 1S - ³ D°	0 - 1	F12
Kr IX	76.29			3d ¹⁰ - 3d ⁹ (³ D)4f	^g 1S - ¹ P°	0 - 1	F12
Kr IX	76.80			3d ¹⁰ - 3d ⁹ (³ D)4f	^g 1S - ³ P°	0 - 1	F12
Kr IX	114.95	750		3d ¹⁰ - 3d ⁹ (³ D)4p	^g 1S - ³ D°	0 - 1	M22
Kr IX	115.74	1000		3d ¹⁰ - 3d ⁹ (³ D)4p	^g 1S - ¹ P°	0 - 1	M22
Kr IX	117.71	200		3d ¹⁰ - 3d ⁹ (³ D)4p	^g 1S - ³ P°	0 - 1	M22
Kr IX	374.54	20		3d ⁹ (³ D)4d - 3d ⁹ (³ D)4f	³ D - ³ P°	? 3 - 2	S6, K8
Kr IX	446.76	80		3d ⁹ (³ D)4d - 3d ⁹ (³ D)4f	¹ D - ³ D°	? 2 - 2	S6, K8
Kr IX	477.93	80		3d ⁹ (³ D)4d - 3d ⁹ (³ D)4f	¹ D - ¹ P°	? 2 - 1	S6, K8
Kr IX	498.68	100		3d ⁹ (³ D)4d - 3d ⁹ (³ D)4f	¹ D - ³ P°	? 2 - 2	S6, K8

KRYPTON X (Kr⁹⁺), Z = 36
 Ground State 1s²2s²2p⁶3s²3p⁶3d⁹2D_{5/2} (27 electrons)
 Ionization Potential [2 218 000] cm⁻¹; [275] eV

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr X	99.06			3d ⁹ - 3d ⁸ 4p			F12
Kr X	99.57			3d ⁹ - 3d ⁸ 4p			F12
Kr X	99.69			3d ⁹ - 3d ⁸ 4p			F12
Kr X	99.86			3d ⁹ - 3d ⁸ 4p			F12
Kr X	100.11			3d ⁹ - 3d ⁸ 4p			F12
Kr X	100.30			3d ⁹ - 3d ⁸ 4p			F12
Kr X	101.20			3d ⁹ - 3d ⁸ 4p			F12
Kr X	101.39			3d ⁹ - 3d ⁸ 4p			F12
Kr X	102.16			3d ⁹ - 3d ⁸ 4p			F12
Kr X	102.24			3d ⁹ - 3d ⁸ 4p			F12

Element	Wavelength	Intensity	Multiplet	Configuration	Term	J - J	References
Kr X	102.30			$3d^9 - 3d^8 4p$			F12
Kr X	102.72			$3d^9 - 3d^8 4p$			F12
Kr X	102.86			$3d^9 - 3d^8 4p$			F12
Kr X	103.27			$3d^9 - 3d^8 4p$			F12
Kr X	103.60			$3d^9 - 3d^8 4p$			F12

KRYPTON XI (Kr^{10+}), $Z = 36$

Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8$ 3F_4 (26 electrons)

Ionization Potential [2 547 000] cm^{-1} ; [316] eV

KRYPTON XII (Kr^{11+}), $Z = 36$

Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7$ $^4F_{9/2}$ (25 electrons)

Ionization Potential [2 888 000] cm^{-1} , [358] eV

KRYPTON XIII (Kr^{12+}), $Z = 36$

Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6$ 5D_4 (24 electrons)

Ionization Potential [3 250 000] cm^{-1} ; [403] eV

KRYPTON XIV (Kr^{13+}), $Z = 36$

Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5$ $^6S_{5/2}$ (23 electrons)

Ionization Potential [3 638 000] cm^{-1} ; [451] eV

KRYPTON XV (Kr^{14+}), $Z = 36$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^4 \ ^5D_0$ (22 electrons)Ionization Potential [4 009 000] cm^{-1} ; [497] eVKRYPTON XVI (Kr^{15+}), $Z = 36$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 \ ^4F_{3/2}$ (21 electrons)Ionization Potential [4 775 000] cm^{-1} ; [545] eVKRYPTON XVII (Kr^{16+}), $Z = 36$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 3d^2 \ ^3F_2$ (20 electrons)Ionization Potential [4 783 000] cm^{-1} ; [593] eVKRYPTON XVIII (Kr^{17+}), $Z = 36$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 3d \ ^2D_{3/2}$ (19 electrons)Ionization Potential [5 178 200] cm^{-1} ; [642] eVKRYPTON XIX (Kr^{18+}), $Z = 36$ Ground State $1s^2 2s^2 2p^6 3s^2 3p^6 \ ^1S_0$ (18 electrons)Ionization Potential [6 404 300] cm^{-1} ; [794] eV

KRYPTON XX (Kr^{19+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^5 \ ^2P_{3/2}^{\circ}$ (17 electrons)
Ionization Potential [6 718 800] cm^{-1} ; [833] eV

KRYPTON XXI (Kr^{20+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^4 \ ^3P_2$ (16 electrons)
Ionization Potential [7 081 800] cm^{-1} ; [878] eV

KRYPTON XXII (Kr^{21+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^3 \ ^4S_{3/2}^{\circ}$ (15 electrons)
Ionization Potential [7 574 000] cm^{-1} ; [939] eV

KRYPTON XXIII (Kr^{22+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p^2 \ ^3P_0$ (14 electrons)
Ionization Potential [7 977 100] cm^{-1} ; [989] eV

KRYPTON XXIV (Kr^{23+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 3p \ ^2P_{1/2}^{\circ}$ (13 electrons)
Ionization Potential [8 380 400] cm^{-1} ; [1039] eV

KRYPTON XXV (Kr^{24+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s^2 \ ^1S_0$ (12 electrons)
Ionization Potential [9 284 000] cm^{-1} ; [1151] eV

KRYPTON XXVI (Kr^{25+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 3s \ ^2S_{1/2}$ (11 electrons)
Ionization Potential [9 727 300] cm^{-1} ; [1206] eV

KRYPTON XXVII (Kr^{26+}), $Z = 36$
Ground State $1s^2 2s^2 2p^6 \ ^1S_0$ (10 electrons)
Ionization Potential [23 818 000] cm^{-1} ; [2953] eV

KRYPTON XXVIII (Kr^{27+}), $Z = 36$
Ground State $1s^2 2s^2 2p^5 \ ^2P_{3/2}$ (9 electrons)
Ionization Potential [24 649 000] cm^{-1} ; [3056] eV

KRYPTON XXIX (Kr^{28+}), $Z = 36$
Ground State $1s^2 2s^2 2p^4 \ ^3P_2$ (8 electrons)
Ionization Potential [25 835 000] cm^{-1} ; [3203] eV

KRYPTON XXX (Kr²⁹⁺), Z = 36
Ground State $1s^2 2s^2 2p^3 \ ^4S_{3/2}$ (7 electrons)
Ionization Potential [27 270 000] cm⁻¹; [3381] eV

KRYPTON XXXI (Kr³⁰⁺), Z = 36
Ground State $1s^2 2s^2 2p^2 \ ^3P_0$ (6 electrons)
Ionization Potential [28 641 000] cm⁻¹; [3551] eV

KRYPTON XXXII (Kr³¹⁺), Z = 36
Ground State $1s^2 2s^2 2p \ ^2P_{1/2}^o$ (5 electrons)
Ionization Potential [29 940 000] cm⁻¹; [3712] eV

KRYPTON XXXIII (Kr³²⁺), Z = 36
Ground State $1s^2 2s^2 \ ^1S_0$ (4 electrons)
Ionization Potential [31 553 000] cm⁻¹; [3912] eV

KRYPTON XXXIV (Kr³³⁺), Z = 36
Ground State $1s^2 2s \ ^2S_{1/2}$ (3 electrons)
Ionization Potential [33 110 000] cm⁻¹; [4105] eV

KRYPTON XXXV (Kr^{24+}), $Z = 36$
Ground State $1s^2 \ ^1S_0$ (2 electrons)
Ionization Potential [139 473 000] cm^{-1} ; [17292] eV

KRYPTON XXXVI (Kr^{35+}), $Z = 36$
Ground State $1s \ ^2S_{1/2}$ (1 electron)
Ionization Potential [144 627 000] cm^{-1} ; [17931] eV

SECTION II

Finding List

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Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Kr (K α)	0.9801			Ti XXI	2.62	P	
Br (K α)	1.0397			Ti XXI	2.63	P	
Se (K α)	1.1048			Ti XXI	2.66	?	f
As (K α)	1.1759			K XIX	2.680	P	10
Zn XXIX	1.18			Ca XIX	2.706		
Ge (K α)	1.2541			Sc XXI	2.74	P	
Cu XXVIII	1.27			Ti (K α)	2.7485		
Zn XXX	1.34	P		K XVIII	2.80	P	
Ga (K α)	1.3401			K XIX	2.826	P	30
Ni XXVII	1.36			K XVIII	2.86	P	
Zn XXIX	1.39			Sc XX	2.87	P	
Zn (K α)	1.4352			Sc XX	2.88		
Cu XXIX	1.44	P		Ar XVIII	2.861	P	
Fe XXV	1.456			Ar XVIII	2.918	P	
Co XXVI	1.47			Sc XX	2.92	?	f
Cu XXVIII	1.49			Ar XVIII	2.987	~	10
Fe XXV	1.509			K XVIII	3.02		
Cu XXVIII	1.52	?	f	Ca XX	3.020	P	100
Ni XXVIII	1.54	P		Sc (K α)	3.0309		
Cu (K α)	1.5406			Ar XVII	3.095		5
Fe XXV	1.59			Ar XVII	3.138		5
Ni XXVII	1.60			Ar XVIII	3.151	P	30
Ni XXVII	1.63	?	f	Ca XIX	3.173		
Ni (K α)	1.6579			Ca XIX	3.186		
Co XXVII	1.66	P		Ca XVIII	3.197		
Mn XXIV	1.72			Ar XVI	3.203		130
Co XXVI	1.72			Ca XVIII	3.206		
Co XXVI	1.75	?	f	Ca XIX	3.225		f
Co (K α)	1.7890			Cl XVII	3.231	P	
Fe XXVI	1.79			Ar XVI	3.25		5
Fe XXV	1.852			Ar XVI	3.268		5
Fe XXV	1.857			Cl XVII	3.272	P	
Fe XXIV	1.862			Ar XV	3.33		5
Fe XXV	1.867		f	K XIX	3.348	P	100
Cr XXIII	1.87			Cl XVII	3.351	P	10
Fe XXIV	1.874			Ca (K α)	3.3584		
Fe (K α)	1.9360			Ar XVII	3.366		190
Mn XXV	1.94	P		Ar XVI	3.42		5
Mn XXIV	2.01	P		Ar XVI	3.430		150
Mn XXIV	2.02			Ar XV	3.45		5
V XXII	2.04			Cl XVI	3.53	P	
Mn XXIV	2.05	?	f	K XVIII	3.53	P	
Cr XXIV	2.10	P		Cl XVII	3.534	P	30
Mn (K α)	2.1018			K XVIII	3.55	P	
Cr XXIII	2.18	P		K XVIII	3.59	?	f
Cr XXIII	2.19			Cl XVI	3.60	P	
Cr XXIII	2.22	?	f	S XVI	3.649	F	
Ti XXI	2.23			S XVI	3.696	P	
Cr (K α)	2.2897			Ar XVIII	3.733	P	100
V XXIII	2.29	P		K (K α)	3.7414		
Ca XX	2.314	P		S XVI	3.784	P	10
Ca XX	2.331	P		Cl XVI	3.80	P	
Ca XX	2.361	P		Ar XVII	3.948		1000
V XXII	2.39	P		Ar XVII	3.968		550
V XXII	2.40			Ar XVI	3.989		260b
Ca XX	2.417	P	10	S XVI	3.991	P	30
V XXII	2.43	?	f	Ar XVI	3.992		260b
Sc XX	2.46			S XV	4.00	P	
Ti XXII	2.50	P		Ar XVII	4.014		f
V (K α)	2.5036			Ar XV	4.015		70
Ca XIX	2.516			S XV	4.104		
Ca XX	2.549	P	30	P XV	4.154	P	
Ca XIX	2.573			Cl XVII	4.187	P	100
K XIX	2.584	P		Ar (K α)	4.1918		
K XIX	2.617	P		P XV	4.207	P	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
S XV	4.299			Mg XI	7.850		
P XV	4.308	P	10	Mg XI	7.864		
S XIV	4.394			Al XII	7.873	f	
Cl XVI	4.44	P		Fe XXIV	7.990		
Cl XVI	4.46	P		Mn XXIII	8.02	P	
Cl XVI	4.51	?	f	Na XI	8.021	P	10
P XV	4.543	P	30	Cu XX	8.056		10
P XIV	4.58	P		Mn XXIII	8.09	P	
P XIV	4.68	P		Cu XXII?	8.158		10
Cl (K α)	4.7278			Mn XXII	8.19	?	
S XVI	4.729	P	100	Fe XXIV	8.233		
Si XIV	4.770	P		Cu XXII?	8.260		10
Si XIV	4.831	P		Cr XXII	8.29	P	
P XIV	4.92	P		Fe XXIV	8.290		
Si XIV	4.947	P	10	Fe XXIII	8.307		
S XV	5.039			Fe XXIV	8.317		
S XV	5.067			Cu XX	8.320		10
S XIV	5.083			Al (K α)	8.3393		
S XV	5.099		f	Cr XXII	8.36	P	
S XIV	5.137			Fe XXIV	8.378		
Si XIV	5.217	P	30	Cu XXI	8.379		10
Si XIII	5.283			Fe XXIII	8.38	?	
S (K α)	5.3722			Co	8.414		10
P XV	5.383	P	100	Mg XII	8.421	P	100
Si XIII	5.410			Cu XX	8.437		10
Al XIII	5.534	P		Cu XXI	8.450		10
Al XIII	5.605	P		Mg XI	8.458		
Si XIII	5.68	P		Na XI	8.459	P	30
Al XIII	5.739	P	10	Mg XI	8.490		
P XIV	5.76	P		Cr XXII	8.51	P	
P XIV	5.79	P		Ni	8.516		0
Si XII	5.816			Mg XI	8.518		
P XIV	5.84	?	f	Co	8.518		10
Al XIII	6.053	P	30	Cu XXI	8.524		10
P (K α)	6.157			Ni	8.549		30
Al XII	6.18	P		Mg XI	8.550		
Si XIV	6.182	P	100	Cu XXI	8.577		10
Si XIII	6.224			Ni	8.605		30
Si XIII	6.272			Cu XXI	8.647		10
Al XII	6.314			Ni	8.649		20
Mg XII	6.497	P		Mn XXIII	8.68	P	
Mg XII	6.580	P		Cu XXI	8.690		10
Al XII	6.635			Ni	8.694		20
Si XIII	6.650			Co	8.715		20
Si XIII	6.690			Ni XIX	8.725		10
Si XII	6.717			Cu XXI	8.743		10
Si XIII	6.737		f	Cr XXII	8.77	P	
Mg XII	6.738	P	10	Cu XXI	8.790		10
Si XII	6.787			Co	8.795		20
Mg XII	7.106	P	30	Ni XXII?	8.798		10
Si (K α)	7.1254			Ni XIX	8.838		20
Al XIII	7.173	P	100	Cr XXII	8.84	P	
Fe XXIV	7.233			Cu XXI	8.876		0
Mg XI	7.310			Co	8.880		20
Mg XI	7.473			Ni XXI?	8.886		10
Fe XXIII	7.52	?		Cu	8.931		0
Mn XXIII	7.59	P		Cr XXI	8.96	?	
Mn XXIII	7.65	P		Mn XXII?	8.96	P	
Na XI	7.677	P		Co	8.966		20
Na XI	7.735	P		Ni XXI?	8.993		20
Al XII	7.757			Mn XXIII	9.00	P	
Al XI	7.776			Co	9.028		20
Mn XXIII	7.79	P		Cu	9.040		0
Al XII	7.806	P		Cu	9.060		0
Na XI	7.833	P		Co	9.087		20

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe XXIII	10.685			Fe XVIII	11.318	30	
Co XIX	10.704	40		K XIX	11.32	P	
Cu XXII	10.717	10		Co XVIII	11.324	50	
Ni	10.724	10		Ni XXI	11.342	20	
Fe ?	10.741			Co	11.357	50	
Fe XVII	10.762	10		Fe	11.360		
Ni XXIII?	10.762	20		Sc XIX	11.37	P	
Ne IX	10.765	230		Cu XX	11.38	100	
Cu XXI	10.769	10		Co	11.399	50	
Cu XXII	10.799	30		Ni XXI	11.403	20	
Ca XX	10.80	P		Fe XXIV	11.419	30	
Zn XXI	10.80	20		Cu XXII	11.425	40	
Fe	10.811	20		Fe XVIII	11.440	40	
Ni XXII	10.820	20		Ti XX	11.45	P	
Co	10.840	30		Ni XXI	11.457	20	
Ni	10.841	20		Co XVIII	11.458	70	
Cu XXI	10.847	40		Cu	11.479	40	
Ti XIX	10.85	?		Fe	11.480	10	
Fe	10.873	10		Zn XXI	11.51	40	
Cu XXI	10.874	30		Cu XXII	11.518	50	
Co	10.880	30		Fe	11.521	40	
Ni XXI	10.902	20		Ni XIX	11.522	60	
Fe ?	10.905			Co	11.542	20	
Fe	10.926	10		Ne IX	11.544	570	
Cu XXI	10.933	30		Mn XXIII	11.55	P	
K XIX	10.95	P		F IX	11.560	P	
V XX	10.95	?		Fe XVIII	11.571	20	
Cu	10.963	30		Cu XXII	11.576	40	
Ni XXIII	10.967	20		Co	11.581	20	
Fe	10.97	0		Ni XIX	11.582	50	
Co XVIII	10.97	50		Mn XXII	11.59	?	
Cu XXI	10.995	40		Cu XX	11.593	100	
Na X	11.00			Mn XXIII	11.60	P	
Ne IX	11.001	350		Co XXI?	11.612	20	
Ni XXIII?	11.002	20		Fe XVIII?	11.637	10	
Cr XX	11.01	?		Co XXII?	11.672	20	
Fe XVIII	11.021	20		Cu	11.678	30	
Ni XXIII	11.023	20		Ni XX	11.691	20	
Fe XXIV	11.026	40		Fe	11.698	10	
Cu XXI	11.055	20		F IX	11.707	P	
Ni XXIII	11.073	0		Co	11.712	20	
Fe	11.074	0		Fe XVIII	11.730	10	
Na X	11.08			Cu XX	11.732	60	
Co XVIII	11.103	70		Fe XXII	11.742	10	
Cu XXI	11.110	30		Co XXII?	11.742	30	
Ni XXI?	11.123	20		Ni XX	11.760	40	
Fe XVII	11.125	20		Zn XXI	11.76	60	
Fe XXIV	11.129	40		Fe	11.772	10	
Sc XIX	11.13	P		Cu XVIII	11.774	20	
Cu XXI	11.152	10		Sc XIX	11.78	P	
Ni XXIII	11.159	20		Co XXI	11.801	30	
Fe XXIII	11.164	10		Cu XXI	11.814	20	
Cu XXI	11.175	10		Ni XX	11.818	60	
Na X	11.20	?	f	Sc XIX	11.84	20	
Sc XIX	11.20	P		Co	11.851	20	
Ni XXII	11.203	30		Mn XVI	11.853	20	
Cu	11.229	10		Ni XX	11.854	40	
Co	11.237	50		Fe XXII	11.865	20	
Fe XVII	11.247	40		Ti XX	11.87	P	
Fe XXIV	11.250	60		Co XX	11.886	20	
Co	11.257	50		Cu	11.904	10	
Ni XXIII	11.262	30		Ne VIII	11.905	40	-A
Fe XVIII	11.280	20		Na (K α)	11.9101		
Cu XXI	11.280	10		Cu XXI	11.924	10	
Ni XXIII	11.298	40		Co XXII	11.936	30	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu XX	9.11	20		Mn XXI	10.04	?	
Fe XXII	9.126			Fe XXII	10.053	10	
Mn XXII	9.13	?		Cu XXII	10.057	10	
Ni XIX	9.130	30		Co XVIII	10.060	40	
Co	9.139	40		Fe XXII	10.10	20	
Mg XI	9.168			Ni XIX	10.102	30	
Fe XXII	9.229	G		Cu XXIV	10.103	10	
Mg XI	9.23			Ti XX	10.11	P	
Cu XX	9.230	20		Cu XXIII	10.123	10	
Ni XIX	9.236	30		Fe XXII	10.127	30	
Co	9.245	20		Co XIX	10.130	30	
Fe ?	9.25	0		Cu XXIV	10.170	0	
Cu	9.280	10		Co XVIII	10.178	40	
Ne X	9.291	P		Ni	10.195	20	
Ni	9.291	10		Co	10.198	40	
Cu	9.309	10		Ca XX	10.21	P	
Mg XI	9.32	?	f	Ni	10.215	20	
Ne X	9.352	P		Cu XXII?	10.229	0	
Cu	9.375	10		Fe XXII	10.230	10	
Cu XX	9.429	10		Co XIX	10.230	20	
Na X	9.43			Ne X	10.239	P	30
Cu	9.448	10		Ni	10.261	10	
Co	9.475	20		Cu XXIV	10.267	10	
Cr XXII	9.48	P		Ti XX	10.27	P	
Ne X	9.481	P		Co XIX	10.287	40	
Fe	9.507	0		Ni XIX	10.306	20	
Cu XX	9.522	10		Cu XXIII	10.311	10	
Fe XXII	9.568	0		Fe XXII	10.344	10	
Cu	9.582	0		Ni	10.354	20	
Co XVIII	9.611	20		Cu XXIV	10.359	10	
Cu	9.640	0		Co XIX	10.367	20	
Fe XXII	9.646	0		Co XIX	10.392	40	
Cu	9.653	0		Cu XXIV	10.400	10	
Cu XXIII	9.670	0		Ni XIX	10.417	20	
Fe XXII	9.703	10		Fe XXII	10.443	10	
Ne X	9.708	P	10	Ni	10.450	20	
Co XVIII	9.743	20		Cu XXII	10.450	10	
Cu	9.752	0		Zn XXI	10.47	60	
Ni	9.755	10		Co XIX	10.477	40	
Zn XXI	9.77	1		Ni	10.49	10	
Cu XXIII?	9.772	0		Ni	10.500	10	
Cu	9.792	0		Fe	10.501	20	
Fe XXII	9.793	10		Cu XXII	10.506	10	
Cr XXII	9.80	P		Co XIX	10.507	40	
Cu XXIV?	9.802	0		Ne IX	10.513	50	
Co XX?	9.830	20		Fe	10.530	10	
V XX	9.84	?		Ni	10.530	10	
Fe XXII	9.841	10		Cu XXII	10.546	10	
Ca XX	9.88	P		Ne IX	10.565	70	
Cr XXII	9.88	P		Fe XX?	10.571	10	
Ni	9.883	0		Ni	10.580	10	
Mg (K α)	9.890			Co XIX	10.583	30	
Cu	9.892	0		Cu XX	10.587	50	
Co	9.900	20		Ti XX	10.62	P	
Cu XXIV?	9.906	0		Fe ?	10.623		
Cu XXIV	9.961	10		Co	10.624	30	
Ni XIX	9.97	30		Cu XX	10.641	40	
Cr XXI	9.98	?		Co XIX?	10.644	30	
Cu XXIII	9.982	10		Ne IX	10.646	120	
Fe	9.990	10		Fe XVII	10.649	20	
Cu	10.010	10		Fe XXIV	10.658	10	
Co XIX	10.023	30		Zn XXI	10.67	40	
Na XI	10.025	P	100	Co	10.674	40	
Cu	10.037	10		Ti XX	10.68	P	
Ti XX	10.04	P		Ni XXIII?	10.680	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti XX	11.94	P		Ni XXI	12.467	30	
Cu XXI	11.942	10		Co	12.47	30	
Ni XX	11.946	60		Ca XVIII	12.478	10	
Fe XXII	11.956	10		Fe XXI	12.494	10	
Ni XX	11.963	20		Co XX	12.50	30	
K XIX	11.97	P		Mn XVI	12.510	50	
Mn XVI	11.971	10		Fe XVII	12.514	20	
F IX	11.988	P		Fe XXI	12.521	20	
Fe	11.994	10		Co	12.54	30	
Co XXII?	11.995	30		Fe XXI	12.543	20	
Cu	12.003	10		Ni XXI	12.552	30	
Mn XXIII	12.01	P		Cu XX	12.558	80	
Fe	12.016	20		Fe XXII	12.573	20	
Sc XVIII	12.03	?		Ni XXI	12.581	30	
Ni XX	12.043	30		Fe XXI?	12.585	20	
Cu XXI	12.045	10		Cr	12.589	0	
Co XXII	12.067	30		Co XVIII	12.593	70	
Ti XIX	12.07	?		Fe XXI	12.599	20	
Fe	12.076	10		Cr XVIII	12.61	P	
Ca XX	12.09	P		XXII	12.620	100	
Ni XX	12.103	40		Cr XXI	12.63	?	
Fe XVII	12.122	150		Ca XVIII	12.636	20	
Cu XXI	12.125	20		Ni XIX	12.641	90	
Ne X	12.134	P	100	Mn XVII	12.643	40	
Ni XX	12.139	0		F IX	12.644	P	30
V XIX	12.14	?		Co XVIII	12.656	60	
Co XX?	12.144	40		Sc XIX	12.66	20	
Fe XXI	12.145	10		Cr XXII	12.662	200	
Mn XXIII	12.158	20		Fe XVII	12.681	20	
Ni XX	12.164	10		Co XIX	12.689	40	
Cu XXI	12.171	20		Ni	12.693	30	
Mn XVII	12.181	20		Fe XXI	12.726	10	
Co	12.190	30		Fe XX	12.741	10	
Cr	12.201	0		Mn	12.742	30	
Cu XXI	12.204	10		Fe XX?	12.756	10	
Ar XVIII	12.21	P		Ni	12.759	20	
Mn XXIII	12.222	20		Cr	12.778	0	
Fe XXI	12.233	0		Fe	12.780	20	
Co XXI	12.234	30		Co XIX	12.781	30	
Cu XXI	12.24	P		Ni XIX	12.805	50	
Ni XX	12.250	20		Fe XXI	12.808	30	
Fe XVII	12.262	150		Cu XX	12.82	40	
Fe XVII	12.274	20		Ni XVII	12.830	30	
Co XXII	12.285	30		Fe XX	12.854	30	
Ne IX	12.303	50		Co XIX	12.864	40	
Ni XX	12.315	0		Fe	12.882	20	
Fe XVII	12.319	30		Cr	12.909	10	
Cu XXI	12.328	10		Fe	12.915	10	
Cr	12.329	0		Ni XX	12.915	30	
Co XX	12.338	20		Co XIX	12.922	70	
Ne IX	12.355	50		Fe XX	12.924	10	
Fe XXI	12.362	?		Co XIX	12.973	40	
Mn XVI	12.373	20		Fe XX	12.980	10	
Mn XXIII	12.385	200		Fe XIX	12.990	20	
Fe XXII	12.385	0		Cr XVIII?	13.000		
Ca XVIII	12.40	P		Mn XXI	13.01	?	
Fe XXII?	12.401	20		Fe XX	13.012	20	
Fe XXI	12.411	20		Fe XXJ	13.052	20	
Co XX	12.42	30		Ni XX	13.065	10	
Ni XIX	12.42	100		Co XIX	13.078	50	
Fe XXI	12.427	10		Fe XXI	13.084	20	
Cr	12.435	0		Cu XIX	13.11	-A	
Fe XXI	12.438	10		Co XIX	13.114	30	
Cu	12.439	0		Ca XVIII	13.118	20	
Fe	12.454	10		Ni XX	13.120	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn	13.134	0		Fe XIX	13.695	20	
Fe XX	13.141	20		Co XX	13.705	20	
Cr XVII?	13.143	0		Ne VIII	13.710	70	-A
Cr XXII	13.147	200		Ne IX	13.71	?	f
Ni XX	13.151	10		Mn XX	13.71	?	
Fe XXI	13.158	20		Fe XXII	13.711	10	
Sc XIX	13.160	20		Fe XX	13.720	10	
Fe XX	13.183	20		Mn XXI	13.73	?	
Co XIX	13.183	40		Fe XIX	13.733	20	
Ca XVIII	13.191	20		Fe XXII	13.750	0	
Fe XXII	13.196	10		Cr	13.760	0	
Cr	13.217	10		Ni XIX	13.768	50	
Sc XIX	13.236	100		Co XX	13.769	40	
Co XIX	13.238	40		Fe XXII	13.770	0	
Ni XX	13.240	20		F VIII	13.780		
Fe XXI	13.249	20		Fe XXII	13.780	0	
Fe XXI	13.265	10		Fe	13.793	30	
Co XIX	13.272	30		Mn	13.814	10	
Cr XV	13.294	10		V XX	13.82	?	
Cr XXII	13.294	200		Co	13.822	40	
Fe XXI	13.296	10		Fe XVII	13.823	100	
Ni XX	13.303	10		Mn XX	13.86	?	
Fe XIX	13.307	20		Cr XV	13.862	20	
Fe XIX	13.322	20		Co XVIII	13.862	90	
Ar XVIII	13.35	P		Co XIX	13.862	90	
Fe XX	13.351	30		Fe XVII	13.888	100	
Sc XVIII	13.37	?		K XVII	13.92	P	
Ni XX	13.37	?		Co	13.921	30	
Fe XX	13.374	30		Fe XVIII	13.934	20	
Cr XXII	13.393	20		Mn	13.950	10	
Fe XIX	13.399	50		Cr XVI	13.953	10	
K XIX	13.41	P		Fe XX	13.953	30	
Ca XVII	13.41	?		K XVII	13.98	P	
Cr XV	13.416	10		Cr XV	13.991	20	
Fe XXII	13.416	20		Co	13.997	0	
Co XIX	13.417	30		Cr	14.024	10	
Fe XX	13.422	20		Ni XIX	14.03	70	
Fe XXII	13.442	10		Fe XVIII	14.031	10	
Ne IX	13.447	1000		Cr	14.039	10	
Ti XVIII	13.45	?		Co	14.040	50	
Mn XVI	13.46	60		Fe XXII	14.053	0	
Fe XIX	13.464	40		Co XVI	14.080	30	
F VIII	13.49			Ca XVIII	14.087	100	
Fe XIX	13.497	10		Cr XVI	14.087	20	
Co XIX	13.500	20		Mn XVI	14.093	30	
Fe XIX	13.518	60		Ni XVIII	14.11		-A
Fe XXI	13.518	60		Fe XVIII	14.129	30	
Mn XX	13.53	?		K XVII	14.14	P	
Fe XIX	13.547	10		Cl XVII	14.15	P	
Ne IX	13.549	150		Fe XXII	14.160	20	
Cr XXII	13.549	200		Co XIX	14.178	30	
Cr XVI	13.556	10		Cr	14.205	10	
Fe XIX	13.575	20		Mn XIX	14.205	20	
Mn XVI	13.61	50		Fe XVIII	14.207	70	
Co XX	13.628	100		Cr XX	14.26	?	
Fe XIX	13.631	10		Fe XVIII	14.260	30	
Fe XIX	13.644	20		Mn XX	14.325	20	
Cr	13.652	10		Fe XVIII	14.351	40	
Ne VIII	13.654	70	-A	Co XIX	14.355	20	
Ni	13.658	10		Ni XVIII	14.37		-A
Fe XIX	13.667	30		Fe XVIII	14.373	50	
Fe XX	13.667	30		Fe XVIII	14.422	20	
Mn XX	13.67	?		Co XIX	14.425	20	
Mn XX	13.68	?		O VIII	14.453		
Cl XVII	13.69	P		Fe XVIII	14.453	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
F VIII	14.458			O VIII	15.176	P 10	
Mn XX	14.47	?		Ti XIX	15.18	?	
Co XIX	14.476	10		Cr XV	15.21	50	
Fe XVIII	14.481	0		Ti XX	15.217	200	
Co XIX	14.513	10		Cr XIX	15.23	?	
O VIII	14.524			Fe XIX	15.237	30	
Mn XX	14.53	?		Mn XVI	15.238	20	
Fe XVIII	14.535	40		Ti XX	15.252	200	
Co XIX	14.539	20		Fe XVII	15.260	100	
Fe XVIII	14.549	40		Fe XVIII	15.260	100	
Fe XVIII	14.580	40		Fe XIX	15.288	20	
Co XIX	14.599	10		Fe XIX	15.306	0	
Fe	14.609	20		Mn XVI	15.312	20	
Ne (K α)	14.610			Fe XIX	15.341	10	
O VIII	14.634			Fe XIX	15.361	20	
Cr	14.641	0		Mn XVII	15.403	20	
Mn XX	14.650	20		Fe XIX	15.413	20	
Ca XVIII	14.658	100		Co XVIII	15.432	70	
Co XIX	14.664	10		Fe XVII	15.453	90	
Fe XVIII	14.669	30		Fe XIX	15.453	90	
Mn XX	14.698	20		S XVI	15.46	P	
K XVII	14.70	P		Fe XV	15.490	40	-A
Fe XVIII	14.703	30		Cr XV	15.509	10	
Fe XXII	14.711	0		Co XVII	15.551		-A
Fe	14.733	10		Fe	15.558	10	
Ca XVIII	14.738	300		Fe XVIII	15.567	10	
Fe	14.750	20		Mn XVII	15.584	80	
Mn XIX	14.752	40		Cr XIX?	15.587	20	
K XVII	14.76	P		Fe XIX	15.598	10	
Co XIX	14.761	10		Fe XVIII	15.624	60	
Fe XVIII	14.770	10		Mn XVII	15.675	40	
Cr XIX	14.775	10		Cr XIX	15.680	10	
Fe XVIII	14.804	10		V XIX	15.70	?	
Mn	14.816	30		Mn XVII	15.738	50	
O VIII	14.821			V XIV	15.748	100	
Co	14.824	10		K XVII	15.75	P	
Cr XIX	14.845	10		Fe XVIII	15.764	20	
Fe XXII	14.857	0		Cr XV	15.788	20	
Fe	14.870	20		Mn XVI	15.822	100	
Mn XVIII	14.877	70		Fe XVIII	15.828	80	
Ca XVII	14.90	?		Co XVII	15.828		-A
Fe	14.908	20		Fe XVIII	15.869	80	
Cr XIX	14.925	0		V XV	15.87		
Fe XIX	14.927	10		Mn XVII	15.881	20	
Ar XVIII	14.94	P		Cr XIX	15.888	30	
Cl XVII	14.97	P		Ti XX	15.914	200	
Fe XIX	14.971	10		Mn XVII	15.936	50	
F IX	14.984	P 100		S XVI	15.97	P	
Sc XVII	14.99	?		Fe XVIII	15.979	0	
Cr XIX	14.99	?		Mn XVII	15.98	P	
Cr XIX	15.00	?		Cr XIX	16.00	?	
Fe XVII	15.013	150		Fe XVIII	16.004	80	
Mn	15.024	50		O VIII	16.006	P 30	
Fe	15.042	50		Fe XVIII	16.024	50	
K XVI	15.05	?		Mn XVII	16.048	30	
Cr XV	15.06	50		Ti XX	16.059	300	
Cr XX	15.06	?		Fe XVIII	16.074	50	
Fe XIX	15.069	30		Mn XVII	16.121	20	
Cr XIX	15.08	?		Fe XVIII	16.164	40	
Fe XIX	15.083	20		Mn XVII	16.20	10	
Fe XIX	15.110	20		Ti XX	16.218		
Fe XIX	15.132	0		Fe XVIII	16.236	20	
Fe XIX	15.158	10		Fe XVIII	16.270	10	
Co XVIII	15.169	40		Mn XVII	16.28	0	
Fe XIX	15.173	30		Fe	16.303	10	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca XX	16.31		P	V XVIII	17.545	40	
V XVIII	16.321	100		Fe	17.548	10	
Fe	16.336	20		V XIV	17.575	100	
V XVIII	16.341	100		Ti XIV	17.58		
V XVIII	16.378	100		Mn XVII	17.59		
Ti XX	16.379			Fe	17.597	10	
V XVIII	16.423	40		P XV	17.60	P	
K XVII	16.43		P	V XVII	17.6		
Cr XVII	16.455	90		Cr XVI	17.62	40b	
V XVIII	16.467	160		Fe	17.622	20	
K XVII	16.50		P	Sc XIX	17.634	200	
Fe	16.506	10		V XVIII	17.678	80	
Mn XVIII	16.53		?	Cr XVI	17.69	10	
V XVIII	16.558	140		V XVIII	17.717	20	
V XIX	16.59		?	Mn XVII	17.72	50	
Mn XVI	16.616	100		Ti XIII	17.727	100	
K XVI	16.70		?	Ti XIV	17.73		
Mn XVIII	16.73		?	Cr XVI	17.75	0	
Cl XVII	16.76		P	V XIV	17.754	100	
Sc XVIII	16.76		?	O VII	17.768	200	
Fe XVII	16.775	200		Sc XIX	17.779	300	
F VIII	16.807			Ti XIV	17.80		
Ca XVI	16.81		?	Mn XVII	17.80		
V XVIII	16.816	60		Cr XVI	17.81	30	
Sc XIX	16.819	200		Cr XVI	17.86	20	
Sc XIX	16.861	200		Ti XII	17.869	50	
Mn XVI	16.882	80		Ti XIV	17.88		
Cr XV	16.889	100		Mn XVII	17.90		?
Fe	16.892	20		Cl XV	17.96	50	
S XVI	16.90		P	Cr XVI	17.96	10	
V XIV	16.939	500		Cr XVI	18.01	0	
F VIII	16.951			Sc XIX	18.026		
Cr XV	16.965	50		V XVI	18.076	200	
V XVIII	17.018	40		K XIX	18.08	P	
Fe XVII	17.051	200		Ti XVII	18.091	80	
Cr XVI	17.09	10		V XVIII	18.12	P	
V XIV	17.094	400		Cl XV	18.13	50	
Mn XVI	17.095	40		Ti XVII	18.154	60	
Cl XV	17.10	50		Ti XVII	18.172	40	
Fe	17.127	20		P XV	18.18	P	
F VIII	17.15		f	Sc XIX	18.182		
Fe	17.162	10		Ti XVII	18.215	40	
O VII	17.200	50		V XVI	18.223	50	
Fe XVI	17.207	20	-A	Ti XVII	18.268	100	
Cl XV	17.25	50		F (K α)	18.32		
V XIV	17.26	200		Cr XVII	18.34		?
V XVII	17.27			V XVI	18.344	400	
Cr XVI	17.27	20		Ti XVIII	18.38		?
Mn XVII	17.29	20		Ti XVII	18.387	60	
Fe XV	17.345	10	-A	Cr XV	18.497	400	
Fe	17.367	20		V XVI	18.529	400	
Ti XVIII	17.37		?	Cr XVII	18.54		?
Cr XVI	17.38	50		Ca XVII	18.60		?
O VII	17.396	100		O VII	18.627	500	
V XVIII	17.400	180		Cl XIV	18.63	50	
Fe	17.402	20		V XVI	18.630	600	
V XVIII	17.442	80		Mn XVI	18.654		
Fe	17.450	20		Ti XVII	18.665	20	
Cl XV	17.46	50		N VII	18.670	P	14
Cr XVI	17.46	20		N VII	18.682	P	13
Fe	17.469	20		Ca XVIII	18.691	500	
V XVIII	17.482	160		N VII	18.698	P	12
Mn XVII	17.50			V XVI	18.713	200	
Fe XVI	17.500	40	-A	N VII	18.717	P	11
Cr XVI	17.54	40		Ca XVIII	18.732	300	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N VII	18.742	P	10	V XVI	20.082	600	
N VII	18.774	P	9	Cl XV	20.13	150	
V XIV	18.782	700		Ti XIII	20.135	50	
Cr XV	18.782	200		Ar XVIII	20.16	P	
N VII	18.819	P	8	Ti XV	20.169	100	
V XIV	18.870	300		Ti XVII	20.183	20	
N VII	18.882	P	7	Sc XVI	20.200	80	
V XVI	18.890	250		Si XIV	20.21	P	
S XVI	18.93	P		Ca XVIII	20.220	100	
Mn XVI	18.935			Sc XVI	20.224	20	
Ti XVII	18.939	20		V XVI	20.282	400	
O VIII	18.969	P	100	Sc XVI	20.291	40	
N VII	18.974	P	6	Sc XII	20.298	100	
Cl XV	18.99	100		Ti XV	20.317	300	
Cr XV	19.015	50		Ca XVII	20.330	200	
V XV	19.04	40		Sc XVI	20.330	80	
Ti XVI	19.1			Sc XVI	20.392	80	
N VII	19.118	P	5	Ti XV	20.422	450	
Mn XV	19.155	P	-A	Ca XVII	20.433	300	
Ti XIII	19.204	250		Sc XII	20.438	50	
V XV	19.21	60		V XVI	20.447	600	
P XV	19.24	P		Sc XVI	20.458	80	
Ti XVI	19.26			Sc XVI	20.47	?	
Cr XVI	19.27	40		Ca XVII	20.502	100	
Sc XVII	19.32	?		V XVI	20.516	400	
N VII	19.361	P	4	Cl XIV	20.55	50	
Ti XIII	19.366	200		V XVI	20.663	250	
Ca XVII	19.368	20		Ca XVII	20.665	200	
Ti XVII	19.369	180		Ca XVII	20.700	100	
V XV	19.38	80		Ti XV	20.704	200	
Ti XVII	19.415	40		V XIV	20.716		
Ca XVII	19.438	200		Ca XVII	20.754	200	
V XV	19.45	60		K XVI	20.76	?	
Mn XV	19.450	P	-A	Ca XVII	20.768	100	
Ca XVII	19.459	300		Ca XVII	20.827	300	
Ti XVII	19.459	60		Ti XV	20.829	300	
Cr XVI	19.46	0		Sc XVI	20.831	40	
Ti XVII	19.501	40		Cr XIV	20.84	50	
V XV	19.53	70		Ca XVII	20.855	200	
Cr XVI	19.53	40		Cr XV	20.863	400	
Ca XVII	19.539	200		Si XIV	20.88	P	
Cr XVI	19.55	40		K XVII	20.88	P	
Cl XIV	19.58	50		Ca XVII	20.880	300	
Ca XVII	19.638	300		N VII	20.910	P	2
Ca XVIII	19.642	600		K XVII	20.93	P	
Ti XVII	19.651	20		Ti XV	20.932	150	
V XV	19.66	60b		V XIV	21.018		
V XV	19.69			Ti XIII	21.035	350	
Ti XVII	19.718	40		Ti XV	21.094	50	
Cr XVI	19.72	50		Cl XV	21.10	100	
V XVI	19.730	300		Sc XVI	21.114	20	
V XV	19.74	10		Ti XIII	21.127	100	
Ca XVIII	19.789	600		Cr XV	21.153	300	
V XV	19.79	30		Ar XVII	21.17	100	
Cr XVI	19.82	40		Cl XV	21.18	150	
N VII	19.826	P	3	Ca XVII	21.212	200	
V XV	19.86	70		Ca XVII	21.267	200	
V XV	19.91	40b		V XIV	21.294	1000	
Sc XIII	19.93			Ca XVII	21.303	100	
Ti XIII	19.943	50		Cl XV	21.41	50	
Cr XVI	19.96	10		Sc XV	21.41		
V XV	20.00	10		Cr XIV	21.467	-A	
V XV	20.03	30		Sc XV	21.49		
Ca XVIII	20.052	100		Sc XV	21.51		
Ca XVII	20.082	100		P XV	21.54	P	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V XV	21.58	60		V XIV	23.490		
O VII	21.6020	1000		Cu XIX	23.563	10	
Ca XVII	21.606	200		Sc XIV	23.568	100	
Ar XIV	21.61 ?			Ar XIII	23.57	200	
Ca XVI	21.61 ?			Cu XIX	23.599	10	
Sc XVI	21.637	40		O (K α)	23.62		
Sc XVI	21.670	60		Cu XIX	23.621	1	
Sc XVI	21.732	80		V XIII	23.678	0	
Cr XIV	21.770		A	Ti XIII	23.698		
S XIV	21.79	50		S XIII	23.70	250	
O VII	21.804	300		Cu XIX	23.704	10	
Sc XVI	21.816	40		Sc XII	23.725	350	
V XV	21.83	50		Sc XIV	23.740	100	
V XV	21.92	50		N VI	23.771	10	4
Sc XVI	21.927	40		V XIV	23.794		
Sc XII	21.940	250		P XIII	23.810	10	
Cl XIV	22.60	50		Sc XII	23.821	50	
Sc XVI	22.016	20		Ar XIII	23.93	50	
K XVII	22.020	100		V XIII	23.96	20	
Ca XIV	22.07			Ti XIII	23.991		
Si XIV	22.09		P	V XIII	24.083	20	
V XV	22.09	60		Cl XIII	24.09	50	
O VII	22.10		f	Sc XIII	24.09	20	
Ti XV	22.109	100		Ca XIV	24.11		
Cl XIV	22.11	50		V XIII	24.202		A
Ca XVII	22.113	200		Al XIII	24.22		P
Sc XII	22.119	200		S XIV	24.26	100	
K XVII	22.163	100		Sc XIII	24.28	30	
V XV	22.20	30		Cl XIII	24.29	200	
Ti XIV	22.28	20		Ca XIV	24.30		
Ca XVII	22.347	100		Ti XIV	24.32	60	
Cl XIV	22.37	50		V XIII	24.330	30	
Ar XVII	22.37	40		K XV	24.34		?
V XV	22.38	20		Cl XIII?	24.40	50	
Cl XIV	22.42	100		S XIV	24.43	150	
Ti XV	22.471	350		V XIII	24.440	0	
Cu XIX	22.475	1		V XIII	24.517		A
Sc XVI	22.522	20		Sc XIII	24.56	60	
K XVII	22.53		P	Ca XIV	24.6		
Cl XVII	22.61		P	Ar XIII	24.61	80	
P XIII	22.64	50		Sc XIII	24.65	10	
Sc XIV	22.650	150		V XIII	24.654	0	
Cu XIX	22.661	1		Sc XIII	24.71	40	
Ti XV	22.688	200		Ti XIV	24.73	50	
K XVII	22.70		P	Si XIV	24.74		P
Ca XV	22.73			V XIII	24.758	0	
Sc XIV	22.825	50		N VII	24.781	100	1
Sc XII	22.837	50		Cl XIII	24.79	50	
Cl XIV	22.86	100		Cl XIII	24.83		?
Ti XV	22.936	300		Cl XIII	24.86	50	
Ca XVI	22.95		?	Ni XVIII	24.881	1	
Sc XIV	22.964	300		Sc XIII	24.89	10	
Ti XV	22.967	200		N VI	24.898	30	
Ar XIII	23.03	50		Cl XIII	24.97	50	3
S XIV	23.04	150		Sc XIII	24.97	30	
Ti XV	23.049	150		Sc XIV	24.971	50	
Sc XII	23.045	50		Ar XV	25.05	100	
P XIII	23.08	50		Ca XX	25.05		P
Ti XV	23.187	200		Ni XVIII	25.070	3	
S XIII	23.25	150		Sc XIII	25.08	20	
Sc XIV	23.274	250		P XIII	25.103	20	
Ti XIII	23.356			Sc XIII	25.12	20	
Ar XIII	23.39	50		Cu XIX	25.142		
Sc XIV	23.430	200		P XIII	25.169	20	
Al XIII	23.44		P	Cu XIX	25.175	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar XII	25.19	100		Si XII	27.035	1	
Sc XIII	25.19	20		P XII	27.049	10	
Sc XIII	25.23	20		Cu XIX	27.076	35	
Ar XII	25.24	100		Ca XI	27.079	20	
Cu XIX	25.295	20		P XII	27.101	10	
Ca XI	25.327	100		Ar XV	27.14	P	
Sc XIII	25.33	10		Ar XIII	27.17	60	
Ar XIV	25.42	60		Ti XII	27.20	20	
Sc XIII	25.43	10		Ar XIV	27.22	50	
Sc XIV	25.441	300		Sc XII	27.260		
Ca XI	25.517	100		Ca XX	27.27	P	
Cu XIX	25.525	60		Ti XII	27.306	20	
S XVI	25.54	P		Ar XV	27.41	120	
S XII	25.55	50		Ca XII	27.412	20	
Ar XIV	25.58	60		Ar XIV	27.42	200	
Ar XV	25.60	100		Ar XIV	27.47	300	
Al XIII	25.63	P		Ti XII	27.489		A
Sc XIV	25.647	150		Mg XII	27.52	P	
Si XII	25.655	1		Ti XII	27.590	20	
Ar XVI	25.71	400		Ar XIII	27.60	100	
Ar XV	25.72	40		Ca XII	27.606	20	
Ca XIII	25.76			Ar XIV	27.63	300	
P XII	25.788	0		Sc XIII	27.63	20	
S XIII	25.80	100		Cl XIV	27.65	250	
Ar XV	25.84	60		P XII	27.677	0	
K XV	25.91	?		K XIX	27.77	P	
Sc XIV	25.923	300		Ar	27.79	50	
Sc XIV	25.988	250		Ti XII	27.818		A
Ar XV	26.00	80		Si XII	27.850	3	
Ca XIII	26.02			Cl XIV	27.88	250	
Ni XVIII	26.026	6		Fe XVI	27.88		
C VI	26.026	P	5	Ar	27.90	50	
Si XII	26.03			Sc XIII	27.90	30	
Ni XVIII	26.046	3		Co XVII	27.902	3	
Sc XIV	26.059	150		Si XII	27.909	10	
Sc XIV	26.200	150		Sc XIII	27.97	10	
Ni XVIII	26.218	10		Ca XII	27.978	100	
Sc XIV	26.226	100		Ni XVIII	27.98		
Ar	26.30	100		Ni XVIII	27.982	20	
Zn XX	26.33	10		Ti XII	28.090	0	
S XIII	26.35	150		P XII	28.017	10	
C VI	26.357	P	4	Ni XVIII	28.018	3	
Ar XIII	26.36	110		P XIII	28.044	50	
Ca XIII	26.36			Ar XII	28.05	100	
Cu XIX	26.36	20		Cl XIV	28.12	250	
Ca XI	26.442	20		Ti XII	28.120	0	
Cu XIX	26.452	20		P XIII	28.128	70	
Si XII	26.460	3		Sc XIII	28.13	40	
Ar XIII	26.53	60		Ca XII	28.13	50	
Sc XII	26.544			Ni XVIII	28.20	35	
P XIII	26.608	10		Ar XV	28.26	120	
Zn XX	26.62	30		Cl XV	28.27	300	
Ca XI	26.639	20		Sc XIII	28.27	10	
Ti XIII	26.641			S XII	28.29	50	
Cl XV	26.66	350		P XII	28.304	30	
Cl XV	26.67	350		Ar XV	28.32	150	
Ar XIV	26.72	40		Sc XIII	28.32	10	
Ar XIII	26.82	40		S XII	28.41	100	
Ti XII	26.86	0		Cl XV	28.42	450	
Sc XII	26.920			Mg XII	28.43	P	
Ti XIII	26.960			Sc XIII	28.45	20	
Ca XI	26.962	100		C VI	28.466	P	2
Si XII	26.98			P XII	28.549	10	
C VI	26.990	P	3	Cu XIX	28.626	20	
Cu XIX	27.025	60		P XIII	28.66	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe XVI	28.67			Ar XIII?	30.24	50	
Cu XIX	28.671	35		Cl XIV	30.25	300	
Ar XIII	28.68	80		Si XI	30.322	5	
Al XIII	28.70		P	Cu XVIII	30.325	35	
Sc XIII	28.75	20		Fe XVI	30.33		
N VI	28.787	100	2	P XI	30.34	150	
Co XVII	28.85			Ar XIII	30.34	50	
Co XVII	28.874	6		Si XI	30.368	10	
Cl XIV	28.9		?	Al XI	30.376	20	
Cl XV	28.93	200		Ar XI	30.40	150	
Co XVII	28.960	5		S XIV	30.43	250	
Cu XIX	28.978	125		Ca XI	30.448	600	
P XV	29.07		P	Sc XII	30.480		
N VI	29.084			Ar XIII?	30.58	100	
Cl XV	29.09	200	1	Ar XII	30.65		
Ar X	29.1	100		P XII	30.667	0	
Co XVII	29.171	10		Ar XIII	30.68	50	
Ar X	29.2	50		P XII	30.722	40	
Ar XIII	29.20	100		P XII	30.749	40	
S XII	29.23	50		Ar XIII?	30.77	50	
Cu XIX	29.277	200		Sc XII	30.816		
Ar XIII	29.32	150		Ar XIII?	30.84	50	
Ar XIV	29.33	150		Ca XI	30.867	300	
Ar XIII	29.37	250		K X	30.887	50	
Ni XVIII	29.383	3		Cl XIV	30.90	200	
Cl XIV	29.40	350		Ni XVII	30.91		
Al XI	29.416	6		K X	30.937	20	
Ni XVIII	29.422	3		Ar XVIII	30.94	P	
Si XII	29.439	10		Ar X	30.96	150	
Ar XI	29.48	150		Cl XIV	30.98	200	
Ar XIV	29.49	150		Cl XIV	31.0	?	
Si XII	29.509	20		Si XII	31.015	60	
Cl XIV	29.52	450		S XI	31.02	150b	
N VI	29.53		f	Fe XVI	31.041	3	
Ar XIII	29.56	250		K X	31.062	20	
Ar XV	29.57	300		Ar X	31.08	100	
Si XII	29.574	1		P XII	31.090	40	
K X	29.588	100		Ar XI	31.10	200	
P XII	29.622	10		Cl XIII	31.12	250	
Si XII	29.645	3		Co XVII	31.142	20	
Ar XIII	29.67	50		Ar XII?	31.18	50	
Ni XVIII	29.779	35		K X	31.200	20	
Al XI	29.793	10		Cl XIII	31.24	150	
K X	29.794	50		Fe XVI	31.242	20	
Ni XVIII	29.829	20		Ca XI	31.257	200	
Ar XIII	29.85	100		Al XI	31.313	35	
Ar XIV	29.90	50		P XII	31.327	10	
Fe XVI	29.93			Cl XIII	31.35	300	
P XII	29.970	10		Ar XII	31.35	250	
P XII	29.996	40		Ar XI	31.36	300	
Cl XIV	30.00	200		Co XVII	31.386	35	
Cu XVIII	30.019	10		Ar XII	31.39	300	
P XII	30.060	60		Al XI	31.426	3	
Cl XIV	30.07	250		Cl XIII	31.44	450	
Zn XX	30.08	20		Cl XIII	31.47		
Mg XII	30.09		P	Ar XII?	31.47	300	
Cl XIV	30.10	150		Al XI	31.483	6	
Fe XVI	30.10			Ar IX	31.52	600	
Cu XVIII	30.104	20		P XII	31.527	30	
Si XI	30.126	5		Ar XII	31.55	100	
Cl XIV	30.13	350		Ar XII?	31.56	100	
Zn XX	30.14	30		N (K α)	31.6		
S XIII	30.2		P	S XIII	31.6	150	
Ar XIII?	30.21	50		Cl XIII?	31.60	250	
K XIX	30.22		P	Ar XII	31.65	350	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar IX	31.66	700		Ar XI?	33.03	50	
Ar XIII	31.66	?		Cl XIII	33.04	150	
Ca XII	31.660	100		Fe XVI	33.04		
Ar XIII	31.70	80		Co XVII	33.046	20	
Ar XIII	31.78	300		Al XI	33.109	10	
Ni XVIII	31.845	20		Si XI	33.153	10	
Ar XIII	31.86	80		Al XI	33.172	35	
Ni XVIII	31.890	20		S XIII	33.2	P	
Ar XIII	31.92	100		Si XI	33.222	20	
Si XI	31.924	10		P XI	33.23	100	
S XIII	31.94	350		Ni XVII	33.249	6	
Ca XX	31.95	P		Cu XIX	33.260	35	
Ca XII	31.960	50		S XIV	33.28	150	
Si XI	31.980	20		Si XI	33.298	20	
Ar XII	31.99	200		Cu XIX	33.317	60	
Ni XVIII	32.034	60		Ni XVII	33.340	3	
Cl XIII?	32.05	150		S XIV	33.38	50	
C V	32.064		11	Si XIV	33.39	P	
Al XI	32.068	6		C V	33.4257	30	6
Al XI	32.128	10		C V	33.463		5
Ar XII	32.16	50		Si XI	33.515	20	
Fe XVI	32.166	10		Ar XI	33.53	100	
K XI	32.180	100		Cl XII	33.54	250	
C V	32.188		10	Ni XVII	33.567	3	
Fe XVI	32.192	6		Si XI	33.573	10	
Ar XII	32.20	50		Cl XII	33.58	350	
Ar XIII	32.25	200		Ar XI	33.65	300	
Ca XII	32.280	100		Ar XVIII	33.68	P	
P XII	32.304	0		Mg XII	33.70	P	
Cl XIII	32.32	150		C VI	33.736	P	1
K XI	32.339	50		Cl XII	33.74	350	
Ni XVIII	32.340	90		Cl XII	33.81	450	
Ar XII	32.35	250		Ar XI	33.84	200	
C V	32.3998	4	9	Na XI	33.85	P	
S XIV	32.40	200		Cl XIII	33.87	?	
S XIII	32.41	250b		S XIII	33.89		
Cl XIII	32.43	200		C V	33.925	3	
Fe XVI	32.433	10		Ar XIII	33.95	300	
Ar X	32.45	320		Ar XI	33.96	100	
Ca XII	32.498	50		Ni XVII	33.96		
S XIV	32.55	300		S XIII	33.99		
Cl XIII	32.55	200		Cl XII	34.00	300	
Ar X	32.55	50		C V	34.022	1	
Ar XIV	32.55	150		Cl XII	34.03	350	
Ar X	32.61	200		Si X	34.040	5	
Ar IX	32.64	400		Zn XX	34.08	60	
Fe XVI	32.652	35		Ar XI	34.10	100	
Ca XII	32.655	20		Fe XVI	34.21		
Ar X	32.70	230		Si X	34.238	5	
Si XI	32.735	10		Ar XI	34.24	150	
Ar X	32.74	50		Zn XX	34.27	30	
Ar XIV	32.74	100		C V	34.283	1	
C V	32.7542	10	8	Cl XIII	34.31	200	
Na XI	32.76	P		Ar XI	34.33	300	
C V	32.773		7	P XI	34.35	150	
K XI	32.810	50		Cl XIII	34.44	250	
Fe XVI	32.84			Al X	34.445	25	
Si XII	32.888	35		C V	34.520	2	
Co XVII	32.910	6		Ar XI	34.52	100	
Co XVII	32.951	6		C V	34.598	1	
Si XII	32.972	90		Cl XII	34.66	300	
Co XVII	32.995	35		S XIII	34.67	400	
Al XI	33.007	200		Ar XII	34.67	300	
P XI	33.01	200		C V	34.699	2	
Ca XII	33.01	P		Cl XVII	34.70	P	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cl XII	34.79	350		Ar XI?	36.31	200	
Ar XI	34.80	500		Si XI	36.311	80	
Ar XII	34.80	250		S XII	36.33	300	
Fe XVI	34.857	20		Si XI	36.335	80	
Ar XII	34.88	200		Al X	36.350	25	
Si XI	34.910	20		Ar X?	36.39	100	
C V	34.9728	100	4	Al X	36.403	50	
Al XI	34.994	200		Mg X	36.518	35	
Ar IX	35.02	700		P XII	36.520	30	
Al XI	35.065	250		S XII	36.54	150	
C V	35.070			Ar X?	36.56	100	
Ar XI	35.07	100	3	P XII	36.562	50	
P XIII	35.095	150		P XII	36.613	80	
Fe XVI	35.106	60		P XII	36.655	60	
P XIII	35.136	100		K XI	36.662	70	
Al XI	35.163	6		Cl XI	36.67		
Ca XI	35.212	800		Ar XII	36.67	500	
Cu XVIII	35.238	6		Al XI	36.675	400	
Al XI	35.239	5		Cl XII	36.68	350	
Cu XVIII	35.256	6		Ar X	36.69	200	
Ar IX	35.28	300		P XII	36.697	40	
Cu XVIII	35.294	10		S XIII	36.7		P
Al X	35.301	10		S XII	36.71	150	
K X	35.307	400		Zn XX	36.74	70	
Si X	35.319	10		Fe XVI	36.749	60	
Fe XVI	35.333	1		P X	36.75	500	
Al X	35.340	10		Si XI	36.772	70	
S X	35.353	10		Ar X	36.78	150	
Si XI	35.353	10		P XII	36.792	70	
Mg X	35.366	3		Fe XVI	36.803	20	
Fe XVI	35.368	3		Cl XII	36.86	300	
Ar XI	35.37	200		Al X	36.925	100	
Si XI	35.383	60		Ar IX	36.96	100	
K XIX	35.41		P	K XI	36.971	50	
Si XI	35.446	100		P XII	36.975	100	
Ca XI	35.576	800		Ni XVIII	36.990	60	
Ar XI	35.58	150		P XII	37.041	10	
Co XVII	35.617	6		Ni XVIII	37.049	60	
Si X	35.656	5		Cl XI	37.05		
Co XVII	35.660	10		Cl XII	37.05	300	
Ar XII	35.68	220		Si XI	37.060	10	
S XIII	35.7		P	Co XVI	37.070	3	
Ar XI	35.70	100		P XII	37.074	10	
Co XVII	35.707	20		Fe XVI	37.096	6	
Si X	35.709	20		Ar X?	37.10	50	
Fe XVI	35.71			Fe XVI	37.138	10	
K X	35.779	200		Si X	37.150	20	
Na XI	35.82		P	Co XVI	37.165	6	
Ar IX	35.82	500		Si X	37.206	20	
Mg X	35.827	6		Si X	37.248	10	
Si X	35.838	40		Cu XIX	37.290	250	
Al X	35.888	50		Si XI	37.340	50	
Si X	35.932	20		P XII	37.347	150	
Co XVII	35.932	20		Co XVI	37.401	10	
S XII	35.94	200		Ar X	37.43	250	
Si XIII	35.96		P	K XI	37.435	70	
Ar XI	35.96	100		B V	37.483		P
Fe XVI	36.01			Cu XIX	37.492	90	
Ar XI?	36.16	200		P XIII	37.561	150	
Al X	36.188	25		S XII	37.59	100	
S XIII	36.2		P	S XIII	37.6		P
Zn XX	36.20	50		Ar X	37.60	200	
K X	36.229	100		Mg X	37.644	50	
Si XI	36.238	10		Cl XII	37.67	200	
Cl XI	36.29			K XI	37.696	50	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
P XIII	37.706	200		Ne X	39.65	P	
P XIII	37.723	20		S XI	39.65		350
S XII	37.74	150		Cl VIII	39.655		10
Cl XVII	37.77		P	P XII	39.664		40
Ar XI	37.79	150		Mg X	39.669		250
K XI	37.870	20		S XIII	39.7	P	
Cl XII	37.88	200		Cu XIX	39.728		200
B V	37.960		P	Ar XI	39.75		250
Ar XI	38.00	150		Cl X	39.77		250
S XIII	38.2		P	Ar XI?	39.79		150
Ar X	38.23	150		Fe XVI	39.827		
Al X	38.255	100		Al X	39.853		50
Al X	38.310	125		Cl X	39.956		100
K XI	38.31		P	Ar XI	39.98		150
Ar XI	38.33	380		Ar XI	40.02		100
Si XI	38.336	20		Mg X	40.022		120
S XII	38.34	100		Ar XI	40.04		250
Ar X	38.40	500		Mg X	40.080		200
Ar X	38.51	420		Cl X	40.085		200
Ar XI	38.62	400		Na XI	40.11	P	
P XII	38.629	20		Cl X	40.136		1
Ar X	38.64	700		Fe XVI	40.153		
Al XIII	38.73		P	P XII	40.157		10
P XIII	38.754	30		P XII	40.171		30
Mg X	38.759	60		Fe XVI	40.199		10
Ar XI	38.79	300		Fe XVI	40.245		10
Mg X	38.823	120		C V	40.2680		500
Si X	38.830	60		Cu XIX	40.270		90
Ar XI	38.87	250		P XII	40.301		200
B V	38.871	10	P	Cu XIX	40.312		35
Cu XVIII	38.876	35		P XII	40.340		50
Ar X	38.88	500		P XII	40.380		120
P XIII	38.921	50		Cl XI	40.392		10
Fe XV	38.95			Si X	40.407		10
Ni XVII	38.96			Ar	40.42		50
S XI	38.99	450		Al X	40.421		25
Cl X	39.01	250		P XII	40.429		150
Al XI	39.091	250		P XII	40.478		20
Cl XII	39.15	250		Cl X	40.49		250
Si X	39.175	40		Si X	40.503		5
Al XI	39.180	400		P XII	40.613		120
S XVI	39.18		P	Cu XVIII	40.613		6
Si X	39.203	50		Mg IX	40.638		10
Cl X	39.253	10		Ar	40.64		100
S XI	39.26	350		Cl X	40.660		100
Si X	39.264	50		C V	40.7306		30
Al X	39.251	75		Cu XVIII	40.749		35
Ar XI?	39.30	200		Cu XVIII	40.769		10
Si X	39.305	80		Cl XI	40.787		10
P XII	39.310	120		Al IX	40.904		10
Ni XVII	39.346	3		Si XII	40.911		200
P XII	39.354	300		Si XII	40.951		200
Ni XVII	39.373	6		Ne X	40.96	P	
Ni XVII	39.415	10		Cl X	40.994		10
Si X	39.443	50		B V	40.996	P	30
P XII	39.456	500		Ni XVIII	41.015		125
Cl VIII	39.462	100		Si X	41.023		30
Ar XVIII	39.47		P	Al IX	41.037		20
Ar XI	39.49	300		Ar	41.08		50
Al XI	39.530	60		Si X	41.086		30
Al X	39.535	100		Cu XVIII	41.134		60
Si X	39.552	70		K X	41.148		700
Al XI	39.623	90		Fe XVI	41.17		
Al X	39.628	125		Cu XVIII	41.173		10
Ar XI	39.64	300		Ni XVIII	41.218		90

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar	41.38	150		Ar X	42.94	250	
Cl X	41.390	100		Si XI	42.950	20	
Co XVII	41.404	10		Si XI	43.046	20	
Co XVII	41.462	10		Mg IX	43.087	10	
C V	41.47	f		Mg IX	43.138	20	
P XII	41.471	50		Cl IX	43.168	120	
Ar IX	41.48	600		Al IX	43.195	40	
P XII	41.518	60		Al IX	43.237	40	
K X	41.541	700		Al IX	43.261	80	
Al IX	41.543	20		Ar X	43.27	150	
P IX	41.556	150		Si XI	43.290	10	
Fe XV	41.559	3		Si XI	43.329	10	
Ar X	41.57	200		Ne X	43.35	P	
Cl X	41.589	10		Si XI	43.385	10	
P XII	41.634	120		Fe XV	43.39		
Cl VIII	41.636	1		Ar	43.42	150	
Fe XV	41.663	10		Al X	43.460	75	
P XII	41.700	70		Mg IX	43.481	50	
Al X	41.730	106		P XI	43.488	50	
Mg IX	41.803	40		S X	43.5		
Ar X	41.89	100		P XI	43.529	70	
Fe XV	41.903	20		Al IX	43.549	10	
Fe XVI	41.91			Al X	43.549	350	
P XI	42.006	150		S XI	43.56	150	
Ar IX	42.02	200		Al X	43.577	100	
S X	42.16	100b		Fe XV	43.65		
Cl VIII	42.166	10		Ar X	43.69	350	
Cl VIII	42.220	200		S XI	43.75	150	
Al XI	42.23	P		Si XI	43.763	10	
Mg X	42.294	250		P XI	43.808	100	
Fe XVI	42.30			Ni XVIII	43.814	200	
Al X	42.310	75		Mg IX	43.843	60	
Al X	42.340	200		Ar X	43.92	450	
Mg X	42.363	400		Cl IX	44.003	200	
Al X	42.403	350		Si XII	44.021	200	
Cl VIII	42.430	100		P XII	44.014	10	
P XI	42.468	100		Mg X	44.050	400	
P XI	42.479	150		Ar X	44.05	350	
S X	42.51	P		Cl IX	44.088	400	
Mg X	42.523	6		P XI	44.115	300	
S X	42.54	P		Al X	44.136	10	
P XII	42.553	20		Si XII	44.165	250	
Ar IX	42.56	200		Cl IX	44.183	200	
S X	42.58	P		Ar	44.19	100	
Mg X	42.596	10		Si IX	44.215	10	
P XI	42.599	150		Si IX	44.249	10	
P XII	42.647	40		Cl XVII	44.25	P	
S XVI	42.65	P		Cl IX	44.267	300b	
P XII	42.679	20		Ar X	44.27	450	
Al IX	42.708	10		S VIII	44.350	20	
Si XI	42.730	40		Cl VIII	44.361	200b	
Al IX	42.744	10		Cl IX	44.361	200b	
P XII	42.763	140		Cl X	44.361	200b	
P XI	42.764	200		P X	44.364	250	
Si XI	42.773	10		Ni XVIII	44.365	250	
P XII	42.779	20		Mg IX	44.373	40	
Si XI	42.826	70		S VIII	44.374	100b	
Zn XX	42.83	70		S X	44.374	100b	
Ni XVII	42.855	20		S X	44.387	20	
Si XI	42.866	30		Ni XVIII	44.405	35	
Si XI	42.910	10		Mg IX	44.420	60	
Al IX	42.928	20		Ar X	44.45	450	
Fe XV	42.93			Al X	44.493	75	
Zn XX	42.93	80		S X?	44.5	350	
Cl IX	42.940	100		Si X	44.521	30	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cl IX	44.530	100		P XI	45.997	400	
S VIII	44.547	50		Cu XIX	46.086	60	
P XV	44.59	P		Na IX	46.090	100	
Cl VIII	44.603	200		Cl IX	46.098	100	
Ar X	44.63	400		P XI	46.203	450	
Si X	44.655	30		S VII	46.212	10	
C (K α)	44.7			Al X	46.223	75	
Al IX	44.704	60		S X	46.24	100	
Si X	44.719	20		Cl IX	46.242	10	
Na IX	44.723	10		Ar	46.26	50	
Al IX	44.743	80		Si XI	46.264	10	
Ar	44.79	150		P X	46.294	450	
Si X	44.830	30		Ne IX	46.3	P	
Ar X	44.84	300		Si XI	46.300	50	
Ni XVII	44.850	6		P X	46.334	450	
Si X	44.855	30		Mg IX	46.340	40	
Al X	44.902	10		S IX	46.373	50	
Si X	44.979	60		Ar	46.39	100	
Mg IX	44.983	20		Si XI	46.401	100	
P XI	44.987	100		S X	46.41	100b	
Ni XVII	44.995	10		S IX	46.413	50	
Ni XVII	45.018	1		Cr XIV	46.468		
Ar X	45.03	350		Cl X	46.476	200	
Al IX	45.077	10		Cr XIV	46.527		
Cl IX	45.112	400		Ar	46.53	150	
Mn XV	45.137			Si X	46.563	30	
Cl IX	45.261	200		S IX	46.585	10d	
S VIII	45.279	50		S IX	46.624	10	
S VIII	45.290	50		P X	46.636	300	
Co XVII	45.319			Mg IX	46.657	160	
Cu XIX	45.329	10		Fe XVI	46.661		
Cl IX	45.332	100		Si XI	46.662	40	
Al IX	45.344	40		Ca XX	46.7	P	
S VIII	45.370	20		Mg IX	46.711	10	
Cl IX	45.378	300		S IX	46.713	50	
Ar XII	45.38	50		Fe XVI	46.718		
Ni XVII	45.382	20		S IX	46.765	50	
Cl IX	45.396	300b		P X	46.769	350	
Cl X	45.396	300b		Cu XVIII	46.781	3	
Si XI	45.398	10		Cl X	46.845	100	
Ni XVII	45.424	6		Si X	46.895	20	
Cl X	45.431	10		Al IX	46.896	40	
S VIII	45.458	20		Cl X	46.908	10	
Cl IX	45.465	10		Cu XVIII	47.012	6	
Mg XII	45.47	P		Mg IX	47.041	60	
Ar XII	45.49	100		Si X	47.043	50	
S VIII	45.508	20		S IX	47.052	50	
Si XII	45.519	10		Cl X	47.085	15	
Cl IX	45.519	200		S VII	47.098	50	
Co XVII	45.527			S IX	47.188	10	
Cl IX	45.539	200		Mg X	47.231	250	
Si X	45.605	5		S IX	47.249	50	
Cl X	45.626	15		Si XI	47.293	20	
Mg IX	45.635	40		S VII	47.307	50	
Cl IX	45.657	100		Mg X	47.310	400	
Ar	45.67	150		Cu XIX	47.329	200	
Si X	45.684	60		Si XI	47.350	50	
P VIII	45.69	P		Si XI	47.385	10	
Si XII	45.692	20		Al IX	47.417	80	
Cl IX	45.745	10		S IX	47.433	200	
P X	45.905	75		Cu XIX	47.437	250	
P X	45.931	125		Si XI	47.453	10	
P X	45.963	200		Al IX	47.455	170	
Mg IX	45.980	20		Co XVI	47.483	100	
S X	45.99	100		Al IX	47.489	200	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Si X	47.489	50		Na IX	49.326	100	
Si XI	47.489	50		S IX	49.328	50	
S IX	47.518	30		Na IX	49.386	200	
Al IX	47.534	100		Si X	49.441	50	
Si X	47.545	50		Cu XVIII	49.452	10	
S VIII	47.566	10		B IV	49.4549		
Cu XVIII	47.585	10		P VIII	49.47	P	
S VIII	47.594	10		Cl VIII	49.487	700	
Si XI	47.607	50		Fe XV	49.49		
S IX	47.616	10		Cu XVIII	49.490	20	
Si XI	47.653	50		Ne IX	49.5	P	
S X	47.654	20		Cu XVIII	49.558	20	
Ne IX	47.7	P		Cl IX	49.568	100	
Si XI	47.702	5		Mg IX	49.586	1	
P X	47.702	100		Si X	49.701	100	
Si XI	47.735	20		P X	49.765	50	
Al IX	47.755	10		P X	49.803	25	
Na IX	47.776	10		Co XVI	49.838	100	
S VIII	47.793	10b		Al IX	49.854	100	
S X	47.793	10b		P X	49.865	15	
Mg IX	47.818	10d		Al IX	49.916	100	
Na IX	47.836	100		Co XVI	49.958	100	
Al IX	47.856	50		S XVI	49.97	P	
P X	47.896	50		Co XVI	49.979	20	
Si XI	47.899	50		Si X	49.984	60	
Mg IX	47.947	100d		Si VIII	49.987	10	
Ne IX	48.0	P		S VII	49.990	120	
Mg IX	48.024	10d		Si X	50.018	90	
S IX	48.160	100b		Si VIII	50.019	50d	
Al XI	48.297	70c		S VII	50.027	70	
Al XI	48.338	700		Fe XV	50.062	1	
Mg IX	48.340	100		Cl VIII	50.074	500	
S IX	48.362	20		Fe XV	50.085	10	
Si X	48.381	20		Fe XV	50.120	100	
Si X	48.440	40		Si X	50.124	70	
P XV	48.53	P		Si X	50.154	50	
Ne X	48.55	P		Mg VIII	50.219	20	
Na IX	48.553	200		Ni XVIII	50.253	20	
Si X	48.553	10		Si X	50.254	70	
S IX	48.564	20		Ne IX	50.3	P	
Co XVII	48.564			Si X	50.305	50	
B V	48.587	P	100	Si X	50.333	50	
Si X	48.596	20		Fe XVI	50.350		
S VII	48.647	150		Co XVI	50.357	200	
Ar IX	48.73	500		Mg VIII	50.386	20	
Al IX	48.765	20		Si X	50.390	10	
Mg IX	48.794	10		Co XVI	50.393	20	
P VIII	48.86	P		B IV	50.4347	100	
S VII	48.874	100		Mg XI	50.48	P	
P IX	48.925	350		P VIII	50.48	P	
B IV	48.939			P IX	50.511	200	
F IX	48.96	P		Si VIII	50.524	50b	
Fe XVI	48.97			Si X	50.524	50b	
Si XI	48.991	20		Si XI	50.524	100	
Si XI	49.052	30		Fe XVI	50.555		
Al IX	49.094	40		P IX	50.560	300	
S IX	49.119	100		F IX	50.58	P	
Co XVII	49.133			Si XI	50.617	40	
Co XVII	49.171			P IX	50.626	100	
Ar IX	49.18	500		Al X	50.670	50	
Si XI	49.181	30		Si X	50.691	100	
Si X	49.182	10		Cl VIII	50.700	200	
Si XI	49.222	50		Al X	50.717	75	
Cl IX	49.234	100		Al X	50.762	350	
Si XI	49.265	10		Mg IX	50.777	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al X	50.802	50		Ni XVIII	52.615	200	
Cr XIV	50.812			Mg VIII	52.628	40	
Al X	50.903	50		Si IX	52.671	10	
Al X	50.946	10		Cl IX	52.677	200	
P VIII	50.95		P	S VIII	52.681	20	
Cl IX	51.026	400		B IV	52.6853	330	
Al X	51.039	10		Mg VIII	52.692	80	
Mg VIII	51.040	10		S VIII	52.702	20	
Ni XVIII	51.042	35		P IX	52.709	150	
Mg VIII	51.098	40		Ni XVIII	52.720	250	
Si IX	51.113	50		Cl IX	52.726	300	
P X	51.155	450		S VIII	52.756	300	
P IX	51.156	450		S VII	52.789	300	
Cr XIV	51.162			Ni XVII	52.802	6	
Si XIV	51.20		P	Si IX	52.810	20	
S VIII	51.227	100		Si IX	52.838	50	
Na VIII	51.316	10		S VIII	52.854	100	
Al X	51.362	350		S IX	52.854	100	
Si IX	51.362	100		V XIII	52.870		
Cl IX	51.378	300		Ti XII	52.896	1	
Mg VIII	51.389	20		Fe XV	52.911	300	
Al X	51.400	1		V XIII	52.928		
Al X	51.454	1		Cl IX	52.939	10	
Mg VIII	51.470	40		S VIII	52.958	350	
S VIII	51.470	70		Cl IX	52.959	1	
Mg IX	51.560	10		Al IX	52.966	10	
Mg IX	51.591	300		Mn XV	52.977		
Si X	51.635	10		P IX	52.980	250	
Mg IX	51.654	400		S VIII	52.985	70	
Si X	51.676	20		Si	53.025	20	
Si VIII	51.718	20		Mn XV	53.032		
Na VIII	51.789	10		Si	53.063	20	
K XIX	51.8		P	S VIII	53.073	50	
S VII	51.807	350		Al IX	53.098	10	
Si VIII	51.819	20		Cl IX	53.108	1	
P IX	51.861	300		Mg IX	53.112	10	
P IX	51.889	100		Ti XII	53.140	1	
Al X	51.979	300		Co XV	53.173	200	
Ni XVII	52.000	6		Mg IX	53.188	200d	
Cl IX	52.055	200		Mg IX	53.222	200d	
Si X	52.070	50		Al IX	53.237	60	
S VII	52.097	200		S VIII	53.239	30	
Na IX	52.116	100		Al IX	53.267	60	
Si X	52.155	100d		Al IX	53.376	10	
P X	52.158	250		Al	53.412	10	
P IX	52.160	300		Al IX	53.424	10	
Na IX	52.186	200		Ti XII	53.433	3	
Ti XI	52.218	1		Mg VIII	53.438	20	
Ni XVII	52.224	10		Cl IX	53.448	10	
Si XI	52.296	100		Ti XII	53.457	1	
Al XI	52.299	400		Si X	53.463	10	
Cl IX	52.303	400		Mg VIII	53.484	10d	
Cr XIV	52.363			Al IX	53.488	1	
Mg VIII	52.395	10		Cr XII	53.506	50	
Ne IX	52.4		P	Mg VIII	53.512	100d	
Cl IX	52.426	300		F IX	53.53		P
Al XI	52.446	700		Al IX	53.554	10	
Mg XI	52.47		P	Si X	53.573	50d	
Si X	52.485	100		Si X	53.595	50d	
Na IX	52.487	1		Al	53.598	10	
P IX	52.552	150		Cl IX	53.696	100	
Si VIII	52.554	20		Mg VIII	53.744	10	
Co XV	52.583	100		Na VIII	53.750	10	
P X	52.594	200		Cr XIII	53.765	100	
Si X	52.611	50		Si VIII	53.770	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al VIII	53.725	10		Ni XVII	55.18	10	
Al VIII	53.800	10		Ti XII	55.181	1	
Ne VIII	53.81	20		P IX	55.220	100	
Mg VIII	53.812	10		Mg VIII	55.222	10d	
Al VIII	53.823	10		Al X	55.227	150	
Na IX	53.860	300		Si IX	55.234	50	
Mg VIII	53.905	100		Ni XVII	55.25	20	
Si IX	53.992	10		Al X	55.272	500	
Mg IX	54.011	200		Si IX	55.272	150	
Ca XX	54.03		P	P IX	55.299	50	
Al X	54.115	220		Si IX	55.305	50	
S VIII	54.118	500		Na VIII	55.345	10	
F IX	54.124	150		Si IX	55.356	100	
Mg	54.131	10		Al X	55.376	750	
Na XI	54.14		P	Na VIII	55.396	100	
F ₂ XVI	54.142			Si IX	55.401	100	
S IX	54.178	100		Ti XII	55.443	3	
Al VIII	54.217	200b		Cu XII	55.466	1	
Al VIII	54.258	200		Si IX	55.511	50	
S VIII	54.266	100		S IX	55.540	100	
Ne VIII	54.31	70		Al	55.622	1	
Al IX	54.312	10d		Fe XV	55.635	100	
Ti XI	54.322	1		Al IX	55.667	10	
S VIII	54.379	20		P VIII	55.672	120	
Na VIII	54.380	100		P VIII	55.710	70	
S VIII	54.385	100		Si XIV	55.72		P
Al XI	54.388	60		Al X	55.731	50	
S IX	54.396	50		Si IX	55.781	150	
Si IX	54.403	50d		Fe XV	55.793	200	
Zn XII	54.409	10		Fe XV	55.815	10	
S VIII	54.424	150		P VIII	55.876	300	
Al IX	54.457	200		P VIII	55.926	100	
Si VII	54.462	50b		Co XVII	56.021		
Si X	54.462	50b		Si IX	56.027	150	
Mg IX	54.463	10		Ne VIII	56.043	320	
S VIII	54.501	20		S IX	56.081	50	
Ni XVII	54.52			Ne IX	56.1		P
Si VII	54.522	50d		S IX	56.125	20	
Si X	54.522	50d		Si	56.145	50	
Zn XII	54.544	10		Al IX	56.150	50b	
S VIII	54.566	50		P VII	56.174	50	
Si X	54.571	50		Fe XV	56.200	300	
Si X	54.599	50d		Fe XV	56.236	1	
S VIII	54.604	50		Mn XV	56.270		
S VII	54.652	100		Al	56.274	30	
Si X	54.664	10		P VII	56.282	10	
Si X	54.702	10		Al IX	56.304	70	
P VII	54.708	50		P VII	56.322	120	
Fe XVI	54.728			S IX	56.332	20d	
Fe XVI	54.769			Cu XII	56.333	1	
Si IX	54.841	150		Mg VI:	56.358	10d	
Mg VIII	54.853	60		Mg VIII	56.403	10d	
Si IX	54.870	100		Mn XV	56.484		
Mg VIII	54.886	100		Si VII	56.528	50	
P VII	54.887	100		Al	56.545	10	
Si IX	54.907	100		Al X	56.590	75	
S VII	54.938	100		P X	56.597	150	
Ne VIII	55.01	130		Si VII	56.645	50d	
Mg IX	55.060	200		Al X	56.650	10d	
P IX	55.066	100		Si X	56.680	50d	
Si IX	55.094	50		Al X	56.696	75	
Si X	55.096	100		Al X	56.762	10	
Si IX	55.116	50		Al X	56.802	200	
Ni XVII	55.14	6		Si X	56.804	50	
Al	55.143	10		Co XVII	56.833		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mg IX	56.861	10		P VIII	58.506	150	
P XV	56.87	P		Si VII	58.526	10	
Al IX	56.899	100b		Mg VIII	58.537	10d	
Cu XI	56.915	i		Be IV	58.574	P	
Al IX	56.945	250		Si VII	58.580	100	
Al X	56.945	250		Mg VIII	58.614	290d	
Al X	56.964	150		Mg VIII	58.667	300d	
Al X	57.024	250		Cl VIII	58.675	1000	
P VIII	57.042	450		Si VII	58.719	50	
Cu XI	57.047	1		P VI	58.73	P	
Al X	57.072	10		Al VII	58.752	1	
P IX	57.083	450		P VIII	58.776	50	
Na VIII	57.096	10		Si VII	58.782	50	
Al X	57.116	75		Al X	58.808	1	
Na VIII	57.119	10		Co XVII	58.842		
Si IX	57.157	50		Al X	58.858	100	
Si X	57.209	20		Si VIII	58.885	150d	
Mn XIV	57.224	20		Si IX	58.906	50d	
Na VIII	57.230	10d		Co XVII	58.948		
P VIII	57.230	350		Co XVI	58.95	P	
Al	57.244	50		Na IX	58.954	100	
P IX	57.266	350		P VI	58.96	P	
Al	57.271	50		Fe XIV	58.963	200	
Si VII	57.325	50		P VII	58.972	35	
P IX	57.339	150		Al X	58.987	150	
Si X	57.365	80		Si IX	59.004	100	
Al X	57.368	350		Na VIII	59.009	100	
P VII	57.42	P		P VII	59.028	15	
Si VII	57.434	50		Mg VIII	59.038	200	
Si IX	57.434	50		Na IX	59.042	200	
Al VIII	57.553	10		Si IX	59.077	50	
Si VII	57.589	50b		Na VIII	59.101	10	
Si IX	57.589	50b		Al X	59.107	400	
Mg VIII	57.590	10		Ti XII	59.133	6	
Al VIII	57.624	10		Mg VIII	59.153	300	
F VII	57.66	P		Ne VIII	59.19	230	
Al	57.663	10		Cl VIII	59.191	900	
P IX	57.683	100		Na VIII	59.204	300	
Ar XVIII	57.7	P		S VIII	59.236	70	
P IX	57.711	50		Na VIII	59.249	10	
Mg VIII	57.736	100		Al	59.298	10	
Ne VIII	57.747	470		P VIII	59.302	350	
Si IX	57.778	100		Be IV	59.320	P	
Mg X	57.876	700		Mn XIV	59.325	100	
Ti XI	57.891	1		Al IX	59.381	10d	
Mg X	57.920	700		Al XIII	59.39	P	
P VI	57.93	P		Fe X	59.404		
P VIII	58.018	350		Ti X	59.435	10	
Al IX	58.060	10		Al	59.481	10d	
Na VIII	58.070	10		P VIII	59.516	250	
Al IX	58.112	50		Fe XIV	59.579	300	
V XIII	58.116	50		S VIII	59.593	20	
Si IX	58.150	500b		Mg VII	59.640	1	
Na IX	58.201	500b		Na VIII	59.759	200	
Al IX	58.222	100		Al IX	59.761	300	
Al IX	58.276	1		P VI	59.78	P	
Na IX	58.279	600		Al VII	59.821	10	
P VI	58.29	P		K XIX	59.88	P	
Mg VII	58.316	10		Si VII	59.884	50	
Al VII	58.384	10		Al VII	59.911	10	
Si VII	58.388	50		F IX	59.95	P	
Ne VIII	58.407	100		Al IX	59.960	60	
Si VII	58.445	100		Si VII	59.966	100b	
Ne IX	58.468	100		Si IX	59.966	100b	
V XIII	58.482			Na VIII	59.992	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
P VI	60.02		P	Si VII	61.306	50	
Al	60.052	50		Ma XV	61.319		
Na VIII	60.053	100		P IX	61.320	50	
Na VIII	60.073	100		Na VIII	61.347	1	
Mg VII	60.138	10		Si IX	61.355	50	
Si X	60.151	20		Zn XIII	61.356	10	
S VII	60.161	1000		Mg IX	61.359	10	
Al IX	60.162	10d		Mn XV	61.361		
Al IX	60.197	50		Al	61.373	50	
Si VII	60.221	100		Mg IX	61.392	100	
Al IX	60.222	10		Si VIII	61.395	50	
Zn XIII	60.248	20		Si VIII	61.446	100d	
Al IX	60.262	10		V XII	61.455	50	
Al IX	60.312	50		Al	61.472	100	
B IV	60.3144	1000		Mg IX	61.489	200	
Mg VIII	60.316	40		Si IX	61.502	50	
Al IX	60.347	100		Si IX	61.546	100	
Ne VIII	60.351	300		S VII	61.547	200	
Mg VIII	60.384	10		Si IX	61.600	50	
Ne VIII	60.413	400		S VIII	61.600	500	
Si	60.421	20		P VI	61.622	50	
Si IX	60.459	20		Al IX	61.647	10	
Ne VIII	60.49	10		Si IX	61.649	100	
Al IX	60.504	150		Fe XIII?	61.659		
Al IX	60.549	200		Al VIII	61.694	150	
P VI	60.57		P	V XII	61.717	100	
Al IX	60.588	300		Si VIII	61.798	100	
Al IX	60.645	10		Ni X	61.809	1	
Si	60.673	100		Si VIII	61.852	100b	
Cr XIV	60.699			Si IX	61.852	100b	
Al X	60.700	10		P VI	61.869	50	
Ti XII	60.701	10		Co XVI	61.875	100	
Mn XV	60.720			Fe XIII	61.876		
Be IV	60.743		F	Mg VIII	61.891	200	
Cr XIV	60.756			Si VIII	61.895	150d	
Ti XII	60.762	3		Al	61.900	10	
Al	60.788	50		Si VIII	61.914	150d	
Ne VIII	60.796	30		Ni X	61.915	1	
S VII	60.804	750		Co XVI	61.916	200	
Mg VIII	60.806	10		Mg IX	61.924	400	
Al	60.809	50		Al	61.933	50	
Si VII	60.837	100		Mg VIII	61.964	100b	
Al IX	60.846	300		Mg IX	61.964	100b	
Al X	60.856	300		P VI	61.970	50	
Ti XII	60.971	1		O VIII	61.977	P	
Si VII	60.989	100b		S VIII	61.978	250	
Si VIII	60.989	100b		Co XVI	61.982	200	
Si IX	60.989	100b		Al VIII	62.016	100	
Si VIII	61.019	100		Mg IX	62.020	10	
Mg IX	61.038	200		Al	62.070	50	
P IX	61.065	50		Fe XV	62.099	60	
Al IX	61.069	600		Sc XI	62.132	40	
Si VIII	61.070	200		Si	62.154	50	
B IV	61.088			Mg VII	62.166	10d	
Na VIII	61.088	200		P VII	62.245	150	
Mg IX	61.088	100		Si X	62.251	100	
Si IX	61.109	50		Na VIII	62.276	100	
Mg IX	61.127	300		Mg VIII	62.291	10	
Mg IX	61.175	200		Al VII	62.296	200b	
Si VIII	61.175	50d		Ne VIII	62.297	350	
Si IX	61.190	50d		Al IX	62.327	250	
Si VIII	61.223	100		Fe XIII?	62.354	60	
Al	61.262	10		Ne VIII	62.361	500	
P IX	61.270	50		Al IX	62.369	150	
Ti XII	61.286	1		Si	62.386	50d	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe XIII	62.387			Ni XI	63.641	40	
Al VII	62.432	10		Na VIII	63.695	10	
Ti XII	62.433	1		S VIII	63.711	50	
B IV	62.44	I		Al VIII	63.714	100	
Si IX	62.454	20		Fe XVI	63.719	30	
Fe XIII?	62.466			Si VIII	63.732	150	
Ti XII	62.470	1		Na VII	63.778	10	
Al VII	62.474	100b		Si VIII	63.879	50	
Al IX	62.474	100b		S VIII	63.886	250	
P VII	62.515	50		Si VIII	63.903	150	
Mn XIV	62.526	50		Al VIII	63.933	10	
Ne VIII	62.58	150		Al VIII	63.965	150d	
Si VIII	62.586	50d		Al VIII	64.004	200	
Al IX	62.587	100		O VIII	64.03	P	
Mg VII	62.615	10		P VIII	64.051	80	
Mn XIV	62.694	100		Be IV	64.065	P	
Fe XIII	62.694	100		Al VII	64.066	10	
Mg VII	62.696	100		Al VIII	64.086	10	
Mn XIV	62.713	20		P VIII	64.100	20	
Na VII	62.725	10d		Na VII	64.113	10	
Ni XI	62.730	20		S VIII	64.120	50	
Mg IX	62.751	500		Mg VII	64.122	200	
Fe X	62.8	P		S VIII	64.137	100	
Si VIII	62.808	100		Na VIII	64.205	200	
Si VIII	62.849	150d		Na VIII	64.237	400	
Fe XVI	62.879	20		Mg VIII	64.246	10	
Si VIII	62.884	50		Al	64.269	10	
Al IX	62.916	150		Si VIII	64.281	100	
Si VII	62.940	50		P VII	64.286	150	
Si IX	62.974	50		Na VIII	64.302	500	
Fe XIII	62.975	100		S VIII	64.365	20	
Al VII	63.025	500b		Al VII	64.325	50	
Al IX	63.025	500b		Si VIII	64.327	150	
S VIII	63.026	50		P VIII	64.337	100	
Cu XI	63.038	40		Si VIII	64.355	50	
Fe XIII	63.048	10		Al VII	64.358	50	
Mn XIV	63.109	200		P VII	64.361	250	
Na VIII	63.114	100		P VIII	64.361	300	
Al X	63.134	200		Mg VII	64.377	100b	
Mn XIV	63.146	20		Mg VIII	64.377	100b	
Mg X	63.152	400		Al	64.418	10	
P VI	63.18	P		Al VII	64.481	10	
Si	63.183	50d		Mg VIII	64.488	100d	
Na VII	63.185	10		Al VII	64.513	10	
Fe XIII	63.191	120		Mg VIII	64.518	100d	
Cu XI	63.192	40		P VII	64.579	150	
Al VIII	63.203	10		P VII	64.587	100	
Na VII	63.227	10		Al IX	64.625	50	
Si VIII	63.229	150		Mg VIII	64.635	200	
Si VIII	63.266	50		P VII	64.635	200	
Mg X	63.295	700		Al XIII	64.64	P	
S VIII	63.304	500		Sc XI	64.70	10	
Cr XIV	63.309			Mg VIII	64.702	200	
Na VII	63.361	10		Al VII	64.704	150	
Mg VII	63.396	100d		Cl XVII	64.72	P	
S VIII	63.431	100		Si X	64.772	50	
Na VII	63.442	10		Mg VIII	64.811	10	
P VI	63.45	P		Al VII	64.815	120	
Si IX	63.478	20		S VIII	64.874	20	
Al IX	63.509	500d		Mg VIII	64.878	100	
Cr XIV	63.525			Al IX	64.885	150	
Al VIII	63.560	10		Na VII	64.904	10	
Fe XII	63.56	60		Al VII	64.904	100b	
Si IX	63.586	100		Al IX	64.904	100b	
Al IX	63.632	300		Sc XI	64.98	40	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Si VI	65.004	20d		Fe XVI	66.368	30	
Al VII	65.014	10d		Fe XII	66.43		
Al VIII	65.128	10d		P VII	66.432	150	
S VIII	65.149	50		Na VIII	66.433	200d	
Si VI	65.211	10		P VII	66.488	50	
Si IX	65.236	10		Na VIII	66.498	400	
Al VIII	65.298	10		Fe XII	66.526		
Si XIV	65.30	P		Ni X	66.542	10	
P VI	65.308	150		Mn XIII	66.574	100	
Fe XV	65.370	1		P VII	66.576	100	
Al VIII	65.381	50		Al IX	66.624	10	
Na VII	65.388	100		Ni X	66.687	10	
Ti XI	65.403	3		P VII	66.691	150	
Na VII	65.474	100		Al VIII	66.704	150	
Al VIII	65.494	50		Si	66.726	100	
Ca XX	65.50	P		Ar XVIII	66.73	P	
Ne X	65.52	P		Al VIII	66.731	200	
Ti XII	65.540	1		P VII	65.75	P	
Ti XII	65.577	3		Al VIII	66.771	350	
Si VII	65.595	50		Si VI	66.772	20	
Mg IX	65.609	400		Mg VII	66.788	10	
Fe XV	65.612	3		Si VI	66.796	10	
Fe XII	65.63	40		Al IX	66.836	100d	
Al	65.632	50		Si IX	66.912	100	
P VI	65.640	350		Fe XII	66.960		
Na VIII	65.672	10		Si X	66.977	20d	
Mg X	65.672	35		Cr XIII	66.983	200	
Si	65.711	50		Al	66.996	10d	
Na VIII	65.730	10		Mn XIV	67.02		
Mg VIII	65.735	100		Na	67.027	100	
P VIII	65.788	350		Al VIII	67.044	10	
Fe XII	65.805			Mg IX	67.090	500	
Mg VIII	65.806	200		Al VIII	67.096	100	
Al	65.821	50		Al VIII	67.121	100	
Ne VIII	65.822	600		Mg IX	67.135	600	
Si VIII	65.833	50		Si VIII	67.157	150	
Mg X	65.847	60		Fe XII	67.164		
Ne VII	65.85			Al VIII	67.166	10	
Al VII	65.865	50		Ti XII	67.171	10	
Al VII	65.882	50		Fe XIV	67.21	60	
Ne VIII	65.895	700		Mn XIII	67.215	200	
Fe XII	65.905			Mg IX	67.239	700	
P VI	65.940	350		Al VIII	67.244	150	
Cr XIII	65.968	50		Al VIII	67.288	500	
Fe XII	65.98	50		Fe XII	67.291		
Al IX	66.038	50		Si VIII	67.318	100	
Fe XII	66.047	10		Al VIII	67.360	250	
P VIII	66.051	350		Ne VIII	67.382	770	
Na VIII	66.059	200		Al VIII	67.408	500	
Mg VIII	66.069	300		Si VIII	67.408	150	
Al IX	66.092	50		Al VIII	67.437	50	
Al IX	66.142	120		Mg VII	67.453	10	
P VII	66.17	P		Al VIII	67.464	600	
Fe XII	66.225			Mg VII	67.470	100d	
Fe XV	66.238	3		Na VIII	67.48	200	
Al IX	66.239	150		Mg VII	67.497	200	
Ne VIII	66.259	300		Al VIII	67.529	10	
Fe XVI	66.263	20		Ti XII	67.555	35	
Al IX	66.275	50		Al VIII	67.565	150b	
Fe XII	66.297	40		Si IX	67.574	50d	
Al VIII	66.321	60b		P VIII	67.587	300	
Al IX	66.321	60b		Na VIII	67.672	400	
Ne VIII	66.330	350		Fe XII	67.702		
Na VIII	66.358	10		Mg VIII	67.731	400b	
Al VIII	66.363	10		Mg IX	67.731	400b	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
O VII	67.76	P		Fe XV	68.849		
Fe XII	67.78	20		Si VIII	68.853	100	
Ne VII	67.80	50		Na VII	68.866	10	
Fe XII	67.821			Fe XV	68.883		
Na VII	67.826	100d		Al	68.904	10	
Al IX	67.828	10		Na VII	68.908	100	
Al	67.873	10		Ne VII	68.92	100	
Na VII	67.877	100d		Mg IX	68.949	10	
Cu XII	67.882	30		Al IX	68.958	50	
Na VII	67.912	200d		Mg IX	68.986	100	
Al VIII	67.946	500		Mg IX	69.009	100	
Fe XII	67.972			Fe XV	69.036		
P VII	67.989	50		Mg IX	69.058	10	
Mg VII	67.993	100d		Mg IX	69.116	100	
Al	68.000	10		Na VIII	69.120	300	
Si VII	68.026	10		P VI	69.121	50	
Mg VII	68.064	200		Cu XII	69.128	30	
Mg VII	68.100	200		Mg IX	69.161	300	
Mg VII	68.144	300d		Al	69.165	200	
P VII	68.147	50		Fe XIV	69.176		
Si VII	68.148	250		Cr XIV	69.183		
Al VI	68.167	50d		Si VI	69.204	50d	
Si VII	68.190	50		Cr XIV	69.221		
Na VIII	68.193	100		Si VI	69.236	250	
Si VII	68.212	50		Sc XI	69.252	40	
Al VI	68.223	10		Al IX	69.258	50d	
Si VII	68.270	50d		Na VII	69.314	10	
Zn XII	68.271	40		Mg VIII	69.327	10	
Ne VII	68.28	160		Mg IX	69.374	200	
Al VI	68.289	1		Al	69.379	50	
Si VII	68.340	50		Si VII	69.385	150	
Mg VII	68.352	200		Fe XIV	69.386		
Al VIII	68.375	750		Na VII	69.395	10d	
Fe XII	68.382			Mg VIII	69.413	400b	
P VIII	68.384	200		Mg IX	69.413	400b	
P VIII	68.385	100		Al VIII	69.420	50	
Si VII	68.408	100		Si VI	69.421	50	
Na VII	68.422	10d		Si VI	69.448	100d	
Al	68.439	50		Mg VIII	69.467	500b	
Mg VIII	68.450	100		Mg IX	69.467	500b	
Si VII	68.456	10		Al VIII	69.502	100	
Al	68.458	50		Mg IX	69.513	100	
Zn XII	68.495	120		Fe XV	69.54		
Si	68.497	50d		Sc XI	69.575	100	
Na VII	68.519	100d		Mg VIII	69.577	100	
Si	68.522	50d		Si VII	69.580	100	
Al VII	68.531	100b		Fe XII	69.60	100	
Al IX	68.531	100b		Si VII	69.602	100	
Mg VIII	68.550	100		Al VIII	69.611	200	
Cr XIV	68.565			Mg VII	69.615	300b	
Mg VIII	68.580	10		Mg IX	69.615	300b	
Si VII	68.593	50		Al	69.631	200	
Mg VIII	68.606	200		Si VIII	69.632	150	
Al VII	68.637	50b		Si VII	69.663	200	
Al IX	68.637	50b		Fe XIV	69.667		
Si VII	68.642	50		Mg XII	69.71	P	
P VIII	68.654	100		Al IX	69.716	100	
Si VII	68.669	50		Al VIII	69.773	150	
Al VII	68.681	10b		Si VII	69.790	200b	
Si VII	68.715	100		Si VIII	69.790	200b	
Al	68.783	10		Al IX	69.850	50d	
Si	68.786	100		Si VII	69.861	100	
Al VIII	68.825	50b		Si VII	69.872	100	
Al IX	68.825	50b		Mg VII	69.900	10	
Si	68.833	20		Si VII	69.905	50	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe XV	69.945	200		Si VI	71.181	25C	
Mg IX	69.950	600		Ti XI	71.201	1	
Fe XV	69.987	300		Si VI	71.273	100	
Fe XII	70.01	60		Al VIII	71.277	50	
Si VII	70.027	250		Si VI	71.304	10	
Al	70.046	50		Ti XI	71.323	3	
Fe XV	70.054	400		Si VI	71.340	10	
Si VII	70.072	250		Si VI	71.366	150	
Al	70.090	100		Fe XIV	71.377	10	
Si VII	70.123	20		Si VI	71.384	200b	
Al VIII	70.161	300		Si VII	71.384	200b	
Mg VII	70.193	100		Na	71.386	10	
Fe XV	70.22			Cr XIII	71.398	300	
Si VII	70.222	200		Cr XIII	71.435	50	
Si VII	70.250	200		Mg VIII	71.454	100	
Fe XIV	70.251			Si VI	71.474	50	
V XIII	70.262			Co X	71.48	30	
Ti X	70.265	0		Si VI	71.534	50	
Na	70.320	10		Cu XI	71.536	20	
Al VIII	70.323	200		Ti XII	71.545	1	
Si VII	70.323	50		Si VI	71.561	50	
V XIII	70.323			Al	71.590	70	
Al VIII	70.402	1		Ti XI	71.603	5	
Si VII	70.427	50		Cu XI	71.612	10	
Sc XI	70.445	200		Mg	71.621	10d	
Si VIII	70.458	100		Al	71.625	70	
Si VIII	70.473	100		Si VI	71.644	10	
Sc XI	70.509	100		Cu XI	71.707	10	
Mg	70.512	10		Si VI	71.718	10	
Fe XV	70.53			Mg	71.724	10d	
Cu XI	70.556	40		Al	71.774	10d	
Mg	70.563	10		Mg VII	71.786	100	
Fe XV	70.59			V XIII	71.799		
Si VII	70.594	100		Cu XI	71.823	10	
Fe XIV	70.613			Mg IX	71.841	100	
Na IX	70.615	700		Cu XI	71.847	10	
Ti X	70.625	1		Al	71.867	10d	
Na IX	70.653	600		Fe XIV	71.87	8	
Cu XI	70.654	30		Sc XI	71.887	40	
Al VIII	70.727	250		Si VII	71.900	200	
Si VII	70.730	50		Mg IX	71.901	200	
Na VIII	70.741	10		Mn XV	71.927		
Mg	70.762	100d		Cu XI	71.951	1	
Si	70.771	100d		Si VII	71.955	200	
Mg	70.787	100d		Al	71.987	10	
Cr XIII	70.792	100		Ti XII	71.987	3	
Al	70.802	50		Na VII	72.020	100	
Mg IX	70.878	10d		V XIII	72.025		
Cu XI	70.895	1		Mg VIII	72.027	300b	
Co IX	70.92	0		Mg IX	72.027	300b	
Mg VII	70.953	100		S VII	72.029	1000	
Cr XIII	70.973	300d		Co IX	72.04	10	
Ti XII	70.986	3		Na VII	72.079	100	
Ne VII	70.990	300		Ti	72.093	1	
Mg VIII	71.007	200d		Cu XI	72.098	30	
Fe XIII	71.029			Fe XI	72.166		
Ti XII	71.031	6		Co IX	72.17	20	
Ne VII	71.038	300		Al VIII	72.223	200	
Mn XV	71.038			Mg IX	72.226	300	
Cu XI	71.045	1		Si VII	72.228	200	
Co IX	71.05	10		Ti XII	72.234	i	
Al	71.077	10		Al VII	72.270	500d	
Mg VIII	71.118	300		O VII	72.3	P	
Al	71.139	50		Fe XI	72.310		
Mg VIII	71.168	100		Mg IX	72.312	400	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al VIII	72.324	200		Mg VIII	73.862	200	
Si VII	72.324	300b		Al VIII	73.879	200	
Si VIII	72.324	300b		Mg VIII	73.890	100	
Cu XI	72.369	2		O VII	73.9	P	
Al VIII	72.401	150		Mg VIII	73.927	100	
Si VIII	72.420	200d		Mg VIII	73.981	200	
Mg VI	72.430	100		Cu XI	73.982	2	
Co X	72.45	40		Al	74.016	120	
Mg VII	72.546	10b		Mg VIII	74.021	300	
Mg VIII	72.546	10b		Mn XIV	74.063	20	
Cu XI	72.580	15		Al VII	74.095	100d	
K XIX	72.59	P		Na VII	74.097	100	
Fe XI	72.635			Ni X	74.097	20	
S VII	72.663	1000		Zn XI	74.173	60	
Al	72.674	300		Na VII	74.180	200	
Mg VIII	72.684	100d		Si VIII	74.186	100	
P VII	72.684	100		Zn XI	74.213	80	
Al VI	72.714	1		Na VII	74.217	200	
Ti	72.772	1		Ne VII	74.23	80	
Mg VII	72.787	100		Na VII	74.255	300	
Cu XI	72.792	5		Al	74.259	10	
Fe XIV	72.796			Ni X	74.266	30	
Al VI	72.810	250		Na VII	74.268	300	
Fe IX	72.85	10		Mg VIII	74.274	200b	
Mg VII	72.852	10		Mg IX	74.274	200b	
Na VII	72.865	200		Mg VI	74.319	300b	
Al VI	72.865	50		Mg VIII	74.319	300b	
Mg VII	72.896	1d		Mg IX	74.319	300b	
Si VI	72.896	50		Al	74.321	50	
Al VI	72.926	100		Mn XIV	74.327	50	
Fe XIV	72.95			Fe XIII	74.327	92	
Cu XI	72.956	5		Zn XI	74.537	160	
Ti	72.991	1		Al VI	74.346	50	
O VII	73.0	P		Mg VIII	74.366	400b	
P VII	73.070	100		Mg IX	74.366	400b	
Al VI	73.076	100		Si VIII	74.371	20	
Fe XIV	73.08			Ne VII	74.40		
S XVI	73.1	P		Ne IX	74.4	P	
Mg VII	73.112	10		Mg VIII	74.411	100b	
Si VII	73.123	500		Mg IX	74.411	100b	
Na	73.128	10		Zn XI	74.412	10	
Fe XV	73.198			Al VI	74.444	300	
Mg VIII	73.250	400		Mg VI	74.461	10b	
Al	73.278	100		Mg IX	74.461	10b	
Ti XI	73.281	1		Al VI	74.504	50d	
Al VI	73.334	1		Mg IX	74.520	100	
Si VII	73.350	250		Ne VIII	74.541	650	
Si VII	73.433	200		Mg VI	74.574	200	
Al IX	73.451	1		Al VI	74.592	150	
Ne VIII	73.470	700		Cu XI	74.633	15	
Fe XV	73.473	30		Ne VIII	74.637	650	
Cu XI	73.516	1		Al VI	74.656	250	
Ne VIII	73.563	750		Zn XI	74.669	10	
Al IX	73.625	1		Mg VIII	74.676	100	
Fe IX	73.63	20		Zn XI	74.724	20	
Co IX	73.66	20		Mg IX	74.738	100	
Al VIII	73.703	150		Al IX	74.785	50	
Mg VIII	73.710	10		Al VI	74.813	50	
Al VIII	73.733	100		Cl XVII	74.82	P	
Cu XI	73.735	5		Zn XI	74.836	20	
Al VIII	73.760	10		Al VIII	74.841	200	
Mg VIII	73.773	10		Fe XIII	74.845	250	
Co IX	73.79	30		Cu XI	74.856	1	
Mn IX	73.8	P		Mg VIII	74.858	600	
Mg VIII	73.825	100		Na VII	74.861	300	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al VI	74.892	100		Fe X	75.865		
Zn XI	74.896	10		Cu XI	75.866	2	
Zn XI	74.940	20		Mg XII	75.87	P	
P VI	74.951	400		Mn XI	75.879		
Na VIII	74.956	300		O VIII	75.89	P	
Mn XIV	74.961	100		Mg VI	75.890	10	
Ne VII	74.962	380		Fe XIII	75.892	93	
Al VIII	74.965	150		Al VII	75.894	100b	
Na VII	74.980	300b		Al VIII	75.894	100b	
Na VIII	74.980	300b		P VII	75.924	450	
Mg VIII	75.034	700		Be IV	75.928	P	100
Na VIII	75.043	400		Mg VII	75.975	400	
Zr XI	75.050	10		Al VIII	75.985	50	
Al VIII	75.058	50		Si VIII	75.986	50	
Mn XI	75.059			Fe X	76.006		
Na VIII	75.096	300		Al VII	76.010	50	
Mg	75.112	100		Fe XIV	76.022	35	
Al	75.164	100		Cu XI	76.022	1	
Mn XV	75.182			Ti	76.030	!	
Si VI	75.193	200b		Al VII	76.086	10	
Si VII	75.193	200b		Fe XIII	76.117	20	
Al	75.226	100d		Na VIII	76.123	500	
Mu XI	75.227			Cr XIII	76.15		
Mg VI	75.248	100		Fe XIV	76.152		
Ar VII	75.270	250		Co IX	76.16	30	
Mn XV	75.286			Mg	76.169	100	
Al VII	75.302	350		Na VIII	76.173	100	
Cu XI	75.325	25		Si VIII	76.198	20	
Mg VI	75.334	100d		Mg VIII	76.199	100	
O VII	75.35	P		Na VIII	76.217	200	
Al VII	75.360	600		Al VII	76.221	50	
Na VIII	75.385	160		Cu XI	76.256	5	
Al VIII	75.397	70		Al VII	76.257	100	
Si VI?	75.398	150		Kr IX	76.29		
Zn XI	75.406	20		O VII	76.3	P	
Ti XI	75.415	1		Co IX	76.30	40	
Na VIII	75.428	200		V XII	76.307	300	
Kr IX	75.45			Al VII	76.342	10	
Cu XI	75.472	2		Sc X	76.343	100	
Mn XI	75.477			P VII	76.344	200	
Si VI	75.486	50		Mn XI	76.360		
Al VII	75.488	200b		Al VII	76.383	500	
Ne VII	75.49	130		Mg VII	76.392	300	
O VII	75.5	P		Ti XI	76.403	1	
Na VIII	75.518	300		Cu XI	76.406	10	
Mg	75.528	10d		Al VII	76.422	500	
Al VII	75.532	200		Mg IX	76.459	100	
Ne VII	75.55	120		Cr XII	76.488	300	
Al VII	75.577	150		Ti	76.490	1	
Si VI	75.587	50		Fe X	76.495	30b	
Zn XI	75.590	120		Na VII	76.501	10	
Al VIII	75.623	100		Fe XVI	76.502	30b	
Zn XI	75.635	10		Ne VII	76.515	140	
P VI	75.648	200		Fe X	76.53	P	
Mg	75.666	300		P VI	76.534	50	
Zn XI	75.668	20		Al VII	76.543	1000	
Al VIII	75.734	50		Na VII	76.565	10	
Al XIII	75.74	P		Al VII	76.572	1000	
Ne VII	75.765	500		Al VI	76.618	200	
Al VIII	75.778	250		Na VII	76.626	10d	
Al VII	75.809	100		Al VI	76.697	200	
Cr XII	75.815	200		Mg VIII	76.714	100	
Mn XI	75.819			Ti XI	76.731	1	
Mg VI	75.834	200		Mg VIII	76.740	200	
Al VII	75.850	100b		Mn XI	76.763		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mg VIII	76.788	300		P VII	77.969	250	
Al	76.794	200		Na	78.023	10	
Fe XVI	76.796			Mn XI	78.056		
Kr IX	76.80			V XIII	78.101		
Fe X	76.822			Al VI	78.112	100	
Na VII	76.827	10		Al	78.149	100	
Al	76.853	200		Fe X	78.151		
Mn XI	76.858			Al VI	78.178	50	
Na VII	76.862	10		Al VIII	78.225	1	
Mg VI	76.908	1		Mg VI	78.239	10	
Al VI	76.953	50		Al	78.256	70	
V XII	76.960	50		P VII	78.285	400	
Al	76.984	100		Ne IX	78.300	100	
Fe XI	77.00	40		Al VII	78.327	1000	
Mg VII	77.033	100		Mn XIV	78.35		
Al	77.052	50		Al VII	78.351	1000b	
Na	77.076	10		Al VIII	78.351	1000b	
Mg VII	77.144	200		Mg VII	78.376	10	
Ne VII	77.25	220		Mg VII	78.405	10	
Na VIII	77.267	600		P VII	78.414	150	
Mn XI	77.270			Mn XIV	78.42		
Ne VII	77.30	220		Al	78.421	10	
Mg VI	77.301	10		Mg VIII	78.446	600d	
O VII	77.31		P	Na VII	78.459	10	
Al	77.315	10		Al VI	78.459	70	
Na VII	77.353	100		Fe XIII	78.462	80	
Al IX	77.381	150		Al	78.508	150	
Ni XI	77.393	80		Sc XI	78.509	100	
Mn XI	77.402			Mg VII	78.521	200	
Mg VI	77.405	200b		Mn XIV	78.54		
Mg VII	77.405	200b		Cu XI	78.542	120	
Si VI	77.429	500		Fe XIII	78.56		
Ti	77.435	1		Al	78.573	70	
Al VII	77.448	150b		Mg VIII	78.574	600d	
Al IX	77.448	150b		Si V	78.611	50	
Fe X	77.45		P	Al VI	78.628	10	
Ti	77.506	1		Mg	78.643	100d	
Mg VI	77.511	100b		Ti X	78.655	1	
Mg VIII	77.511	100b		Mg	78.668	100d	
Ti	77.541	1		Al VI	78.712	10	
Mn XI	77.556			P VII	78.734	250	
Na VII	77.558	10		Ni XI	78.744	60	
Mg VIII	77.572	500		V XIII	78.746		
Fe XII	77.58	60		Fe X	78.769	20b	
Al VIII	77.605	300		Fe X	78.770	20b	
Fe X	77.627			Na VI	78.771	10	
Mg VI	639	10		V XIII	78.783		
Mg VIII	77.571	500		Cu XI	78.786	130	
O VII	77.68		P	Al	78.836	100	
Si VI	77.718	300		Si V	78.903	50	
Fe X	77.728			Na VII	78.907	300	
Mg VIII	77.737	600b		Sc XI	78.917	300	
Mg IX	77.737	600b		Al	78.938	300	
Na IX	77.764	700		O VII	78.94	50	
Al VII	77.770	300		Na VII	78.982	200	
Al VII	77.806	70		Al VII	79.012	500	
Fe X	77.812			Ti XI	79.028	1	
Ti	77.823	1		Cu XXI	79.05		P
Fe X	77.865	20		Mg VI	79.059	10d	
Al VII	77.896	500		Ti XI	79.076	1	
Na IX	77.911	800		Mn XIV	79.10		
Sc XI	77.917	40d		Ti X	79.110	3	
Ti	77.935	1		Mg VII	79.131	500	
Al VI	77.945	500b		Mn XIII	79.16		
Al VII	77.945	500b		Mg VII	79.168	500	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al VII	79.197	500		Na VIII	80.756	10	
Si VI	79.236	256		Al VI	80.776	70	
Mg VII	79.248	100		Mg VIII	80.806	10d	
Si VII	79.262	50		Si V	80.807	100	
Al VIII	79.455	120		P VII	80.813	100	
Na VII	79.477	200		Si VI	80.821	400	
Fe XII	79.486	30		Mg VIII	80.889	100	
Si VII	79.491	100		V XII	80.896	100	
Si VII	79.523	100		Ar XVIII	80.9	P	
Al	79.557	10		Si VI	80.908	400	
Na VII	79.571	100		F IX	80.91	P	
Si VII	79.615	100		Cr XIV	80.916		
Na VII	79.620	100		Mg VI	80.930	200	
Al VII	79.635	10		N VII	80.96	P	
Al VII	79.690	150		Mg VII	81.024	100	
Mg VIII	79.695	200		Si VI	81.030	350	
Mn XIV	79.720	100		Mn XIV	81.05		
Na VII	79.761	10		V XII	81.077	200	
Mn XIV	79.761	200		V XII	81.098	50	
Al	79.783	50		Mg VI	81.106	300	
Na VII	79.786	10		Si V	81.113	100	
Mg VI	79.817	200		Ti XI	81.119	1	
Mn XIV	79.826	300		Mg VII	81.133	300	
Mg VI	79.830	400		Fe XIII	81.161		
Mg VI	79.857	400		Na IX	81.175	500	
Mg VIII	79.880	200		Al VI	81.176	50	
Na VII	79.893	300d		Na VIII	81.210	500	
Al VII	79.919	300		Al VII	81.234	50	
Al VII	79.952	250		Mg VIII	81.304	100	
Na VII	80.008	300		Ti	81.306	1	
Al	80.014	10		Al VI?	81.339	10	
Fe XII	80.022	15		Na IX	81.350	500	
Mg VI	80.032	200		Mg VIII	81.368	10	
Mn XIV	80.06			Ne VII	81.37	110	
Mg VI	80.075	200		Na VII	81.430	100	
Na VII	80.133	10		Si VII	81.449	50	
Fe XII	80.160			Na VI	81.498	200b	
Na VII	80.174	10		Na VII	81.498	200b	
Mg VIII	80.229	400d		O VII	81.50	100	
Fe XII	80.23	24		Co XI	81.507	300	
Na VII	80.245	100		V XII	81.513	400	
Mg VIII	80.255	400d		Na VI	81.543	100d	
Al VIII	80.320	10		V XII	81.556	50	
Na VI	80.345	10		Si VII	81.558	250	
Mn XIV	80.38			Al	81.560	100	
Co IX	80.38	50		Na VI	81.584	100d - A	
Si VI	80.395	250		Si VII	81.620	600	
Al	80.403	10		Fe XII	81.651	80	
Mg IX	80.428	100		Al	81.667	100	
Si VI	80.449	500		Mg VIII	81.732	300	
Mn XIV	80.46			Al VI	81.738	50b	
Al VIII	80.483	10d		Al VII	81.738	50b	
Si VI	80.491	250		Mg VIII	81.790	200	
Si VI	80.501	500		Al VII	81.806	200d	
P VII	80.537	50		Cr XIV	81.838		
Ne VII	80.533	520		Mg VIII	81.844	400	
Co IX	80.54	60		Na VII	81.855	400	
Fe XII	80.55	35		Be III	81.89		
Mg VI	80.563	100		O VII	81.89	150	
Si VI	80.577	600		Si VII	81.895	500	
Na VI	80.645	10d		Mg VIII	81.943	200	
Si VI	80.598	500		Fe XII	81.943	93	
Al VIII	80.704	100		Mg VIII	81.979	200	
Mg VI	80.724	10		Si VII	81.998	150	
Si VI	80.725	500		Al VI	82.082	70	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al	82.105	70		Mg VI	83.519	300b	
Mg	82.111	10		Mg VII	83.519	300b	
Ti XII	82.121	90		Mn XII?	83.52		
Al	82.128	70		Si V?	83.526	400	
Ne VII	82.198	500		Mg VI	83.560	200b	
Fe XII	82.226			Mg VII	83.560	200b	
Mg VI	82.238	200b		Mg VII	83.587	200	
Mg VIII	82.238	200b		Si VI	83.611	400	
Al VI	82.267	50		Mg VII	83.635	10	
Ne VII	82.268	700		Al VIII	83.635	10	
Ti XII	82.307	6		Na VI	83.639	100	
Mg VIII	82.317	300		Si VI	83.639	150	
Al VI	82.338	10		N VII	83.65	P	
Ti XII	82.344	20		Ni X	83.676	10	
Ti XII	82.368	6		Si VI	83.684	50	
Be III	82.38			Mg VII	83.716	300	
Al	82.423	50		S. VI	83.729	50	
Fe IX	82.43	30		Sc X	83.760	40	
Mg VI	82.475	100		Mg VII	83.766	500	
Na VII	82.516	10		Mn XIV	83.78		
Co XI	82.527	70		Si VI	83.802	300	
Al VIII	82.543	150		Ni XX	83.82	P	
Al	82.582	50		Al VII	83.831	350	
Mg VIII	82.598	200		Co XI	83.861	100	
Si	82.622	50d		Sc X	83.901	100	
Na VII	82.636	10		Mg VII	83.910	300	
Na VII	82.685	10		Sc XI	83.958	40	
Mg VIII	82.709	200		Mg VII	83.959	400d	
Fe XII	82.744			Si VI	83.965	10	
Co XI	82.759	200		Al VII	84.007	200	
Mn X	82.78	400		Mg VII	84.025	500	
Mg VIII	82.822	300		Co XI	84.039	200	
Fe XII	82.837	35		Na VIII	84.050	500	
Mg VI	82.853	100		Si VI	84.082	600b	
Ni X	82.892	2		Si VII	84.082	600b	
Al	82.998	50d		Mg VII	84.087	300b	
Mg VII	82.940	400		Mg VIII	84.087	300b	
Mg VII	82.969	400		Mn XIV	84.09		
Na XI	82.97	P		Al VII	84.098	100	
Si VI	83.006	200		Mg VII	84.189	10	
Mg VII	83.015	500d		Ni X	84.194	2	
Mn X	83.03	200		Mn X	84.2	P	
Al	83.102	10		Sc X	84.204	200	
Ni X	83.108	25		Ne VII	84.212	200	
Si VI	83.128	750		Na VII	84.221	400	
Na VII	83.180	100		Fe XIII	84.275		
Co XI	83.190	300		Mn X	84.28	200	
Be III	83.20			Ne VII	84.292	200	
P XV	83.2	P		Sc XI	84.351	40	
Mn XIII	83.23			Sc XI	84.393	50	
Na VIII	83.240	700		Ni X	84.418	5	
Si VI	83.258	250		Sc XI	84.433	100	
Si VI	83.283	50		Al	84.479	10	
Na VIII	83.288	800		S XVI	84.48	P	
Fe XX	83.3			Fe XII	84.491	25	
Ni X	83.326	2		Cr XIII	84.616	50	
Al	83.335	10		Mg VII	84.642	500	
Si VI	83.358	400		Al VI?	84.650	100	
Na VIII	83.391	900		Ni X	84.659	5	
Mg VI	83.403	400b		Ti X	84.711	6	
Mg VII	83.403	400b		Mg VI	84.745	200d	
Mn XIII	83.41			Be III	84.758	100	
Fe IX	83.45	40		Fe XII	84.768		
Al VIII	83.465	50		Sc	84.777	100	
Mn X	83.48	350		Al VI?	84.801	20	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mg VIII	84.827	10d		Mg VII	86.147	10	
Al VI?	84.828	70		Al VI	86.147	200	
Na VII	84.832	10		Fe XI	86.149	10	
Ti XI	84.835	6		Cu X	86.160	100	
Cr XIII	84.898	200		Cr XIV	86.164		
Mg VIII	84.919	100		Cu X	86.204	100	
Al VI?	84.928	10		Mg VIII	86.234	100	
Al	85.046	1		Al	86.282	50	
Mg VIII	85.064	10		Ni X	86.300	60	
Mg	85.091	10		Cu X	86.336	140	
Fe XII	85.14			Mg VIII	86.359	100	
Mg VI	85.153	10b		Al	86.360	100	
Mg VIII	85.153	10b		Na VIII	86.381	400	
Si V	85.175	500		Al	86.393	100	
Al	85.189	10		Na VIII	86.417	500	
Ne VII	85.19	150		Mg VIII	86.417	200d	
Si VII	85.219	100		Cu X	86.422	10	
Mg VIII	85.248	200		Al	86.427	100	
Na VII	85.260	300		Mg VIII	86.440	200d	
Ti X	85.262	10		Ni X	86.464	5	
Si VII	85.289	500		Ne VII	86.47		
Ne VII	85.29	190		Na VIII	86.479	600	
Ti XI	85.290	3		Fe XI	86.513	100	
Na VII	85.297	300		Na VIII	86.530	100	
Mg VII	85.336	10		Al	86.540	10	
Mg VII	85.407	700		Na VII	86.596	400	
Al VI	85.423	100		Na VII	86.652	500	
Ne VII	85.43	340		Al VII	86.671	10	
Na VII	85.458	400		Al VII	86.689	50	
Fe XII	85.477	30		Cu X	86.720	10	
Al VI	85.515	1000		F VII	86.728	10	
Ni X	85.523	25		Na VII	86.758	300b	
Cr XIII	85.566	300		Na VIII	86.758	300b	
Al VI	85.569	200		Mg VII	86.762	100	
Mg VI	85.577	200		Fe XI	86.772	200	
Si V	85.579	300		Cu X	86.776	90	
Si VII	85.584	500		Cu X	86.792	10	
Mg VIII	85.599	300		Mg VI	86.807	200	
Si	85.614	20		Ne VII	86.818	190	
Mg VI	85.622	300		Mg VIII	86.847	200	
Al VI	85.622	300		Ni X	86.865	2	
Al V	85.662	50		Al VII	86.887	750	
Fe XII	85.669			Na	86.890	10	
Si VII	85.698	100		Cu X	86.907	90	
Al VI	85.724	300		Cu X	86.964	1	
Mg VIII	85.749	400		Al	86.975	10	
Ni X	85.753	5		Mg VIII	87.017	100	
Al VI?	85.764	400		Cu X	87.018	90	
Al V	85.804	350		Al V	87.020	100	
Al VI	85.817	350		Fe XI	87.025	120	
Na VIII	85.826	200		Al VII	87.060	600	
Na VIII	85.861	300		Ni X	87.077	1	
Al VI	85.865	100b		Mg VII	87.131	500d	
Na VIII	85.887	300		Cu X	87.135	1	
Al V	85.922	10b		Na VI	87.141	100b	
Na VIII	85.936	100		Na VII	87.141	100b	
Al VI?	85.970	10		V XI	87.166	600	
Na VIII	85.992	300		Mg VII	87.175	400d	
Al VI	86.020	150		Al VII	87.176	300	
Mg VII	86.032	200d		Na VI	87.211	700b	
Na VIII	86.039	500		Na VIII	87.211	700b	
Cr XIV	86.057			Mn IX	87.24	150	
O VII	86.07	200		Al V	87.279	50d	
Al VI	86.070	150		Mn XIII	87.30		
Al VI	86.097	150		Ni X	87.317	25	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al VI	87.334	400		Na VI	88.583	100	
V XII	87.36			Co IX	88.63	80	
Mn XIII	87.40			Al V	88.636	100b	
Mg VI	87.406	10		Ti	88.642	1	
Mn XV	87.47			Mg VII	88.680	600	
Na VII	87.471	10		Al V	88.688	200b	
Cu X	87.516	50		Al VI	88.588	100b	
Mn IX	87.52	200		Na VII	88.698	200	
Na	87.524	200		Mn IX	88.74	200	
Al VI	87.544	350		Na VII	88.747	300	
Al VI	87.592	500		Co XIX	88.81	P	
Al VI	87.629	100		Al V	88.817	50	
Al VI	87.655	650		Mg VI	88.827	200	
Mg	87.660	10		Si XII	88.84		
Ni X	87.680	15		Na VII	88.865	400	
Cu X	87.703	100		Mn IX	88.89	200	
Mg VII	87.722	600		Mg XII	88.91	P	
Ti XI	87.725	35		Na VII	88.914	200	
Mg VII	87.767	400		Al V	88.945	1	
Al VI	87.783	250		Mg VI	88.952	200	
Mn IX	87.79	100		Ti	88.961	1	
Mn XV	87.80			Co X	88.99	90	
Al VI	87.802	250		Ne VII	89.02	130	
Ne VII	87.85	200		Mg VI	89.021	10	
Al VI	87.866	350		Fe XI	89.104	200	
V XI	87.868	800		Ti	89.181	1	
Al VI	87.887	250		Fe XI	89.185	100	
Mg VII	87.889	500		Mg	89.256	100	
Al	87.932	100		Mn XIX	89.3		
Cu X	87.932	100		Ne VII	89.368	500	
Mn IX	87.94	300		Mn IX	89.39	P	
Ti	87.972	6		Mg VII	89.407	200	
Cu X	87.983	40		Mg VII	89.448	200	
Fe XI	87.995	10		Mg VII	89.476	10	
Si VII	88.008	150		Mg	89.556	10	
Mg VIII	88.016	200		Fe X	89.577	10	
Cu X	88.020	60		Mg VI	89.649	10	
Fe XI	88.029	10		Fe XI	89.703	10	
Cu X	88.032	120		Sc X	89.736	40d	
Al VII	88.033	900		Na VIII	89.759	200	
Na VI	88.038	100		Mn IX	89.77	200	
Ne VIII	88.092	850		Fe XI	89.771	10	
Al	88.108	100		Ti	89.814	3	
Na VI	88.143	200d		Na VIII	89.818	300	
Fe XI	88.167	10		Ti XII	89.844	60	
Al VI	88.170	1000		Mn IX	89.89	200	
Na VI	88.223	100		Na VIII	89.948	400	
Mn IX	88.23	250		Cr XIII	89.99		
Al	88.241	10		Mn IX	89.99	400	
Na VI	88.246	200		Fe XIX	90.0		
Na VI	88.270	300d		Cr XIII	90.07		
Al VI	88.273	750		Mn IX	90.08	450	
Ti	88.284	1		Mg	90.165	10	
Be III	88.314	330		Cr XIII	90.17		
Al VI	88.325	100		Fe XI	90.170	10	
Na VI	88.340	100d		Na VII	90.173	100	
Al VI	88.376	750		Al VI	90.200	1000	
Na VI	88.387	10		Fe XI	90.205	100	
Mn IX	88.40	300		Na VII	90.252	400b	
Al V	88.425	100		Na VIII	90.252	400b	
Co IX	88.44			Na XI	90.31	P	
Na VI	88.460	100		Mg VII	90.338	100	
Al VI	88.469	250		Fe XI	90.345	10	
N VII	88.51	P		Mn XII	90.372		
Al V	88.539	400b		Si V	90.453	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mg	90.463	10		Si VI	91.798	200	
Na VI	90.468	300		Ti X	91.806	0	
Co X	90.47	80		Na VI	91.836	10	
Fe XV	90.503	10		Ti X	91.855	0	
Ti XII	90.512	90		Cr XIII	91.855	400b	
Na VIII	90.536	500		Na VII	92.003	500	
Ti XII	90.547	6		Cr XIII	92.01		
Al VII	90.550	300		Al V	92.039	10	
Mn IX	90.60			Mg VIII	92.123	100d	
Al V	90.630	250b		Cr XIII	92.16		
Al VII	90.630	250b		Mn XI	92.240		
Al V	90.646	100		Mg VII	92.256	300	
P VI	90.647	500		Ti	92.272	1	
Cl XVII	90.7	P		Mg VIII	92.324	10	
Al V	90.761	200		Mg V	92.409	10d	
Mn XII	90.701			Mg V	92.428	10d	
Mg VII	90.706	400		Mg VII	92.503	10	
Na VI	90.746	10		Mg V	92.534	10	
Al VII	90.772	200		Cr XIII	92.54		
Cu XXI	90.81	P		Ti	92.581	1	
Mg VII	90.815	300		Mg V	92.588	10	
Na VII	90.830	10		Na VI	92.608	10d	
Cr XIII	90.85			Cr XIII	92.61		
Si V	90.852	200		Al VI	92.626	750	
Al VI	90.858	600		Al VI	92.636	250	
Cr XII	90.86			Mn XI	92.640		
Mg VI	90.897	600b		Mg V	92.641	10	
Mg VII	90.897	600b		Mg	92.685	10	
Ti XI	90.908	1		Na VII	92.774	200	
Al V	90.914	200		Na VII	92.809	100	
Ti XI	90.927	3		Fe XI	92.81		
Ti XI	90.966	3		Na VII	92.843	100	
Al V	90.982	50d		Ne VII	92.850	90	
Fe XIV	91.009	20		Fe XI	92.87		
Mg	91.013	10		Al VI	92.875	500	
O VII	91.02	250		Na VII	92.883	100	
Mn IX	91.02	400		Mg VII	92.898	200	
Al	91.023	500		Na VII	92.930	200	
Na VII	91.064	200		Mg VII	92.934	200	
Al V	91.078	10		Si	92.957	50d	
Mg	91.129	10d		Mg VI	92.964	100b	
Na VI	91.268	100		Mg VII	92.964	100b	
Fe XIV	91.273			Al VI	92.970	250	
Mg VII	91.302	10d		Na VII	92.976	400	
Al VI	91.332	500		Fe XI	93.02		
Si VI	91.369	200		V XIII	93.025		
Mg IX	91.385	10d		O VI	93.03	100	
Fe XI	91.394			Cr X	93.069	25	
Na VI	91.414	10d		Na	93.070	10	
Mg VII	91.460	10d		Mg V	93.109	100b	
P VI	91.471	500		Mg VI	93.109	100b	
Fe XI	91.472			Na VIII	93.120	100	
Na VI	91.475	10		Na VIII	93.197	10	
Al VIII	91.487	50		Na VIII	93.242	200	
Ni X	91.527	40		Al VII	93.269	10	
Ne VII	91.564	260		Al VII	93.295	120	
Mg VII	91.573	100		Na VIII	93.359	10	
Fe XI	91.63			Na VII	93.393	400	
Mn XI	91.646			Sc IX	93.393	100	
Fe XI	91.733			Ti XI	93.395	6	
Na VI	91.737	10		Cr XIII	93.42		
Cr XIII	91.749	200		Fe XI	93.433		
Al V	91.750	50		Na VII	93.434	400	
Ni X	91.790	60		Fe VIII	93.46	100	
Cr XIII	91.792	300		Na VII	93.486	500	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mg VI	93.493	300		Na VI	95.182	100	
Ca X	93.502	50		Mg VII	95.233	100	
Al VII	93.516	100		Mg VII	95.259	200	
Na VII	93.528	100		Na VI	95.263	100	
Al VII	93.542	!		Ti	95.293	3	
Ti XI	93.589	20		Mn XI	95.299		
Fe VIII	93.61	200		Na VI	95.319	10	
Ti XI	93.626	16		Fe X	95.338	100	
Mg VIII	93.650	200d		Fe X	95.374	300	
Al V	93.654	20		Mg VI	95.385	400b	
Na VIII	93.670	400		Mg VII	95.385	400b	
Mg	93.720	100d		Mn XI	95.390		
Al V	93.755	350		Al	95.405	10	
Fe XX	93.8			Mg VI	95.421	400b	
O VI	93.84	100		Mg VII	95.421	400b	
Al V	93.855	200		Al VI	95.436	100	
Al V	93.880	70		Mg VI	95.483	500b	
Sc IX	93.889	100d		Mg VII	95.483	500b	
Na VIII	93.898	200		Si XIV	95.5	P	
Ti	93.909	10		Na VIII	95.551	200	
Mg VIII	93.911	10		Mg V	95.556	100b	
Fe XVIII	93.94	400		Mg VII	95.556	100b	
Al V	93.955	300		Mg V	95.592	10	
Mg VIII	93.972	10		Al	95.624	100	
Al V	93.981	100		Mg VI	95.637	300b	
V XIII	93.994			Mg VII	95.637	300b	
Fe X	94.012	400		Ti	95.640	3	
Na VII	94.020	10		Mg VI	95.675	300	
Mg VII	94.043	400b		F VII	95.697	10	
Mg VII	94.043	400b		Al	95.720	200	
Ti XI	94.053	35		Ne VII	95.75	700	
Ti XI	94.085	3		Cr XVIII	95.76		
Al V	94.089	70		F VII	95.775	100	
Al V	94.117	120		Na	95.796	10	
Al V	94.160	100		Mg V	95.803	200	
Mg VII	94.174	300		Mg VI	95.803	200	
Al V	94.187	100		Al V	95.835	100	
Na VI	94.208	100		Ne VII	95.84	250	
Mg VII	94.276	200b		Co IX	95.852	2	
Mg VIII	94.276	200b		Al	95.859	10	
Na VII	94.288	600		Mg V	95.909	100d	
Ne VII	94.29	400		Ti	95.929	3	
Al V	94.321	10		Na VI	95.933	300	
Mn XI	94.327			Mg V	95.965	100	
Ne VII	94.36	500		Al VII	95.965	200d	
Al V	94.394	10		Ti	96.017	3	
Ne VII	94.40	400		Na	96.018	100	
Na VII	94.468	700		Mg V	96.019	200b	
Ti	94.570	3		Mg VII	96.019	200b	
Mg	94.721	100		Si VI	96.020	500	
Mg V	94.793	10		Al VI?	96.071	10	
Na VI	94.827	10d		Co IX	96.076	40	
Sc XI	94.888	50		Mg V	96.085	100b	
Ne VII	94.890	300		Mg VI	96.085	100b	
Al	94.970	150		Cr XII	96.11		
Ni XX	94.97	P		O VII	96.12	300	
Ne VII	94.986	300		Fe X	96.122	400	
O VI	95.02	200		Na VI	96.124	10	
Sc X	95.02	40		P XV	96.13	P	
Mg VII	95.027	400		Al V	96.150	50	
Sc X	95.05	40		Mg V	96.159	10b	
Mg VII	95.089	10		Mg VI	96.159	100	
Sc X	95.09	40		Ti	96.170	1	
Sr XI	95.117	500		Na VI	96.196	100	
Mg VII	95.139	100		Al VII	96.198	50	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn XVIII	96.22			Na VII	98.016	100	
Mg VI	96.240	100		Mn XI	98.023		
Ti	96.246	1		Mg VII	98.032	300	
Mg VI	96.256	200		Mn XI	98.064		
Mg VI	96.303	200		Na VII	98.080	300b	
Co IX	96.305	5		Na VIII	98.080	300b	
Na VI	96.307	100		Ne VIII	98.115	850	
Al VII	96.319	10		Fe XIII	98.128	25	
Mn VIII	96.33	50		Sc	98.180	200	
Cr XII	96.35			Na VII	98.188	300	
Mg VI	96.388	100		Sc	98.192	100	
Si V	96.439	750		Si V	98.209	100	
Al VI	96.442	10		Mg V	98.235	100	
Mg VI	96.467	10		Ne VIII	98.260	870	
Na VI	96.475	300		Mg V	98.271	200	
Si VI	96.488	500		N VI	98.3	P	
Cr XII	96.50			Na VI	98.3	20	
Co IX	96.541	10		Sc	98.323	300	
Na	96.572	10		Fe VIII	98.37	200	
Mg VI	96.670	200		Na VII	98.378	300	
Al VI	96.673	50d		Fe XIII	98.387		
Mg VI	96.704	200		Na VII	98.394	300	
Ti	96.731	3		Mg V	98.406	100	
O VI	96.78	250		Mg V	98.444	100	
Fe X	96.788	200		Mn XI	98.477		
Mg VI	96.797	100		Mg VI	98.508	300	
Na VII	96.845	100		Fe XIII	98.523	15	
Mg VI	96.857	100		Mn XI	98.538		
Cr XIII	96.86			Fe VIII	98.54	300	
Na VII	96.872	200		V XII	98.630	300	
Mg VI	96.903	10		Mg V	98.636	200	
Na VII	96.922	300		Al VI?	98.684	10	
Mg VI	96.939	400		F VIII	98.707	10	
Al	96.939	10		F VIII	98.799	10	
Mg VI	96.973	400		Mg V	98.805	200	
Fe X	97.122	300		Fe XIII	98.826		
Li	97.142	1		Mg V	98.872	100	
Si V	97.143	500		Sc	98.889	300d	
Cr XIII	97.25			Sc	98.911	100	
Mg VI	97.251	500		Mg V	98.983	400b	
Mg VI	97.278	500		Mg VI	98.983	400b	
Co IX	97.355	5		Mg VII	98.983	400b	
Mg V	97.391	100		Na VI	99.004	10	
N VI	97.4	P		Mn XI	99.02		
Mn VIII	97.41	70		Mg V	99.025	200b	
Mg V	97.439	200		Mg VI	99.025	200b	
Mg VIII	97.465	200		Co IX	99.042	40	
Ne VII	97.502	730		F VI	99.044	10	
Mg VIII	97.525	10		Kr X	99.06		
Mg V	97.563	100		Mg V	99.067	200	
Co IX	97.587	15		Si VI	99.095	500	
Fe X	97.591	10		Mn XIX	99.1		
Mg V	97.606	200b		F VI	99.105	15	
Mg VIII	97.606	200b		N VI	99.13	P	
Na VI	97.636	10		Mg V?	99.149	10	
V XII	97.642	50		Al V	99.200	50	
Mg V	97.686	100b		F VI	99.203	10	
Mg VIII	97.686	100b		Mg V	99.205	1	
Sc XI	97.777	300		Mg VI	99.279	400	
Na VII	97.790	100		Co IX	99.284	1	
Sc XI	97.830	400		Al V	99.290		
Fe X	97.838	10		Co XIX	99.30	P	
Co IX	97.854	15		Mg VI	99.333	400	
Na VII	97.907	200		Mn XI	99.356		
V XII	97.938	200		Ti	99.377	6	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Na VII	99.421	400		Al VI	100.919	200	
Al V	99.427	200		Sc	100.924	100	
Si VI	99.460	750		Na V	100.945	10	
N VI	99.5		P	Mg V	100.949	10	
Na VI	99.500	10		Ca IX	100.958	80	
V XIII	99.523			Si VI	100.963	50	
Mg V	99.535	100		Al VI	101.027	159	
Al V	99.544	100		Cr XIV	101.05		
Na VII	99.556	400		Ca XX	101.1		P
Kr X	99.57			Co IX	101.107	2	
Si VI	99.598	500		Ti	101.111	3	
Mg V	99.610	200		Si VI	101.160	10	
Al V	99.616	350		Kr X	101.20		
Na VI	99.617	100		Na VII	101.201	10	
V XIII	99.625			Mg	101.322	100	
O VI	99.68	250		Na VI	101.348	10	
Na VI	99.680	100b		Ti X	101.353	35	
Na VII	99.680	100b		Cr XII	101.39		
Kr X	99.69			Kr X	101.39		
Mg VI	99.713	300		Mg	101.398	10	
Mg VI	99.738	300		Co IX	101.410	2	
Al V	99.769	20		Cr XIV	101.42		
Mg V	99.788	100		Fe X	101.435		
Kr X	99.86			N VI	101.46		P
Co IX	99.921	90		Cr XII	101.46		
Si VI	99.966	500		Fe XIX	101.5		
Mn XVII	100.00			Mg VI	101.508	200d	
Kr X	100.11			Mg VI	101.556	300	
Mn X	100.173	100		O VI	101.57	100	
Mg	100.196	100		Ni IX	101.657	80	
Ti	100.208	6		Mg V	101.671	300	
Co IX	100.210	15		Be III	101.7		P
Be III	100.2552	1000		Ni IX	101.701	80	
Kr X	100.30			Fe X	101.733		
Na VII	100.337	100		Mg V	101.782	300	
Ti	100.359	3		Na VII	101.785	300	
Mg VII	100.374	100		Mn X	101.808	50	
Ne X	100.41		P	Na VII	101.816	300	
Mg VII	100.421	100		Mg V	101.845	100	
Na VI	100.469	200		Fe X	101.846		
Na VI	100.519	300		Ni IX	101.846	100	
Mg VIII	100.519	10		Mn X	101.854	50	
Mg	100.545	200		Cr XVII	101.91		
Mn X	100.585	200		Sc	101.918	200	
Na VI	100.590	100		Ni IX	101.932	20	
Fe X	100.590	400		Mg VII	101.956	200	
Ti XI	100.591	6		Ca X	101.977	50	
Mg VIII	100.597	200		Sc X	101.978	600	
Al VI	100.616	600		Mn X	102.030	50	
Co IX	100.636	2		Na VIII	102.043	10	
Ti	100.638	3		Sc IX	102.047	50	
Al VI	100.639	100		Mg VII	102.053	10	
Si VI	100.640	500d		Ca VIII	102.057	10	
Ca IX	100.645	40		Mg V	102.079	200	
Sc	100.676	100		Fe X	102.095		
Mg VI	100.702	500		Ti X	102.106	20	
Na VII	100.718	200		Mg VII	102.138	100	
Sc X	100.739	100		Kr X	102.16		
Sc	100.781	100		Mg VI	102.189	500	
Mn X	100.787	100		Fe X	102.192		
Ti	100.835	20		Na VII	102.226	100	
Co IX	100.856	1		Mg VI	102.239	500	
Na V	100.88	10		Kr X	102.24		
Al VI	100.894	200		Sc	102.251	300	
Mg VI	100.904	400		Ni IX	102.283	10	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
O VI	102.30	150		Fe XVIII	103.95	200	
Kr X	102.30			Ni IX	103.981	100	
Ni IX	102.340	60		Al V	103.990	200	
Fe X	102.348			Ni IX	103.993	100	
Ni IX	102.364	1		Na VII	104.000	200	
Na VII	102.390	100		Ti	104.015	6	
S XVI	102.4		P	Na VII	104.036	220	
O VIII	102.43		P	Al VI	104.047	1000	
Na VII	102.448	10		Al V	104.073	500	
Mg VII	102.471	300		Mg V	104.100	200	
Ni IX	102.480	60		Al V	104.121	600	
Ca VIII	102.482	50		Cr VII	104.13	40	
Ni IX	102.539	1		Mg V	104.140	200	
Ti	102.576	6		Li III	104.142		P
N VI	102.6		P	Sc XI	104.142	40	
Ni IX	102.602	100		Al V	104.180	700	
Sc IX	102.653	100		Mg V	104.182	100	
Ni IX	102.710	1		Mg V	104.214	100	
Kr X	102.72			Sc XI	104.219	40	
Fe X	102.829			Al	104.227	10	
Sc	102.835	230		Fe X	104.248		
V XVII	102.84			Mn X	104.310	50	
Si VI	102.846	50		Na	104.314	10	
Li III	102.856		P	Mg	104.342	300	
Kr X	102.86			Al VI	104.344	800	
Sc	102.868	100		Ti	104.348	6	
Mg VII	102.906	300		Al V	104.363	500	
Ne VIII	102.911	790		Mg V	104.432	200	
Sc	102.975	100		Sc XI	104.437	500	
Na VI	103.002	10		Na	104.440	10	
Al VI	103.062	10		Al V	104.447	500	
Na VI	103.078	100		V XII	104.45		
Ne VIII	103.085	830		Al VI	104.466	400	
Ne VII	103.09			Ti	104.466	1	
Si VI	103.163	100		Al V	104.495	400	
Fe X	103.164			Be III	104.5	f	
Na VI	103.210	200		Ti X	104.516	0	
O VI	103.26	200		Mg VI	104.519	300	
Mn X	103.269	300		Ti X	104.568	0	
Kr X	103.27			N VI	104.58		P
Fe X	103.319			V XII	104.58		
Mg V	103.333	10	-A	Sc	104.592	300	
Na VII	103.354	100		Mg VI	104.597	500	
Li III	103.359		P	Mn X	104.608	100	
Ne VII	103.400	10		Fe X	104.638		
N IX	103.428	40		Sc	104.658	100	
Na V	103.482	10		Ti	104.659	5	
Mn X	103.521	200		V XII	104.66		
Fe IX	103.566	80		O VI	104.67	250	
N VI	103.6		P	V XI	104.74		
Kr X	103.60			Mn X	104.806	50	
Ni IX	103.620	80		O VI	104.811	350	
Fe X	103.724			Br IX	104.85		
Mg VII	103.743	10		Ti	104.861	3	
Na VII	103.779	300		Na VII	104.871	200	
Al V	103.805	500		Cr XVIII	104.94		
Na VII	103.842	200		Na VII	104.955	300	
Mg VII	103.859	10		Al	104.960	10	
Ni IX	103.871	60		N VI	105.0		P
Al V	103.881	700		Mg	105.066	500	
Na VII	103.891	400d		V XI	105.08		
Mg V	103.904	400		Na VII	105.111	300	
Ni IX	103.926	1		Sc XI	105.140	600	
Al VI	103.940	300		Cr VII	105.14	160	
Mg V	103.947	300		Mg VII	105.159	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Sc XI	105.170	200		Mg V	107.661	200	
Na VII	105.205	200		Na VI	107.683	500	
Fe IX	105.208	60		Al V	107.711	300	
Mn IX	105.256	50		Na VI	107.742	200	
V XI	105.34			Ti	107.801	3	
Na VII	105.354	400		Mg VI	107.820	400	
Mg VI	105.410	200		V XII	107.83		
Li III	105.468	P		Fe VIII	107.872	400	
V XII	105.49			Sc	107.929	200	
Mg VI	105.502	300		Na V	107.934	200b	
Sc	105.578	300		Na VI	107.934	200b	
Mg VI	105.778	100		Al V	107.945	1000	
Na XI	105.82	P		Li III	107.999	10	
Mg VI	105.830	100		Al V	108.004	250	
V XI	106.00			Mg VI	108.015	300	
Ne VII	106.040	300		Na V	108.017	200	
Na VI	106.040	300		Sc	108.026	100d	
Na VI	106.077	300		Al V	108.057	600	
Ne VII	106.086	800		Na VII	108.079	10	
Na VI	106.125	400		Fe VIII	108.083	400	
Ne VII	106.192	800		Ti XII	108.086	10	
Na V	106.278	100		Al V	108.112	600	
Fe XIX	106.3			Mg VI	108.114	200	
Na V	106.302	100		Mg VI	108.148	100	
Na	106.345	200		V XVI	108.15		
Na V	106.399	100		Na VII	108.159	10	
V XI	106.42			Na VII	108.193	200	
Mg	106.453	200		Sc	108.296	100	
Al	106.471	10		V VII	108.3		
Na V	106.490	100		Al V	108.315	200	
Mg VII	106.524	200d		Mg VI	108.338	100	
Sc X	106.557	100		Na VII	108.373	100	
Na VI	106.580	10		Al V	108.385	500	
Cr XVI	106.60			Co IX	108.39	90	
Sc	106.655	100d		Fe XIX	108.4		
Na	106.703	10d		Al V	108.404	250	
Mg VII	106.707	100		Fe XII	108.440		
V XII	106.781	200		Mg VI	108.441	10	
O VI	106.79	300		Al V	108.446	150	
Mg VII	106.809	10		Al V	108.462	500	
V XII	106.820	10		Ti	108.493	3	
V XII	106.885	400		Al V	108.526	20	
Na VI	107.014	200		Al IV	108.535	50	
Na VI	107.061	300b		Na VI	108.555	400	
Na VII	107.061	300b		Fe XII	108.605		
Na VI	107.093	300b		Al V	108.616	50	
Na VII	107.093	300b		Co IX	108.66	100	
Ne VII	107.099	200		Na VI	108.678	10	
N VI	107.15	P		Mn XVIII	108.70		
Na VI	107.158	100b		Al V	108.707	300	
Na VIII	107.158	100b		Na VII	108.733	200	
Na VI	107.227	300		Na VII	108.829	100	
V XII	107.25			Al V	108.851	50	
Sc	107.273	100		Fe XII	108.862		
Na VI	107.288	400		Ti	108.886	3	
Mn X	107.34			Al IV	108.907	50d	
Mn X	107.36			V XII	108.93		
Fe XIII	107.384			Mn X	108.93		
Mn X	107.39			Mn X	108.97		
Mn X	107.472			F VI	108.975	100	
Na VI	107.535	300		Fe XII	109.015		
Na VI	107.553	300		Al V	109.021	150	
V XI	107.57			F VI	109.040	150	
Na VI	107.608	400		Sc X	109.072	100	
Al VII	107.620	700		Ti XII	109.107	35	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti	109.153	1		Al XIII	110.8	P	
Mg V	109.174	10		Mg V	110.809	200	
Sc X	109.202	40		Na V	110.817	200b	
Cu	109.215	120		Na VII	110.817	200	
Sc X	109.227	100		Mg V	110.859	400	
Ne X	109.28	P		Na V	110.878	200	
Al VI	109.284	350		Sc	110.920	200	
Sc X	109.285	300		Na V	110.921	10	
Sc X	109.307	10		Mg V	110.939	200	
Mn XVII	109.35			Si XIII	110.957	100	
Na VII	109.362	100		Ca X	110.962	75	
Mg	109.420	100		Mg V	111.031	300	
Ti	109.509	3		Mg V	111.091	300	
Fe XII	109.509			Ne VII	111.152	220	
Al VI	109.514	1000		Mg VI	111.160	300	
Na VII	109.519	200		Al IV	111.196	100	
Br IX	109.59			Ca X	111.197	50	
Ti	109.593	3		Mg V	111.199	400b	
Sc	109.609	200		Mg VI	111.199	400b	
Fe XII	109.712			Ne VI	111.2	10	
Na VI	109.763	10		Na VII	111.211	300	
Sc X	109.765	400		Mg V	111.247	200	
Mn IX	109.785	30		Mn IX	111.262	400	
Sc X	109.805	200		V XVII	111.27		
Mg V	109.812	200		Ti	111.345	20	
Ne VII	109.820	20		Na VII	111.390	200	
Al VI	109.843	600		Sc	111.402	200	
Na VI	109.896	500		Mg V	111.419	200	
Sc	109.897	300		Mg V	111.457	200	
Fe XIX	109.9			Mg V	111.457	200	
Ti	109.904	6		Mn IX	111.500	200	
Ti	109.963	1		Na V	111.512	100	
Al VI	109.974	200		Na V	111.552	10	
Ne VII	109.995	470		Mg VI	111.552	500	
Ti	110.019	1		Al IV	111.589	150	
Mg V	110.029	100		Ti XI	111.664	6	
Ti XV	110.072	1		Sc	111.711	200	
Na VI	110.085	200		Fe IX	111.713	10	
Mg V	110.121	100b		Na VI	111.725	100	
Mg VII	110.121	100b		Mg VI	111.746	400	
O VI	110.148	120		Sc	111.757	100	
C VI	110.22	P		Al IV	111.781	50	
O VI	110.220	250		Fe IX	111.791	20	
N VI	110.23		8	Na VI	111.793	100	
Fe XXI	110.28	?		Ne VII	111.807	430	
Ti	110.383	10		Mg VI	111.864	400	
Sc	110.306	100		Na V	111.879	10	
Si XIV	110.37	P		Mn VII	111.889	20	
Na	110.474	10		Mn XVIII	111.93	?	
Sc	110.498	300		Sc XIV	111.937	40c	
Ne VI	110.5	20		Ti	111.942	3	
Fe XX	110.5			Mg VII	111.984	10d	
Ti XVI	110.56			K XIX	112.0	P	
Ne VII	110.562	400		Ti	112.002	1	
Na	110.577	100		Na V	112.009	300b	
N VI	110.59	P		Na VI	112.009	300b	
Fe XII	110.591			Fe IX	112.01	10	
Ne VII	110.630	600		Mn VII	112.060	10	
Na VII	110.647	200		Na V	112.077	10	
Br IX	110.66			Fe IX	112.096	40	
O VI	110.69	150		K IX	112.113	50	
Sc IX	110.718	100d		Ti	112.116	1	
Fe XII	110.732			Mg VII	112.135	10	
Na VI	110.750	200		Ti	112.153	1	
Na VII	110.778	300		Ti	112.178	3	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Na V	112.186	10		Mg V	113.934	300	
Sc	112.210	300		Sc XV	113.937	200	
Fe VIII	112.25	250		Ti XI	113.940	6	
Fe XX	112.25 ?			Na V	113.952	10	
Mg VII	112.269	i		Mg V	113.990	300	
Sc XV	112.337	100		Mn IX	114.023	50	
V XI	112.34			Fe IX	114.024	40	
Na V	112.347	10		Mg V	114.029	200	
Fe IX	112.37	10		Fe VIII	114.05	150	
Mn IX	112.415	500		Ti	114.053	3	
Sc	112.434	100		Mg V	114.059	400	
Na VI	112.448	300d		Fe IX	114.111	20	
Fe VIII	112.47	350		Mg V	114.199	300	
Fe VIII	112.49	350		Mn VII	114.216	10	
Na	112.526	10		Cr VII	114.22	60	
Cu	112.532	120		Mg V	114.226	300	
Sc	112.544	300		Ti XI	114.272	10	
K IX	112.581	100		Mg V	114.285	300	
V XI	112.63			Fe VIII	114.29	300	
Na	112.641	10		Al IV	114.313	10	
Sc X	112.677	200		Mg V	114.324	300	
Fe VIII	112.70	250		Mn VII	114.393	20	
V XI	112.76			Mg VI	114.412	10	
Sc XV	112.825	40		Mn IX	114.472	50	
Ca VIII	112.906	50		Mg V	114.498	10	
Mg IV?	112.914	10		Fe VIII	114.56	300	
Fe VIII	112.93	500		Ca VIII?	114.566	40	
F VII	112.935	400		Mg VI	114.624	10	
Na VI	112.950	400		Na VI	114.666	400	
F VII	112.976	300		Na V	114.700	100d	
Fe XX	112.99 ?			Mg VI	114.725	10	
Sc	113.014	300		Al IV	114.737	50	
Na	113.061	100		Na V	114.738	100	
Mn IX	113.080	200		Mg V	114.785	600d	
Na VI	113.125	400		Kr IX	114.95	750	
Al	113.140	50		Mn XX	114.98 ?		
Ti XI	113.151	3		Mg V	115.013	600d	
Mg VI	113.189	500		Ti XI	115.015	20	
Mg V	113.217	200		Ti XV	115.02		
Mg V	113.279	10		Mg V	115.093	400b	
Ti	113.289	3		Ca VIII?	115.107	80	
Mn XVIII	113.3			Cr XVI	115.17		
Al VI	113.314	50		Mn XVIII	115.23		
Ti	113.374	1		Ne VII	115.31	600	
V XII	113.39			Fe IX	115.53	30	
Mg V	113.414	200		Na VII	115.61	10	
Al VI	113.437	150		Ne VII	115.92	600	
Ca VIII	113.453	100		Mg V	115.999	400	
Fe XX	113.5			Cr VII	115.40	70	
Mg V	113.518	100		Na VII	115.475	10	
Na V	113.574	10		Ne VII	115.522	700	
Al VI	113.623	50d		Mg V	115.517	400	
Mn IX	113.627	300		Na VI	115.729	200	
Ti	113.643	1		Kr IX	115.74	1000	
Mg V	113.753	400		Na VI	115.780	10d	
Al VI	113.756	50		O VI	115.824	350	
Sc	113.767	100d		Ne VII	115.955	330	
V XII	113.78			Fe IX	115.996	30	
Fe IX	113.793	60		F VI	116.034	10	
Mg V	113.823	100		Ca XX	116.1 P		
F VI	113.840	10d		Sc	116.18	300	
C VI	113.87 P			Fe VIII	116.16	400	
V XV	113.87			Fe IX	116.193		
Ne VI	113.9	10		Ti XVI	116.21		
Li III	113.905 P	30		O VI	116.347	120	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
O VI	116.419	250		Fe VIII	118.63	150	
Fe IX	116.42	40		V VI	118.7	70	
Fe VIII	116.43	50		Mg IV	118.740	5	
Al IV	116.464	250		Ne V	118.8	50	
Ti XII	116.497	60		Mg V	118.810	500	
P XV	116.5	P		Na VII	118.840	10	
Fe XIX	116.5			Fe VIII	118.89	400	
Cr XVII	116.53			Ne V	118.9	10	
Ti XII	116.597	90		Na VII	118.902	10	
Ne VII	116.693	770		Mg V	118.914	10	
Sc	116.770	200		Ti	118.915	6	
Fe IX	116.803	50		Si V	118.968	1000	
N VI	116.81		11	Al V	118.984	300	
Ti	116.910	6		Sc XV	118.99		
Al IV	116.921	150		Na VII	119.014	100	
Mg VI	116.968	500		Sc X?	119.049	400	
Fe VIII	117.18	500		Ti	119.050	6	
V VII	117.2	150		Na VII	119.100	10	
Mn XVIII	117.2			Na VI	119.204	10b	
Mg VI	117.226	300		Na VII	119.204	10b	
V XVII	117.23			Ti	119.268	10	
Sc	117.373	100		Cr IX	119.269	400	
O VI	117.40	300		V XI	119.28		
Al IV	117.410	10		V VI	119.3	60	
Cr IX	117.435	200		Cr IX	119.320	200	
Na VI	117.491	400		Sc X	119.332	100	
Mg VI	117.527	100		V XI	119.36		
Mn XIX	117.6			Fe VIII	119.37	400	
Na VI	117.609	300		Mg V	119.401	400	
Fe VIII	117.65	300		Sc IX	119.444	400	
Na VI	117.699	300		Mg V?	119.447	400	
V VI	117.7	50		Cr IX	119.569	100	
Na V	117.703	10		Cr XIX	119.67	?	
Kr IX	117.71	200		Na VI	119.684	300	
Cr XVII	117.72	?		Fe XIX	119.8		
Mn VII	117.808	30		Ti X	119.822	1	
Si V	117.860	1003		Ti X	119.891	6	
Na V	117.876	10		Mg V	119.978	10	
Mg	117.880	10		F V	119.986	10	
Na VIII	117.909	10		F V	120.032	15	
Cr IX	117.942	600		Na V	120.040	100	
Na V	117.990	400		Mg IV?	120.086	10d	
Mn VII	117.992	50		Ar VIII	120.09	100	
Sc	118.048	200d		F VI	120.116	100	
V XIII	118.08			Fe XXI	120.15	?	
Mg V	118.083	500		Ar VIII	120.16	50	
Ti	118.131	6		Ne VII	120.192	500	
Mg IV?	118.158	10d		Na	120.220	100	
Cr IX	118.165	200		Ti	120.226	1	
Ca X	118.174	50		Sc IX	120.236	500	
Sc	118.179	100		Mg IV?	120.283	1033	
Mn XVIII	118.2			Na	120.298	100	
Ti XVI	118.21			Fe VIII	120.31	150	
Ca X	118.223	100		Sc IX	120.324	50	
Fe VIII	118.28	300		O VII	120.331	350	
Sc	118.297	300		Ne VII	120.337	700	
Mn XIX	118.41	?		Na VI	120.355	10	
Mg IV	118.421	10		Ti	120.406	1	
Na VI	118.500	10		Mg VI	120.415	10d	
Al V	118.500	500		Na	120.430	10	
V XIII	118.50			Ne VI?	120.487	500	
Sc	118.552	400		C VI	120.50	P	
Na VI	118.585	10		Mn XIX	120.5		
Mg IV?	118.603	100		Ti	120.552	20	
Sc	118.616	300		Cu	120.594	150	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V XVI.	120.82			Ti	122.847	6	
Cr XVII	120.84			Ti	122.894	10	
Sc	120.881	100		Cr XVII	122.91		
Na VI	120.931	300		V VII	122.95	200	
Na VI	120.973	200		Co VIII	122.96	30	
Na VI	121.004	100		Cr IX	122.964	200	
Na VI	121.004	100		Ca X	122.995	50	
Sc	121.022	200		Co VIII	123.02	40	
Mg VI	121.025	500		Ar VIII	123.03	50	
Ne VII	121.13	500		Ti X	123.036	6	
Ne VI	121.14	50d		Co VIII	123.05	20	
Na V	121.263	10		F VI	123.051	10	
Mg VI	121.290	300		Ti	123.063	6	
Cr IX	121.293	600		F VI	123.090	10	
Mn IX	121.351			V VII	123.13		
Fe XI	121.419			Na VI	123.134	400	
Mn IX	121.442			Co VIII	123.17	50	
Ti	121.464	6		Mg IV	123.171	5	
Mg IV	121.549	20		F VI	123.175	100	
Ti	121.622	3		Ti	123.196	3	
Mn IX	121.633			Fe XXI	123.22	?	
Mg V	121.644	500		Sc	123.223	200	
Fe XI	121.747			Cr IX	123.226	50	
Na VI	121.773	400		Co VIII	123.24	10	
Ne VII	121.774	260		Ti	123.253	6	
Cr IX	121.781	400		Mg IV	123.266	50	
Ti	121.783	1		Co VIII	123.31	50	
V VII:	121.80			Ti X	123.331	3	
Mg IV	121.881	10		Mg IV	123.372	5	
Na VI	121.913	320		Mg IV?	123.418	10	
Mg V	121.922	500		Co VIII	123.44	10	
Ti	121.922	3		Mn XX	123.48	?	
V VII	121.93	300		Fe XI	123.49	200	
V XV	121.97			Mg IV	123.508	5	
Ti XIV	121.994	1		Mg IV	123.569	2	
Na VI	122.018	300b		Fe XI	123.572		
Na VII	122.018	300b		Mg VI	123.590	100d	
Mg V	122.034	400		Cr XVIII	123.60	?	
F V	122.042	10		Ti X	123.657	6	
F VI	122.122	100		F V	123.665	10	
O V	122.128	10		Ti X	123.703	3	
Ti	122.136	1		Ne V	123.71	30	
Mn VIII	122.168	150		V VII	123.72		
F VI	122.169	10		V XVI	123.72		
F VI	122.200	200		Mg IV	123.721	4	
F VI	122.251	15		Ca X	123.733	125	
Na VII	122.252	100		Na VI	123.744	400	
Co VIII	122.27	50		Mg IV?	123.770	6	
Co VIII	122.32	50		F V	123.774	100	
Na	122.330	10		Mn VII	123.799	100	
O V	122.372	10		Fe XI	123.822		
Ti	122.376	6		Fe XII	123.822		
N VI	122.44		7	Na VI	123.868	300	
Co VIII	122.47	70		Mg IV	123.913	1	
Ne VI	122.49	200b		Na VI	123.929	500	
Co VIII	122.49	20		Ti XI	123.946	6	
Ne V	122.52	200b		F IX	123.97	P	
V VII	122.56	250		Na VI	123.970	290	
Co VIII	122.58	40		Mn VII	124.005	150	
Ar VIII	122.62	10		Al IV	124.034	400	
Sc XIV	122.66			Mn VIII	124.055	100	
Sc	122.676	400		Na VI	124.059	400	
Ne VI	122.69	100		Ti	124.104	3	
Cr IX	122.720	200		Sc XV	124.14		
Sc	122.741	100		Ti X	124.143	3	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Na VI	124.153	400		Mg IV	125.810	30	
Cr VIII	124.184	200		Sc XV	125.83		
V VII	124.30			V VII	125.87		
Cr XVIII	124.38 ?			Na V	125.89 ²	200	
F VI	124.387	300d		Ne V	125.9	20	
Ti X	124.391	6		Ti XI	125.946	6	
Mg IV	124.415	100		Ti XI	125.979	20	
F VI	124.440	10		V VII	125.98	400	
Sc	124.464	100		Mn XVIII	126.0		
F VI	124.474	10		Ti XI	126.042	35	
Mg IV	124.52	1		Al V	126.065	750	
Na VII	124.532	10		Na V	126.090	10	
Mg IV	124.539	10 ²		V IX	126.152	400	
Al IV	124.543	300		Na V	126.210	100	
Ti	124.555	1		Ti	126.276	1	
O V	124.615 ⁹	200		Mg V	126.280	400	
Ti	124.632	1		Ti VI	126.330	3	
Mg IV	124.64	40		Na V	126.368	10	
Mg IV	124.650	240		Si XII	126.43		
Co VIII	124.65	50		Mg VI	126.450	100	
Fe XI	124.725			Na V	126.458	10	
Mg IV	124.761	80		Mg VI	126.488	100	
Fe XXI	124.77 ?			Mg V	126.544	200	
Ar XVIII	124.8 P			Na V	126.557	200	
Ti XVI	124.82			Ti VI	126.566	1	
Na VI	124.850	10		Mg IV	126.600	4	
Mg IV	124.870	100		Na V	126.608	100	
Co VIII	124.88	80		K VII	126.650	10	
Ti	124.940	6		Ti X	126.651	20	
V XVIII	124.94 ?			Mg V	126.677	10b	
Mg IV	124.989	70		V XVII	126.71		
Mg IV	124.994	90		V IX	126.732	250	
Cr XVII	125.00			V IX	126.765	250	
V XVI	125.11			Si XII	126.77		
Co VIII	125.16	80		Na V	126.779	100b	
Na V	125.178	400		Na VII	126.779	10	
V VII	125.19			Zn XII	126.786	40	
Ti	125.195	1		Mg IV	126.800	20	
Mg VI	125.206	300		V IX	126.810	20	
Na V	125.216	400		Na V	126.814	100b	
Cu VIII	125.27	60		Na VII	126.814	100	
Na V	125.286	500		Na V	126.920	10	
Co VIII	125.34	100		F VI	126.923	500	
Cr XVII	125.35			Mg IV	126.960	10	
Co VIII	125.35	100		Na V	126.985	10	
Na VI	125.383	10		Mg	127.013	10	
V IX	125.420	600		Na V	127.036	10	
Na V	125.428	300		V IX	127.068	500	
Cr XVIII	125.44			Cu	127.105	200	
Ti VI	125.456	10		V VII	127.11	200	
Ti X	125.456	10		K VII	127.151	20	
Mg IV	125.459	100		Sc XI	127.156	500	
Mg VI	125.459	300b		Mg IV	127.165	5	
Na V	125.461	300		Zn XII	127.346	40	
Fe XXII	125.47 ?			Cr XIX	127.41 ?		
Al V	125.525	750		Na V	127.444	400	
Co VIII	125.57	30		Na V	127.473	400	
Fe XI	125.587	10		Zn XII	127.631	40	
Mg V	125.600	400b		F VII	127.653	400	
Mg VI	125.600	400b		Ne VII	127.663	710	
Sc	125.610	100		F VII	127.796	500	
V VII	125.62			Na VI	127.837	400	
Ti VI	125.689	6		Sc XVI	127.844	200	
Cr VIII	125.728	100		Na	127.953	100	
Ti	125.744	3		Sc IX	127.985	50	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al XIII	128.02	P		Ca IX	129.970	40	
Na V	128.025	400		Mg IV	129.98	30	
Sc IX	128.035	50		Cr VIII	129.998	700	
Na V	128.051	400		Mg XII	130.0	P	
Ne X	128.06	P		Si XII	130.02		
Sc	128.088	100		Mn XX	130.06	?	
Cr XVIII	128.10			Mg IV	130.087	100	
Ti	128.111	6		Ti VI	130.113	3	
Na	128.112	300		Mg IV	130.116	90	
Cu	128.123	250		Sc	130.213	200	
N V	128.229	1 -A	3.13	Mg IV	130.246	70	
O V	128.235	10		Mg VI	130.294	200b	
Sc XI	128.247	500		Sc	130.304	200	
Cu	128.255	300		N VI	130.32		10
Ti VII	128.269	1		Mg IV	130.349	100	
Ca XIV	128.28			Mg IV	130.36	20	
O V	128.297	20		Al V	130.413	1000	
V VI	128.382	100		Sc XV	130.42		
O VII	128.412	150		N V	130.431	40 -A	3 07
Ti XVI	128.42			Mg IV?	130.541	0	
N V	128.430	1 -A	3.12	Sc	130.558	100	
Ti VI	128.450	1		Mg IV	130.625	60	
O VII	128.500	200		Mg VI	130.630	100b	
Zn XII	128.518	20		Sc	130.642	300	
Ti	128.591	3		Na V	130.680	200	
N V	128.662	10 -A	3.11	Sc	130.683	100	
K XIX	128.7	P		Mg VI	130.701	10	
Ti	128.731	3		Fe XI	130.713	10	
Sc XVI	128.780	40		Na V	130.723	100	
Ne V	128.79	10		Al V	130.848	1000	
Ti	128.871	3		Ti XVII	130.87	?	
N V	128.954	10 -A	3.10	Sc	130.886	200	
Ne V	129.03	50		V XVII	130.91		
Na VI	129.040	200		Fe VIII	130.939	400	
Ti XVI	129.07			Sc XIII	130.96	300	
Ti VI	129.148	3		Al V	131.003	1000	
V XVI	129.16			Sc	131.068	270	
Ca IX	129.197	120		Zn XIII	131.082	40	
Ti VI	129.249	6		Ti	131.102	5	
Sc	129.283	100		Ti XV	131.12		
Ti	129.288	0		Ca XIII	131.22		
N V	129.337	20 -A	3.09	V XVI	131.22		
Ti XIV	129.384	1		Fe VIII	131.242	450	
Cu	129.398	100		N V	131.254	50 -A	3.06
Ti	129.418	1		Ti VII	131.284	1	
Mn XX	129.42	?		Na V	131.345	300	
Ca IX	129.425	240		Sc	131.354	100	
Ca IX	129.445	40		Na V	131.413	200	
Sc	129.454	200		Ca VIII	131.420	10	
Na IV	129.464	10		Al V	131.441	1000	
Cu	129.567	400		Ca VIII	131.470	10	
V VI	129.574	200		Ti	131.474	1	
Ti VII	129.603	1		F V	131.516	10	
Cu	129.697	200		Cu	131.533	150	
Mg IV	129.710	100		Mn XXI	131.55	?	
Ti VII	129.722	3		Cu	131.590	350	
Al IV	129.729	700		Ti	131.623	3	
O VI	129.786	150	5	Na V	131.635	300d	
N V	129.811	30 -A	3.08	F V	131.638	10	
Mg IV	129.858	300		Cr VIII	131.638	600	
O VI	129.872	250	5	K IX	131.646	150	
Si XII	129.89			Al IV	131.652	150	
Ca IX	129.934	400		Sc XVI	131.69		
Na V	129.942	100		O V	131.750	100	
Mg IV	129.968	200		O V	131.807	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
K IX	131.896	100		O V	133.521	200	
Ti VII	131.937	6		Ti	133.568	1	
V XVIII	132.00 ?			F V	133.599	110	
Ti XVI	132.04			Ti VII	133.633	3	
Ti VII	132.093	1		Ne VII	133.64	150	
Mg IV	132.126	20		Mn VII	133.66	300	
Ti VII	132.149	3		F V	133.662	100	
Mg V	132.171	600		Mn VII	133.68	400	
F V	132.207	10		Ti	133.721	1	
Na IV	132.211	10		Si XIV	133.8 P		
O VI	132.219	100		N VII	133.82 P		
F V	132.310	100		Na VI	133.825	200	
O VI	132.312	200		Ti	133.866	0	
Cr VIII	132.321	200		Sc	133.882	300	
Ti VII	132.322	1		Mn VII	133.90	100	
Ti VII	132.351	1		Cu	133.916	400	
N V	132.383	60 -A	3.05	Ti	133.990	0	
F V	132.389	10d		N V	133.994	70	3.04
F V	132.453	200		V XVII	134.01		
Na IV	132.465	10d		Na VI	134.021	100d	
F V	132.484	300		Cr VIII	134.076	300	
Mg V	132.485	500		Na VI	134.135	10	
Mg IV	132.51			Na V	134.183	10	
F V	132.511	500		Mn VII	134.21	250	
Ti VII	132.522	6		Na V	134.272	200	
Mg V	132.623	300		Ti	134.287	1	
Al V	132.630	500		Ca XIV	134.30		
Sc XVI	132.67			F V	134.407	400	
F V	132.699	100d		Na VI	134.532	300	
Sc	132.714	400		F V	134.539	500	
Ti VII	132.735	10		Cu	134.550	600	
Na IV	132.740	10		Ti XV	134.57		
Cr XVII	132.76			Mn VIII	134.69	20	
O V	132.800	100		Ti	134.701	3	
Mg IV	132.800			F VII	134.703	100	
Mg IV	132.8134	300		Sc X	134.767	300	
F V	132.819	200		Mn VIII	134.79	4	
Ti VII	132.837	3		Sc	134.794	20	
O V	132.851	150		F VII	134.882	200	
O V	132.885	10		Ti	134.894	3	
Ti	132.924	1		Cu XI	134.933	400	
Ca XIV	132.93			F IX	134.94 P		
Ti VII	132.982	1		Cr VIII	134.942	400	
Al V	133.013	200		C VI	134.95 P		
Ti	133.053	3		Sc	134.971	200	
F V	133.082	10		Li III	134.998 P	100	
K VII	133.084	10		Cu XI	135.006	5	
Cl VII	133.11			Mn VIII	135.00	30	
Sc XV	133.12			Sc X	135.128	400	
Na V	133.162	500		Mn VIII	135.15		
Ti	133.170	1		Mn VII	135.177	200	
Mg IV	133.1966	200		Ti XI	135.179	10	
F V	133.208	100		Cr VIII	135.185	100	
Ti VII	133.218	6		Al	135.231	10	
Al V	133.242	100		Cr XIX	135.27 ?		
V XVI	133.29			Ti	135.326	1	
O VII	133.31	250		Cu XI	135.335	1	
O V	133.328	10		Mn VII	135.393	250	
Ti VII	133.385	1		F VI	135.397	300	
Na V	133.388	400		Mn VII	135.425	20	
O V	133.395	20		Ti	135.458	1	
Cr VIII	133.395	600		Mn VIII	135.48		
Mn VII	133.43	100		Cr XIX	135.51 ?		
V XVI	133.48			O V	135.5232	300	
Ti	133.482	6		Ca	135.597	50	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al	135.620	50		Ti VI	137.813	3	
Sc XVI	135.62			Mg VI	137.814	10	
F V	135.621	1		Mn VIII	137.82	70	
Mg V	135.638	200		Mg V	137.880	600	
Cu XI	135.669	5		Mn VIII	137.92	60	
	135.692	10		Ar VIII	137.93	150	
Cu XI	135.747	500		Na IV	137.945	10	
V VIII	135.751	200		Mg IV	137.970	80	
Ne V	135.791	300		Ti IX	137.991	3	
Ti VII	135.801	20		O V	138.0255	150	
Cu IV	135.846	30	-A	O V	138.0510	200	
Na V	135.854	300		O V	138.0514 P	70	
Cr VIII	135.892	50		O V	138.1089	250	
Sc X	135.921	500		O V	138.1095 P	70	
Mn VII	135.93	200		F v	138.181	100d	
Mg V	135.953	100		C V	138.2 P		
Ne VI	136.00	40		Cr XX	138.21 ?		
Cu XI	136.073	90		F V	138.256	10d	
V VIII	136.078	100		V VI	138.26	60	
Mg V	136.128	10		Mg IV	138.265	150	
Ne V	136.21	20		Sc XI	138.283	500	
Mn VII	136.21	250		Ti XV	138.33		
Al V	136.249	50		Sc XI	138.380	500	
Ti VII	136.267	6		Ne VI	138.39	30	
N V	136.479	80	2.03	Mg IV	138.525	100	
Na IV	136.435	10		Ar VIII	138.44	250	
V XVII	136.45			Zn XII	138.448	40	
Na IV	136.550	100		Cu XIII	138.481	0	
Cu XI	136.572	15		Mn VII	138.49	450	
Ti IX	136.595	6		K XIII	138.50	250	
Sc XV	136.62			Ti VII	138.548	10	
Na IV	136.645	10		Ti IX	138.548	10	
Al V	136.668	100		Na	138.628	200	
Ti VI	136.714	6		Ne VI	138.64	30	
Cu	136.724	450		Sc	138.662	200	
Na IV	136.748	10		Sc XV	138.68		
Ti VII	136.815	3		Mg IV	138.6884	100	
Na IV	136.854	100		Na VI	138.693	200	
V VIII	136.867	120		Mn VII	138.74	100	
F V	136.902	300		Ti XVI	138.76		
Cu	136.936	400		Ti XVI	138.79		
F V	136.955	10		Na V	138.812	200	
Fe X	137.027			Ti VII	138.814	1	
Na IV	137.062	10		B. VIII	138.9	750	
Na IV	137.144	10		Na V	138.917	300	
Ti IX	137.153	3		Mg IV	138.939	1	
V VIII	137.194	50		O V	139.0289	300	
Ca XV	137.21			V VIII	139.188	50	
Mg V	137.234	600		Cu XII	139.210	100	
Ti XVII	137.31 ?			Sc	139.319	100d	
V VIII	137.316	100		Sc XIV	139.46		
Sc	137.352	100		K VII	139.480	20	
Ti IX	137.377	20		C V	139.5 P		
Mg V	137.414	800		V VI	139.55	70	
Sc	137.418	70		Ni	139.55	20	
V VIII	137.491	120		Sc XVI	139.60		
Mn VIII	137.50	100		Mn VII	139.65	500	
Mg	137.509	10		Mg	139.705	10	
Na VI	137.589	10		V VIII	139.730	200	
Ti VII	137.661	20		F VI	139.758	500	
Fe XX	137.70 ?			F VI	139.800	600	
Na IV	137.714	10		Br VIII	139.8	750	
Ti IX	137.743	1		Na IV	139.867	200b	
Mg V	137.748	700		Na VII	139.867	200b	
Sc XIII	137.80	300		Fe X	139.868		

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti XII	139.884	3		Ni	141.35	60	
F VI	139.900	700		Se VIII	141.38	100	
Ti VI	139.911	3		Ca XV	141.66		
Mn VIII	139.93	50		Se VIII	141.68	800	
Sc	139.980	100		Cu	141.694	300	
Mg IV	139.993	70		Ni	141.70	30	
Cl XVII	140.0		P	Mn VIII	141.76	100	
O V	140.045	10		Mn VII	141.81	200	
K VII	140.085	50		Se VIII	141.82	800	
O V	140.109	20		V VIII	141.864	200	
Mg IV	140.121	120		Ni	141.87	60	
Ne IV	140.13	15		V VIII	141.924	100	
Na V	140.171	10		Ti VI	141.988	3	
Mg IV	140.176	200		Se VIII	142.01	700	
Ca XIV	140.20			Fe X	142.019	20	
Ti	140.240	3		Ti XV	142.09		
V XVI	140.25			O V	142.12	10	
Na V	140.258	10		Cu	142.158	200	
F V	140.266	10		Ni	142.22	40	
Zn XII	140.283	40		V XVIII	142.23	?	
Fe X	140.296			Na IV	142.232	200b	
Ti XV	140.34			Na V	142.232	200b	
N V	140.356	160	P	V VIII	142.247	100	
Ti XII	140.361	1		Se VIII	142.28	900	
Mn VII	140.38	25%	3.02	Na IV	142.363	100	
F V	140.414	60		Ca XIV	142.37		
Mg IV	140.427	100		Ca XIII	142.39		
Ti VI	140.443	20		Na V	142.415	10	
Ti IX	140.443	35		Ni	142.42	50	
V VIII	140.451	600		F V	142.422	100	
Mg IV	140.475	120		Ne V	142.44	100	
Ni	140.52	20		Br VIII	142.5		P
Mg IV	140.525	120		Ne V	142.52	100	
Ca XV	140.55			Ti	142.543	1	
Mg IV	140.560	120		Ti X	142.595	3	
V VIII	140.665	200		Ne V	142.66	40	
Fe X	140.678			K XIII	142.68	250	
Ne V	140.72	50		Mn VII	142.68	200	
Mn VIII	140.73	50		Ti X	142.687	10	
Ne V	140.76	150		Na IV	142.688	10	
F IV	140.781	1	-A	Ne V	142.72	150	
Ne V	140.79	150		Ti XV	142.72		
F IV	140.816	1	-A	Se VIII	142.75	800	
Ni	140.83	30		N V	142.797	1	-A
Na VI	140.833	200		Sc	142.836	200	26
K XII	140.85			Cu	142.892	600	
Mg IV	140.868	200		Ne IV	142.93	15	
Mg IV	140.915	80		Cu XIII	142.930	5	
Se VIII	140.92	400		Mg V	142.933	600	
V VIII	140.934	50		N V	142.981	1	-A
Mg IV	140.965	100					25
Na VI	141.040	10		Cu	143.033	500	
Ca XII	141.05	60		Se VIII	143.10	700	
Ni	141.06	50		Sc	143.120	200	
Ti VI	141.061	3		Ca	143.173	100	
Se VIII	141.09	800		Ti VI	143.176	1	
Ca VIII	141.110	50		Ca VIII	143.216	250	
Ti VI	141.113	10		Ne V	143.22	50	
V XVIII	141.15		?	N V	143.241	10	-A
Ca VIII	141.153	50		Ne V	143.27	100	24
F VI	141.154	200		Sc IX	143.324	230	
Mn VII	141.17	50		Cu XIII	143.334	2	
Ti	141.208	1		Ne V	143.34	150	
C V	141.27		P	Sc IX	143.393	200	
Mn VIII	141.29	70		Ar XVIII	143.4		P
				Ti XVI	143.42		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Sc XV	143.44			Cu	145.671	100	
Se VIII	143.44	300		F VI	145.691	300	
Sc XVI	143.487	100		K IX	145.702	125	
N V	143.520	10 -A	23	N V	145.742	50 -A	19
Cu	143.634	150		K IX	145.753	125	
K XII	143.76	500		Ni X	145.777	60	
Ni	143.80	50		Se VIII	145.78	300	
Mn VII	143.87	20		Ti V	145.79	1	
Se VIII	143.89	700		Ca XIV	145.80		
F V	143.897	100		Na IV	145.846	10	
N V	143.914	20 -A	22	Na IV	146.060	300	
C V	143.94			Mg V	146.083	600	
Se VIII	143.94	400		Ni X	146.119	15	
F V	143.965	15		Se VIII	146.22	600	
Ne IV	144.02	10		Ne IV	146.25	10	
Ca	144.038	150		Na IV	146.298	100	
Ca VIII	144.069	200		O V	146.345	100	
Ti	144.092	1		Na IV	146.398	10	
Ca VIII	144.111	50		Na VI	146.398	10	
Ne IV	144.15	10		Se VIII	146.42	800	
Cu XIII	144.186	2		Mg V	146.464	500	
Ni X	144.271	150		Mg IV	146.526	250	
Ne IV	144.28	5		Cr VII	146.532	1000	
Ca XV	144.29			F VI	146.576	200	
Fe X	144.328			F VI	146.613	300	
Na V	144.330	200		V VIII	146.613	180	
Ni X	144.379	15		Mg V	146.621	400	
N V	144.392	30 -A	21	Se IX	146.628	300	
Ti	144.461	1		Cu	146.669	1000	
Na V	144.546	200		F VI	146.676	400	
Se VIII	144.55	300		Sc XV	146.71		
Ti V	144.551	6		N V	146.716	30 -A	18
F V	144.637	100		F VI	146.718	200	
V VIII	144.653	600		N V	146.767	60 -A	18
Na V	144.661	100		V VIII	146.789	200	
F V	144.673	90		Cr VI	146.82	200	
Cu	144.728	250		Sc	146.825	300	
O V	144.802	100		Mg IV	146.837	200	
Cr VI	144.81	100		Ti V	146.897	3	
O V	144.837	100		Se VIII	146.92	300	
Mn XIX	144.86 ?			N V	146.921	30 -A	3.01
Se VIII	144.89	300		Mg IV	146.954	400	
Ni X	144.933	15		Sc IX	146.954	400	
N V	144.978	40 -A	20	Ni	147.00	70	
Na IV	144.979	10		Mg IV	147.005	200	
Cr VI	145.01	200		Cr VI	147.02	300	
Sc XIV	145.035	200		Mg IV	147.050	200	
Ni X	145.040	300		Se VIII	147.09	500	
Ni X	145.110	2		C V	147.1 P		
F V	145.177	100d		V VIII	147.126	100	
F V	145.392	200		Ne V	147.13	150	
Se VIII	145.41	800		Fe XXII	147.14 ?		
F VI	145.462	100		K IX	147.157	150	
Mg V	145.485	500		Ti IX	147.157	1	
F VI	145.489	100		Fe XXI	147.20 ?		
Cu XXVII	145.5 F			Se VIII	147.23	400	
V VIII	145.507	400		Mg IV	147.252	150	
V XIX	145.54 ?			Mg V	147.252	300	
F V	145.547	300		O V	147.261	200	
F VI	145.585	100		Ca XII	147.27	50	
Se VIII	145.59	600		Se VIII	147.29	800	
Ti XVI	145.62			Sc IX	147.310	300	
F VI	145.630	100		Ti	147.316	1	
Cu	145.651	350		Mg IV	147.319	160	
Fe XVIII	145.656	10		Sc IX	147.346	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mg IV	147.4062	300		Ne IV	148.94	20	
N V	147.424 P	240	3.0i	Mg IV	148.958	7	
Mg IV	147.506	4		Na V	149.001	200	
Mg IV	147.535	300		Ti VI	149.010	20	
Sc XV	147.54			Mg IV	149.024	1	
Cu	147.544	200		O V	149.034	10	
K XIV	147.57	50		O VIIa	149.06 P		
Se VIII	147.58	800		O V	149.078	150	
Sr XI	147.60			Ni	149.21	30	
Mg IV	147.630	60		Ar VIII	149.33	150	
Sc VI	147.740	100		Se VIII	149.34	700	
Mg IV	147.748	150		Sc	149.357	100d	
Cu XI	147.748	60		Cl VII	149.37		
Ti XVII	147.78 ?			Ti VI	149.392	10	
Se VIII	147.78	800		Mg IV	149.400	5	
Sc IX	147.834	200		Cl VII	149.43		
Ni XII	147.847	1		Na VI	149.442	10	
Mg IV	147.881	80		Cu XI	149.460	40	
Na V	147.897	200		Ni	149.47	50	
Sc VI	147.90	100		Ti VI	149.560	10	
K IX	147.943	200		Ne IV	149.59	10	
F V	147.946	400		Na VI	149.621	10	
Se VIII	147.95	400		Ti VIII	149.653	3	
K IX	147.973	25		Ti XVII	149.66 ?		
F V	148.002	500		Cu	149.703	800	
Ti	148.014	1		Cr VI	149.72	300	
Sc IX	148.103	200		Ti	149.842	3	
Ti VI	148.104	3		Ar XII	149.93		
F V	148.108	100		Cr VI	149.93	400	
Mg IV	148.114	120		Ni	149.97	40	
N V	148.116	40 -A	16	Ti VIII	149.981	1	
Ca XIV	148.15			V XVII	150.03		
N V	148.168	70 -A	16	Ti VIII	150.039	60	
Sc VI	148.18	150		O VI	150.089	500	2
Sc	148.249	100		Sc IX	150.092	500	
Sc	148.287	200		N V	150.116	70 -A	14
Ti VI	148.303	20		O VI	150.124	250	2
N V	148.328	10 -A	15	N V	150.171	140 -A	14
C V	148.35			Fe VII	150.185	50	
N V	148.387	40 -A	15	Ti VI	150.213	3	
Ni XI	148.402	100		Mg XII	150.20 P		
Sc XIV	148.47			Fe VII	150.287	100	
Se VIII	148.48	1000		Na IV	150.297	400	
Ti VIII	148.498	1		Se VIII	150.30	700	
C V	148.5 P			Al XI	150.31		
Sc VI	148.536	100d		Ti VI	150.315	3	
Ti XV	148.54			F IV	150.335	10	
Sc	148.580	100d		Cu XI	150.356	1	
Ni	148.62	50		Fe VI	150.402	50	
Na V	148.642	400		F IV	150.422	10	
F VI	148.653	400		N V	150.429	20 -A	13
Ne IV	148.66	5		Sc XIV	150.46		
Ar VIII	148.73	100		K XIV	150.48	100	
Cr VII	148.736	600		N V	150.488	50 -A	13
Sc	148.743	100d		C V	150.51 P		
Ne V	148.78	15b		Fe VII	150.524	100	
Ne IV	148.79	15b		Na IV	150.545	300	
Sc	148.805	200		Ni	150.56	40	
Se VIII	148.81	800		Al XI	150.57		
Ti VIII	148.820	1		V VI	150.625	200	
Ni	148.83	40		Na IV	150.647	200	
Cu	148.846	800		Na IV	150.695	200	
Fe XXIII	148.85 ?			Fe VII	150.806	500	
Na V	148.856	300		Fe VII	150.851	500	
V VII	148.903	300		Ti VIII	150.867	35	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Sc X	150.900	300		O IV	152.355	1	A
Ne IV	150.93	5		Mg V	152.384	100	
Sc X	150.939	400		F V	152.391	300	
Sc XVI	150.94			K XI	152.44		
Na IV	150.968	200b		Co	152.50	600	
Na V	150.968	200c		F V	152.511	400	
F IV	150.977	100		Mg V	152.527	100	
Sc X	150.995	500		F V	152.563	200	
F IV	151.005	100		Mg V	152.591	10d	
Fe VII	151.022	600		Sc VI	152.60	250	
Fe VII	151.044	100		Co	152.66	200	
Na IV	151.048	10		Sc	152.681	200	
K XIII	151.05	50		Co IX	152.71	5	
F IV	151.079	1		Cr XVIII	152.74	?	
Na V	151.127	400		K XIII	152.77	300	
Fe VII	151.143	200		Sc XIV	152.85		
Na V	151.188	100		K VII	152.888	20	
Mn XXI	151.21	?		Fe VII	152.906	50	
Fe VII	151.268	50		Ti VI	152.960	10	
Na IV	151.303	100b		Co	152.96	700	
Na V	151.303	100b		F IV	152.997	1	
Sc IX	151.401	400		Ca X	153.012	150	
Ne V	151.42	120		Ca XIV	153.03		
Fe VII	151.430	400		F IV	153.102	10	
O V	151.4470	250		N V	153.136	180	12
Ne IV	151.46	P		F IV	153.141	10	
O V	151.4772	300		O IV	153.162	1	A
O V	151.4782	P		Sc	153.172	300	
Ti VIII	151.484	10		Ni XII	153.174	5	
Fe VII	151.485	50		N V	153.192	280	12
Fe VII	151.510	400		Ti VI	153.255	3	
O V	151.5465	330		K XII	153.26		
O V	151.5476	P		Co IX	153.29	150	
Fe VII	151.673	420		Ti VI	153.384	3	
K XIV	151.68	100		C V	153.53		
Ar VII	151.70	50		Ti VI	153.550	35	
Ni	151.70	30		N V	153.624	30	11
Mn XX	151.74	?		K VII	153.624	100	
Fe VII	151.748	100		Ar XII	153.63		
Fe VII	151.780	500		Ti XVIII	153.64	?	
Mg	151.808	10		Fe VII	153.658	50	
Ne IV	151.82	75		F VI	153.678	200	
Ca X	151.832	75		N V	153.683	60	11
Ni	151.85	30		F VI	153.741	300	
Ar XI	151.86			Fe VII	153.742	20	
Ti VIII	151.864	10		Co IX	153.78	60	
Ar VII	151.88	100		Sc XV	153.80		
Sc XIV	151.89			F VI	153.880	400	
Ti VI	151.897	1		Co	153.89	800	
Co	151.91	600		K XIV	153.91	200	
Ti VIII	151.915	1		O V	153.9516	200	
Fe VII	151.968	100		Sc	154.006	230	
Mg V	152.019	10		Fe VII	154.039	300	
F V	152.035	50		Ti VI	154.161	1	
Fe VII	152.069	300		Ni XII	154.175	15	
Mg V	152.149	300		Cr VI	154.19	400	
Ni XII	152.152	1		Fe VII	154.214	50	
Ni XII	152.153	15		Sc VI	154.25	50	
Ti VIII	152.164	20		Fe VII	154.269	100	
F V	152.174	50		Sc VI	154.29	250	
Ne IV	152.23	75		Fe VII	154.304	200	
Ar VII	152.26	150		Fe VII	154.334	400	
O IV	152.264	1	A	Fe VII	154.359	100	
Ti VI	152.338	10		Cr VI	154.41	500	
F V	152.339	200		Ar XII	154.43		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe VII	154.446	50		Ni	156.30	50	
Ne IV	154.49	25		Ti VIII	156.444	10	
F VI	154.506	300		Ne IV	156.48	25d	
Sc	154.507	100		K VIII	156.07	225	
Fe VII	154.562	200		Na IV	156.536	800	
Sc	154.643	300		K VIII	156.543	75	
Fe VII	154.648	500		Cu	156.557	200	
Al XI	154.66			K VIII	156.566	25	
Fe VII	154.701	400		Co	156.59	400	
Ti VI	154.768	6		V VII	156.608	700	
Cu	154.785	400		Ne V	156.61	20	
Na XI	154.8		P	Ca XIII	156.68		
Fe VII	154.846	300		Ni	156.68	40	
Fe VII	154.885	100		Na IV	156.780	500	
Sc XV	154.89			Cu	156.847	200	
Fe VII	154.920	400		Ne IV	156.87	15	
Co IX	154.92	150		Na IV	156.887	300	
Fe VII	154.945	400		O VIII	156.92	P	
Co IX	155.06	25		Na V	157.036	200	
Na IV	155.090	100		Cr XIX	157.08	?	
Sc VI	155.10	150		Na IV	157.090	400	
Ni XIII	155.12			Ti VIII	157.112	3	
Fe VII	155.122	50		C V	157.2	P	
Al XIII	155.2		P	Na V	157.209	300	
Fe VII	155.243	200		Ni	157.24	40	
Na IV	155.248	200		Ca XIV	157.30		
Co	155.27	400		Cu	157.359	400	
Cl VII	155.32			Ti	157.378	6	
Na IV	155.354	10		K VI?	157.433	50	
Sc VI	155.36	50		Ti VIII	157.472	3	
Fe VII	155.412	50		Ni XXVI	157.5	P	
Na IV	155.445	300		Na V	157.511	200	
Ti VIII	155.456	1		F V	157.515	100d	
Mn XXII	155.46		?	Ti VIII	157.528	3	
Ti	155.494	1		Ni XIII	157.55	50	
Fe XV	155.50			Na IV	157.599	100	
Co IX	155.51	25		Ne IV	157.63	25	
Na IV	155.515	400		Ni XIII	157.730	40	
Ti	155.545	1		Ne IV	157.78	15	
Fe VII	155.548	50		Na IV	157.782	300	
Ca XIV	155.62			Ni XII	157.798	2	
Na IV	155.622	10		Ti XVI	157.81		
F IV	155.624	10	-A	Ne IV	157.86	10	
Co IX	155.65	150		K XIII	157.86	203	
F IV	155.673	10	-A	Sc XIV	157.86		
Ti VIII	155.677	20		Sc XVI	157.94	?	
Na IV	155.693	200d		S XVI	158.0	P	
K VIII	155.715	125		Ni	158.00	40	
Cu	155.718	150		N V	158.024	P	10
Sc XV	155.73			Ti	158.042	3	
Cl VII	155.78			Ne IV	158.06	25	
Fe	155.78			N V	158.088	P	360
Na IV	155.781	100		Ne IV	158.11	10	10
Fe	155.81			K XI	158.11		
Na IV	155.832	10		F IX	158.12	P	
K VIII	155.961	175		Fe VII	158.163	300	
K VIII	155.985	100		Co XI	158.27	1	
Fe VII	155.991	500		C V	158.374		20
Cr XX	156.01		?	Ni X	158.374	150	
K XIII	156.03	50		Ti	158.391	3	
O V	156.1189	100		F IV	158.398	10	
O V	156.1521	150		V VII	158.467	600	
O V	156.2269	200		C V	158.47		
C V	156.233	4	15	Fe VII	158.477	400	
F VI	156.247	600		Fe XXI	158.52	?	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mg III	158.530	10d		Ti XVI	161.17		
F IV	158.537	400b		F VI	161.174	120	
F V	158.537	403b		N VI	161.22		6
Ni	158.54	50		N IV	161.256		2d -A 6.35
O IV	158.553	1 -A		F VI	161.257	100	
F IV	158.601	100		N IV	161.286		2d -A 6.34
O IV	158.606	2 -A		Ti VIII	161.288	6	
Ne IV	158.65	75		F VI	161.308	200	
Sc XV?	158.68			F VI	161.341	90	
B V	158.73	P		Sc VIII?	161.353	300	
Ni XIII	158.77	50		F VI	161.414	100	
Co	158.80	900		Co	161.46	300	
O V	158.813	100d		F VI	161.47	120	
Ne IV	158.82	75		Cu	161.531	300	
N V	158.862	40	9	Ni XIII	161.56	50	
Co X	158.88			Ar XIII	161.61		
Ar VIII	158.92	400		V XIX	161.61		
F IV	158.925	100		Fe XXI	161.61		
O V	158.926	150		Cr VI	161.65	600	
N V	158.928	70	9	Cr VI	161.68	600	
Co IX	158.94	15		Al IV	161.686	700	
Ti	158.952	3		Co	161.70	200	
Cu	159.072	100		Cu	161.748	250	
Ar XIII	159.08			Ca XIII	161.75		
Ar VIII	159.18	250		Ni XIII	161.78		
Mg III	159.209	10d		V VII	161.836	400	
V XVII	159.30			Co	161.88	800	
O V	159.343	250		Cr VI	161.90	200	
N IV	159.366	1d -A	6.38	Sc	161.908	200d	
O V	159.380	250		Cr VI	161.93	100	
Cu	159.462	100		Ni	161.94	30	
F V	159.558	1		Ca IX	161.979	80	
Co IX	159.56	150		F V	162.013	200	
F V	159.658	10		Ti VIII	162.016	1	
Mg III	159.755	10d		F V	162.053	300	
Ca XIII	159.87			Co	162.07	700	
N IV	159.873	1d -A	6.37	Cu	162.078	200	
V VII	159.855	300		F V	162.082	300	
Ni XIII	159.97			F V	162.121	200	
Ni X	159.975	60		Mn XX	162.16		
Ni XII	159.975	1		Ni	162.1	40	
Al IV	160.073	800		F V	162.172	300	
O V	160.141	10		Sc	162.172	200d	
Mg IV	160.2358	200		F V	162.215	300	
Sc	160.337	230		Sc	162.236	200	
Ni	160.38	30		F V	162.270	400	
Sc	160.387	200		Co	162.32	400	
N IV	160.451	1d -A	6.36	Mn VII	162.349	800	
Ne IV	160.47	50		Ca IX	162.371	160	
C V	160.53	P		N IV	162.374		2 -A 6.33
Ni XII	160.554	2		Ti VIII	162.401	1	
Ca VIII	160.592	50		N IV	162.423	10 -A	6.32
Sc VI	160.637	300		Na IV	162.445	800	
Ca VIII	160.640	50		O V	162.494	250	
Sc XVI	160.725	330		Ti XVI	162.51		
Cu	160.763	500		N V	162.556	P 430	3
Ni X	160.798	5		Co XI	162.56	500	
Cl XVII	160.8	P		Sc XVII	162.65	?	
Mg IV	160.8088	150		Cu	162.651	100	
Ti VIII	160.914	1		Mn VII	162.667	600	
Sc	160.949	230		Cr XXI	162.67	?	
Ca XV	160.96			Mn VII	162.707	300	
V VII	161.122	600		Cr VI	162.76	400	
Mg III	161.135	10		N IV	162.816	1d	2.16
Sc	161.162	200		Cl XI	162.83		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni	152.90	50		Sc XVI	164.67		
Ca XIII	162.91			O V	164.7067	300	
Cu IV	162.926	20	-A	Sc VIII	164.772	300	
Ar XIII	162.96			N IV	164.794	30	2.13
Ti V	162.994	20		Ar XIII	164.80		
Cu XI	162.99	1		Ni XIV	164.86		
Sc	163.00	300		Cr VI	164.84	300	
Cr VI	163.01	500		Na IV ^o	164.841	400	
V VII	163.135	200		Co XI	164.91	120	
F VI	163.138	200		Ca XV	164.94		P
V VII	163.182	400		Mg III	164.954	200	
Na IV	163.187	600		O V	164.986	150	
Ca IX	163.229	240		Fe VII	165.081	300	
Ar XII	163.23			Sc XVI	165.11		
Cu	163.271	300		Cu	165.127	300	
V XVIII	163.29			Mg III	165.195	10	
N IV	163.311		1d	Mn XX	165.21		?
Co XI	163.32	150	2.15	F IV	165.27 ^o	10	
Sc VIII	163.416	400		Ca XIV	165.36		
Sc XVI	163.44			Sc VIII	165.395	300	
F V	163.456	300		Ti VII	165.403	6	
F V	163.501	400		Ni	165.43	70	
Fe	163.52			Fe	165.47	500	
F V	163.558	500		F IV	165.479	1	
Ne IV	163.56	60		Cu	165.481	250	
Mg III	163.586	10		Ar X	165.53	400	
F V	163.596	200		Ti	165.653	1	
Cu	163.598	250		Sc VIII	165.654	400	
Ne IV	163.60	10		Fe XVI	165.656	20	
Na V	163.616	300		Ni	165.69	30	
Cr VI	163.80	400		Ti VII	165.716	1	
Na IV	163.840	400		Ni	165.81	40	
Co	163.85	500		Ti VII	165.836	3	
Na V	163.930	200		Co XII	165.86		
N IV	163.949	10d	2.14	C V	165.91		P
N IV	163.972			N IV	165.945	50	2.12
B V	163.99	2	-A	Fe VII	165.95	600	
F VI	164.015	100		F V	165.983	900	
Ne V	164.02	100		Sc VIII	166.022	200	
N IV	164.048	50	-A	Cl XI	166.07		
Ca XIII	164.09			Ni	166.08	50	
K XIII	164.13	250		Ti VII	166.087	10	
Ni XIV	164.146	35		O V	166.1178	200	
Ne V	164.15	100		O V	166.1504	250	
Ni XIII	164.15			F V	166.177	100J	
Mg III	164.159	10		K XIII	166.19	100	
Ti VII	164.173	10		O V	166.2351	300	
O V	164.1766	150		Ni	166.29	50	
Cu	164.259	200		Cu	166.308	120	
Ne V	164.29	80		Sc VIII	166.317	300	
Cr VI	164.30	100		N IV	166.337	10	-A
V VII	164.302	100		Sc VI	166.35	350	6.29
Mg III	164.384	200		Fe	166.35	600	
Sc VIII?	164.444	100		N IV	166.377	20	-A
Ti V	164.446	35		F IV	166.444	200	6.29
Ti VII	164.478	3		Ni	166.46	50	
Cl X	164.5			Cr VII	166.49	50	
Ar XII	164.51			N IV	166.496	20	-A
V VII	164.523	50		F IV	166.499	200	6.28
Cr VI	164.56	300		F IV	166.540	75	-A
O V	164.573 ^c	300		Ti	166.566	1	6.28
O V	164.5887	250		Cr VII	166.57	70	
F IV	164.612	200		Fe VII	166.629	50	
O V	164.6256	200		Cl XI	166.63		
O V	164.6570	330		Cu	166.645	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr XIX	166.67	?		Na IV	168.544	500	
Co	166.71	490		Ni VIII	168.58	150	
N V	166.875	P 440	8	N V	168.587	P 120	7
Ni XII	166.88			Ni VIII	168.62	10	
Sc VIII	166.916	300		Ti VII	168.652	10	
Ca X	166.945	200		Co XII	168.68		
N V	166.946	P 520	8	Ni VIII	168.87	40	
Cr VII	166.95	56		Fe VIII	168.90	700	
Sc VI	166.957	200		Sc XI	168.942	200	
Ca XIV	167.60			Ni VIII	168.95	20	
Cr VII	167.03	90		Ar XII	169.00		
Ca X	167.034	250		Ti	169.036	1	
Ni VIII	167.07	80		Co XII	169.04		
O IV	167.145	1d -A		Sc	169.105	100	
Sc VI	167.17	200		Mg III	169.150	100	
C V	167.218		19	Ni VIII	169.16	400	
Ti XVI	167.22			F IV	169.166	200	-A
Ni VIII	167.35	20		Sc VI	169.26	350	
Cr IV	167.392	10 -A		Ni VIII	169.27	40	
C V	167.402	4	24	Ti VII	169.301	20	
Ne V	167.47	150		Cr VI	169.44	800	
Fe VIII	167.49	700		Sc	169.451	200	
Cr VII	167.50	70		O IV	169.47	0	
Na V	167.510	100		F IV	169.481	100	
Ne V	167.61	30		Cu	169.488	150	
Ar XII	167.62			F IV	169.502	100	
Ti	167.625	1		O IV	169.58	1	
Fe VIII	167.64	700		F IV	169.610	100	
Ni VIII	167.66	10		Sc XVI	169.65		
Ne V	167.67	250		F IV	169.661	200	
N IV	167.709	150	2.10	Ni XIV	169.69		
Ne V	167.83	25		K XII	169.71		
F V	167.858	100		Cr XIX	169.72	?	
Ne IV	167.92	25b		Ti XVI	169.74		
Ne V	167.92	25b		Mg III	169.746	100	
Ti	167.930	1		F IV	169.748	200	
Ni VIII	167.97	40		Sc VIII	169.759	400	
O V	167.9883	400	6	Cu	169.765	150	
O V	167.9910	300	6	F IV	169.790	300	
O V	168.0084	250	6	F IV	169.839	300	
Fe VIII	168.03	700		Fe	169.88	600	
O V	168.0469	200	6	Co XII	169.91		
O V	168.0776	200	6	Sc XV	170.00		
Ni VIII	168.08	20		Cu	170.007	150	
Na IV	168.084	1000		N IV	170.074	200	2.09
Cr VI	168.09	700		Sc	170.105	100	
Ne IV	168.10	10		Ni VIII	170.17	80	
Cu	168.111	150		F IV	170.187	200	
Ni XIV	168.12			N IV	170.208	50	-A
Ti XVIII	168.13	?		Mg λ	170.21	P	6.27
Ti	168.162	10		O V	170.2194	330	
Sc XI	168.165	100		N IV	170.249	100	-A
Fe VIII	168.18	800		Sc VI	170.25	250	6.27
Ti	168.192	10		Ni VIII	170.27	20	
Co XI	168.327	90		Co XI	170.33	2	
Ni VIII	168.33	10		Co XII	170.33		
Co XII	168.34			Ti VII	170.358	125	
Cr VI	168.35	300		Cr VII	170.39	100	
Ni XIV	168.37			N IV	170.463	50	-A
Sc XI	168.396	400		Ti XVII	170.48	?	6.26
Ca XII	168.40			Co XXV	170.5	P	
Na IV	168.409	800		Ni XIV	170.50		
F IV	168.450	200		N IV	170.505	100	-A
N V	168.514	50	7	Ni VIII	170.52	250	6.26
Fe VIII	168.54	800		Sc VI	170.54	150	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti VII	170.559	20		Ni VIII	172.67	40	
Cr VI	170.57	200		Ca XVI	172.73	?	
V XX	170.58	?		Cr VI	172.83	500	
Fe X	170.58	100		Se VII	172.9	700	
Ar X	170.63	200		Co IX	172.91	1	
Na V	170.631	100		Ni VIII	172.93	20	
Co IX	170.70	500		O VI	172.935	950	4
Sc	170.735	100		F V	173.020	100	
O VIII	170.80	?		O VI	173.082	1000	4
Mg III	170.802	500		F VI	173.145	100	
Ni VIII	170.84	10		Cu	173.193	100	
Cr VII	170.85	80		Sc XV	173.27		
Na V	170.923	100		C V	173.281	10	14
Ti VII	170.938	3		Sc	173.346	100	
O IV	170.960	1	-A	Ni VIII	173.41	750	
Cr VII	170.98	70		Sc XV	173.49		
O IV	170.988	1	-A	B V	173.54	P	
F IV	171.066	300		F V	173.656	10	
O IV	171.071	5		F V	173.714	10	
Fe IX	171.075	900		Ni XV	173.73		
Na V	171.076	100d		Sc IX	173.771	300	
O IV	171.121	5		O IV	173.803	?	
O IV	171.191	1		As VII	173.82	600	
F V	171.214	10		O IV	173.851	2	
F V	171.241	100		Sc IX	173.858	400	
F V	171.302	200		O IV	173.917	5	
S VI	171.33	20		N VI	173.92		9
Fe XV	171.359	40		Ne V	173.93	500	6
Ar XI	171.36	P		Ni VIII	173.95	40	
Ni XIV	171.37			O IV	173.968	1	
Cr VI	171.39	400		Na IV	174.008	10	
Ti	171.392	3		Fe VIII?	174.03	100	
Mg III	171.395	400		Cl VII	174.04	150	
Sc	171.530	200		K XIV	174.09	50	
Ca XV	171.58			O IV	174.105	5	
Li II	171.582	100	3	Ne IV	174.12	P	
Mg IV	171.657	250		Cr VI	174.17	300	
Fe XVI	171.66	300		Cl XII	174.21		
Co XI	171.66	2		O IV	174.220	10	
Ti	171.723	3		Ni VIII	174.22	10	
Sc	171.823	100		Ni VIII	174.24	750	
Ti VII	171.888	20		Cr VII	174.28	80	
Mg III	171.896	?		Ne IV	174.30	15	
Ti VII	171.952	6		Ni VIII	174.36	400	
Se VII	172.0	500		K XII	174.40		
Cu	172.036	400		Ni VIII	174.46	250	
Cl XII	172.06			F V	174.490	300	
V XVIII	172.10	?		Ni VIII	174.50	10	
Ni VIII	172.10	40		F V	174.513	300	
Ni XIV	172.16			O V	174.560	150	
O V	172.169	700	2	F V	174.568	300	
Co IX	172.19	150		Sc IV	174.57	200	
Cr VI	172.20	200		Fe X	174.58	700	
K XIV	172.26	100		Cl VII	174.60	200	
Mg IV	172.311	150		As VII	174.60	1000b	
Ni VIII	172.32	20		N IV	174.602	200	2.07
Co XII	172.33			Co	174.67	300	
Ti VII	172.353	6		F V	174.698	400	
Co XII	172.41			As VII	174.70	1000b	
Cr VI	172.48	600		Co	174.71	300	
Ne IV	172.49	200	3	Ni VIII	174.75	40	
Ne IV	172.53	250	3	Ni VIII	174.79	150	
K XII	172.57			Co XIII	174.82		
Ne IV	172.62	400	3	Ne IV	174.88	50	
F IV	172.653	10		Ni VIII	174.88	80	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca VIII	174.910	50		Ti	176.538	1	
Ne IV	174.92	40		Ar VII	176.57	500	
Ni VIII	174.92	750		Cr VII	176.61	100	
Ni VIII	174.95	40		Ar (II)	176.62		
Ca VIII	174.976	50		K XII	176.68		
Ni XV	174.99			Ni VIII	176.69	80	
F IV	175.033	10		Fe XI	176.694	40	
Ni VIII	175.13	400		Ni XV	176.70		
F IV	175.132	1		Ni VIII	176.74	250	
V XVIII	175.16 ?			Se VII	176.8	40	
As VII	175.20	600		Cu	176.824	100	
K VII	175.210	100		Ni VIII	176.87	750	
Fe X	175.26	600		Ca XV	176.88		
Ni VIII	175.26	40		Ni VIII	176.95	250	
Ni VIII	175.28	40		As VII	176.96	600	
Cr VII	175.31	80		Ni VIII	176.98	40	
Ni VIII	175.32	400d		Cl XI	177.00		
K XII	175.35			Ni VIII	177.10	10	
Co XII	175.44			Cl XII	177.11		
As VII	175.46	1000		N IV	177.119	100b -A	6.25
Fe X	175.48			N IV	177.142	100b -A	6.25
Cu	175.484	300		Ne IV	177.16	400	
Ni VIII	175.49	20		N IV	177.163	200 -A	6.25
Ni VIII	175.54	40		N IV	177.182	100b -A	6.25
Ni VIII	175.56	750		Ni VIII	177.19	400b	
As VII	175.56	1000		As VII	177.23	1000	
Sc XVII	175.61 ?			Ti VII	177.238	60	
Ni VIII	175.62	20		Fe X	177.24	800	
Cu	175.633	250		Ni XIV	177.28		
Ni VIII	175.64	400		Ni VIII	177.29	80	
C V	175.67			Ni VIII	177.32	40	
Ni VIII	175.67	400		Ni VIII	177.43	80	
K XV	175.68	50		Cu	177.466	200	
Cl XII	175.71			Sc XV	177.47		
Cr VI	175.75	600		S X	177.55	250	
Co XIII	175.77			Ni XIV	177.56		
Ni VIII	175.80	1000		Co XI	177.58	1	
Cr VII	175.81	80		As VII	177.58	900	
Ti VII	175.812	50		O IV	177.598	1 -A	
Ni VIII	175.82	1000		N IV	177.602	100b -A	6.24
As VII	175.84	800		N IV	177.621	100b -A	6.24
Sc IV	175.89	200		Ni VIII	177.63	10	
Ni VIII	175.91	40		N IV	177.646	250 -A	6.24
Ni VIII	175.94	750		O IV	177.659	1 -A	
Ca	175.963	50		Sc	177.686	200	
Ne IV	176.01	250		O IV	177.698	2 -A	
Ni VIII	176.03	400		Ti	177.729	1	
Cr VI	176.04	800		Ni VIII	177.73	40	
Ni XV	176.10			O IV	177.761	5 -A	
Ti	176.105	1		Al X	177.80		
K VII	176.122	200		O IV	177.808	6 -A	
Ni VIII	176.13	250		Ni VIII	177.83	10	
K VII	176.181	20		Ni VIII	177.87	10	
Ni VIII	176.21	10		Ca VIII	177.886	200	
Cu	176.232	150		Cl XI	177.96		
Ni VIII	176.25	80		Ni VIII	177.97	20	
Ni VIII	176.29	250		F IV	177.971	200	
Fe	176.32	400		As VII	178.00	800	
As VII	176.32	900		Li II	178.015	100	2
Sc	176.325	300		Fe XI	178.060	400	
Ni VIII	176.35	20		Ni VIII	178.06	20	
F IV	176.367	400		F IV	178.126	100	
Ni VIII	176.42	40		Ar XII	178.15		
F V	176.47?	10		K XIII	178.15	300	
Ni VIII	176.50	150		Fe	178.15	600	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti XVI	178.23			Sc VII	180.260	200	
Ca VIII	178.241	200		Ar XIV	180.29		
F V	178.434	500		O IV	180.351	2	
Cu	178.489	150		S X	180.36	150	
Ni VIII	178.52	80		K XII	180.37		
F IV	178.546	100		Ni VIII	180.39	250	
N IV	178.547	1	-A 12.29	Ne IV	180.40	75	
Ca	178.557	50		Fe XI	180.407	700	
Ti XVII	178.57	?		Fe X	180.45	700b	
Ti VII	178.572	10		Co XII	180.45		
F V	178.590	400		O IV	180.481	5	
F V	178.612	300		As VII	180.52	900	
As VII	178.62	900		Fe XI	180.500	300	
Ca VIII	178.639	200		Mg IV	180.518	400	
F IV	178.670	300		Cl IX	180.71		
Ti VI	178.673	20		S X	180.72	350	
Ca VIII	178.684	50		Ar VI	180.72	120	
As VII	178.69	700		Ni VIII	180.73	40	
G V	178.713	150		As VII	180.79	900b	
F IV	178.724	100		Mg IV	180.797	400	
Ca VIII	178.747	10		Sc V	180.82	200	
Ni XV	178.75			Cl XI	180.85		
Ni VIII	178.77	400		Co XIII	180.87		
F IV	178.805	100		N IV	180.928	5	-A 12.27
Sc VIII	178.821	200		Sc V	180.96	200	
Na XI	178.83	P		Cu	180.986	200	
Ni XV	178.87			As VII	181.08	400	
Ni VIII	178.91	250		Ni VIII	181.10	40	
Co XIII	178.98			Fe XI	181.140	400	
Fe	179.00	500		O IV	181.150	15	
Co	179.08	500		Sc XV	181.21		
Ti VII	179.107	10		O IV	181.275	25	
Co	179.16	500		Mg IV	181.345	350	
Ca VIII	179.215	100		Mn	181.37	300	
Cu	179.223	150		Mg X	181.50		
Fe	179.23	400		S XVI	181.5	P	
Ni XV	179.28			F IV	181.521	400	
Ti XIX	179.31	?		Sc V	181.55	50	
S IX	179.32	450		As VII	181.57	800	
V VI	179.323	1000		F IV	181.571	400	
As VII	179.38	600		Ne IV	181.61	100	
Ar VIII	179.40	500		Ne IV	181.65	100	
Sc V	179.42	150		Ti XVII	181.65	?	
K XIII	179.46	400		F IV	181.655	200	
Ca VIII	179.509	150		N IV	181.746	400	2.05
N IV	179.554	2	-A 12.28	Na IV	181.758	800	
Co XIII	179.59			Cl XI	181.84		
Cu IV	179.630	15	-A	Mg X	181.86		
Fe XI	179.762	600		O IV	181.876	10	
Ni VIII	179.77	40		Ca XV	181.90		
P XV	179.8	P		N IV	181.943	10d	6.23
As VII	179.82	400		O IV	181.995	15	
F IV	179.827	100		V VI	182.050	750	
Ti	179.842	1		Co XIII	182.09		
F IV	179.907	1		Mg XII	182.1	P	
F IV	179.943	200		Na IV	182.128	600	
Ni VIII	179.97	550		Ti VI	182.151	90	
F IV	180.029	10		C VI	182.17	P	
Ni XV	180.06			Fe XI	182.173	500	
Ar VI	180.07	80		O V	182.205	150	
Mg IV	180.071	350		Mg III	182.240	300	
Ni VIII	180.12	250		Ni VIII	182.27	20	
Sc V	180.14	350		Na IV	182.282	400	
Se VII	180.2	80		Fe X	182.31	300	
Ar VIII	180.25	750		N IV	182.323	20d	6.22

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Sc V	182.392	200		K XV	184.07	?	
Ni VIII	182.44	400		Ti VI	184.106	35	
Mn VII	182.50	700		O VI	184.117	850	3
As VII	182.51	900		Ni VIII	184.12	900	
Co XIII	182.52			Ca VIII	184.158	200	
Ni VIII	182.55	40		Mn	184.19	700	
Sc	182.618	100		Mg IV	184.199	30	
As VII	182.68	800b		N IV	184.200	75d	6.19
Mn VII	182.69	600		Ni VIII	184.20	10	
Ca VIII	182.707	200		Na III	184.218	10	
O IV	182.711	10		N IV	184.247	75d	6.19
Sc VII	182.743	100		Ar VIII	184.27	150	
Ni VIII	182.76	20		Ca V	184.280	150	
Ni VIII	182.79	20		As VII	184.29	800	
N IV	182.827	30d	6.21	Ar VIII	184.32	250	
Ne IV	182.83	P		Ca IX	184.338	12i	
O IV	182.832	15		Ca XVI	184.37	?	
Ni VII	182.87	80		Ca IX	184.377	240	
N IV	182.894	10	-A	Ni VIII	184.40	10	
Ni VIII	182.94	40	12.26	Fe XI	184.41		
Mn VII	182.96	600		Co XIV	184.41		
Ni VIII	182.96	80		Ca V	184.415	50	
As VII	182.97	900		As VII	184.43	700	
Mg III	182.973	200		Ca IX	184.433	320	
F V	182.979	400		N IV	184.437	1	6.18
Ni VIII	182.99	40		Ni VIII	184.44	550	
Sc VII	182.993	400		N IV	184.485	2	6.18
F V	183.016	300		Ar XI	184.51		
Ni VIII	183.02	40		Fe X	184.53	600	
As VII	183.14	400		Ni VIII	184.58	10	
N IV	183.146	5d - A	12.25	K IX	184.586	175	
Mn VII	183.15	700		Sc VII	184.607	200	
Ni VIII	183.16	10		Ni VIII	184.62	10	
Ne IV	183.17	75		Fe XXIV	184.63	P	
F V	183.208	10		Ni VIII	184.68	40	
Ni VIII	183.23	10		Ne V	184.73	100	
Ne IV	183.25	60		Mn IX	184.80		
O IV	183.353	1		Fe XI	184.800	600	
Ni VIII	183.39	20		Ni XV	184.89		
O IV	183.395	2		Ar XIII	184.90		
N IV	183.402	50d	6.20	Cu IV	184.938	7 - A	
Ar XIV	183.41			Ni VIII	184.95	40	
Ni VIII	183.44	40		As VII	185.06	700	
Mg IV	183.442	150		Ca V	185.102	100	
N IV	183.450	50d	6.20	Ni VIII	185.18	20	
O IV	183.454	3		As VII	185.19	900	
Ca XIV	183.46			Sc	185.219	100	
Ni VIII	183.51	150		Fe VIII	185.22	800	
Na III	183.575	10		Ni VIII	185.23	10	
Sc	183.593	370		Ni XVI	185.23		
Sc	183.626	130		N IV	185.237	150d	6.17
Ni VIII	183.63	10		N IV	185.257	150d	6.17
Co XIII	183.65			Cl IX	185.26		
Sc	183.673	100		Ca V	185.288	50	
As VII	183.68	1000		N IV	185.306	200d	6.17
Mn	183.72	600		O IV	185.384	1	
Na III	183.747	100		Co XIII	185.39		
Ni VIII	183.80	40		Mn VIII	185.46	900	
Ni VIII	183.83	900		Ne IV	185.48	100	
Ni VIII	183.91	80d		F IV	185.484	300	
Mg IV	183.921	50		Sc VII	185.526	300	
O VI	183.937	650	3	Ca V	185.540	100	
Sc VII	183.96	200		O IV	185.544	2	
Ni VIII	183.97	20		N IV	185.568	3	6.16
As VII	184.05	800		Sc VII	185.575	40	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N IV	185.623	5	6.16	As VII	187.38	900	
Ni VIII	185.65	80		Mn	187.45	500	
As VII	185.66	800		Ca	187.515	40	
Ca XIV	185.74			Mn	187.63	400	
O V	185.745	500	12	Ti	187.671	1	
Sc VII	185.808	330		Mg IV	187.697	15	
Ni VIII	185.82	10		Ti	187.752	1	
N IV	185.853	75 -A	12.24	Mn	187.76	500	
K IX	185.883	250		Ti	187.819	1	
Cl X	186.06			Ni VIII	187.87	10	
K XIV	186.06	P		Co XIV	187.89		
N V	186.063	P		F IV	187.916	100	
Ca XX	186.1	P		Ar XIV	187.95		
N V	186.149	P		Mn	187.96	500	
Ni VIII	186.16	10		F IV	188.004	10	
Ni VIII	186.18	80		Ni VIII	188.06	20	
N IV	186.218	50 -A	12.23	Mn	188.09	500	
As VII	186.25	700		Mg IV	188.146	15	
Cu	186.296	150		O IV	188.152	5	
Ni VIII	186.31	10		O IV	188.190	1	
C V	186.329		18	Mn	188.19	600	
Mn	186.35	500		Fe XII	188.219	70	
Ar XIII	186.38			Fe XI	188.305	400	
Ti	186.417	1		Co XIII	188.42		
Ni VIII	186.49	250		Mn IX	188.48	900	
Mg III	186.510	900	4	Sc XVI	188.50		
F IV	186.558	100		Mg III	188.526	300	
Ne IV	186.58	750	7	Ni VIII	188.58	150	
Fe VIII	186.60	800		N IV	188.583	200b	6.13
Ca XIV	186.62			Co XIV	188.60		
N IV	186.690	250d	6.15	N IV	188.606	200b	6.13
C V	186.697	30	23	N IV	188.656	250	6.13
N IV	186.709	250d	6.15	F IV	188.656	200	
F V	186.715	400		Mn	188.67	600	
C V	186.745	30	23	S XI	188.68	225	
N IV	186.759	300d	6.15	N IV	188.743	300b	6.12
Ni VIII	186.76	10		F IV	188.758	100	
F V	186.788	400		N IV	188.762	300b	6.12
Ne IV	186.79	25		N IV	188.818	300	6.12
Co XIV	186.79			Ar XI	188.82		
F V	186.842	500		F IV	188.834	10	
S XI	186.85	200		Fe	188.86	500	
Ni VIII	186.86	10		Na III	188.870	200	
O IV	186.872	2		Co XIII	188.89		
F V	186.879	300		Sc XVIII	188.98 ?		
Fe XII	186.885	60		Ca XIV	189.00		
Ne IV	186.92	75		Mn	189.06	800	
Ni VIII	186.93	40		Mn IX	189.16	800	
O IV	186.936	5		Ni XV	189.21		
F V	186.968	400		Na III	189.346	100	
O IV	186.982	1		N IV	189.365	1	6.11
F V	187.008	400		N IV	189.386	5	6.11
Ar XI	187.08			N IV	189.437	10	6.11
Ni VIII	187.08	10		Mn	189.49	500	
F IV	187.105	200		Ar XI	189.57		
N IV	187.123	10	6.14	Mn	189.82	400	
N IV	187.142	10	6.14	F V	189.943	200	
Mg X	187.17			Mn IX	189.98		
N IV	187.194	20	6.14	S X	189.99	150	
Mg III	187.194	800	3	Fe X	190.02	400	
Ni VIII	187.20	20		Cl XI	190.03		
Ni VIII	187.23	10		K XIV	190.07	P	
F IV	187.240	300		Na IV	190.126	600	
Fe VIII	187.27	600		N V	190.155	P	5.01
Ne X	187.3	P		Ti	190.181	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N V	190.249 P	320	5.01	O IV	192.139	15	
Ca V	190.363	200		O IV	192.169	20	
S XI	190.37	250		O IV	192.206	25	
Na IV	190.440	1000		Mn	192.22	600	
Fe	190.45			O IV	192.244	10	
Ca V	190.457	250		S VI	192.27	20	
Sc XV	190.49			Ti	192.272	3	
Ca V	190.55F	150		Fe XII	192.402	70	
Al	190.560	50		Mn	192.42	500	
Ne IV	190.57	125		Ti	192.474	6	
F V	190.571	600		N IV	192.533	10d -A	15.23
Cl VII	190.59	100		Cu IV	192.585	7 -A	
N IV	190.625	200	A	Sc VII	192.607	150	
Ne IV	190.65	75		Ar VII	192.64	350	
Co XIV	190.65			Ar XII	192.66		
Sc VII	190.654	400		Ti VI	192.710	20	
Mn	190.73	600		O V	192.751	600	5
K XIV	190.75 P			Ti VI	192.754	250	
Ti	190.762	1		O V	192.799	700	5
Co XIV	190.82			Fe XI	192.819	250	
Na IV	190.835	800		N IV	192.859	400b	6.08
F V	190.839	700		S X	192.88	50	
Cl XI	190.94			N IV	192.888	400b	6.08
Ar XI	190.96			O V	192.906	800	5
Na IV	191.000	600		N IV	192.908	400b	6.08
Fe XII	191.051	20		N IV	192.941	400b	6.08
Fe XIV	191.20	200		O V	193.003	300	
Na VI	191.205	10		Sc VII	193.004	300	
N IV	191.228	100		N IV	193.139	300b	6.07
S XI	191.26	250	12.21	N IV	193.160	300b	6.07
Cl VII	191.28	200		N IV	193.214	350	6.07
Fe XIII	191.34			Sc	193.332	200d	
Ar XIV	191.35			Mn X	193.47	600	
O V	191.397	10		Fe XI	193.46	200	
Ca V	191.439	150		S X	193.49	150	
O V	191.458	100		Ti	193.501	1	
S VI	191.48	20		Fe XII	193.517	80	
Ca V	191.480	100		Ti	193.534	3	
O V	191.556	150		Ti	193.585	5	
S VI	191.56	50		Mn	193.59	500	
Ne VI	191.59 ?	20		Ti	193.568	10	
Mn IX	191.50	700		Ar XII	193.68		
Sc VII	191.692	300		Ti	193.737	1	
G IV	191.69	5d		Ti	193.791	1	
O IV	191.60	1		Na	193.807	10	
N IV	191.65	400b	6.10	Ca XIV	193.88		
N IV	191.67	400b	6.10	Na III	194.032	190	
O IV	191.695	5		Ti	194.039	1	
N IV	191.702	400b	6.10	Ni XVI	194.04		
N IV	191.727	400b	6.10	N IV	194.083	75d -A	15.22
N IV	191.748	400b	6.10	Ar XI	194.09		
O IV	191.752	10		F V	194.108	300	
Ar VII	191.76	150		Na III	194.166	10	
Co XIV	191.76			Ne IV	194.28	500	
Ne VI	191.77 ?	20		Mn X	194.30	600	11
Ca V	191.801	100		Na III	194.306	100d	
N IV	191.868	350b	6.09	Fe	194.31		
F V	191.892	300		B V	194.36 P		
N IV	191.898	350b	6.09	Mn X	194.37		
N IV	191.951	350	6.09	Fe XXI	194.38 ?		
F V	191.973	400		Ar XIV	194.39		
Ar VII	192.04	250		Ti	194.420	1	
Cl XI	192.06			K XV	194.44 ?		
Mn X	192.09	600		Ne IV	194.48	200	
Ti	192.102	3		Ti	194.490	3	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
O V	194.593	420	11	F IV	197.108	200	2.04
P IX	194.61	300		Cu	197.128	300	
Mn IX	194.61	600		Ti	197.178	3	
Ne IV	194.62	250b		N IV	197.230	500	
N VII	194.71			P IX	197.25	400	
Sc XVI	194.72			F IV	197.298	100d	15.16
Fe VIII	194.762	250	N IV	197.343	2 -A		
Cl VI	194.80	100	Fe XIII	197.443	30		
Sc VII	194.813	40	Ti VI	197.460	200		
F VI	194.840	100	Ca V	197.531	100		
Mn	194.88	600		Co XV	197.54		
Ti VI	194.900	200		Cl XII	197.55		
Mn X	195.03	600		Cu	197.598	300	
Fe XII	195.127	90		F V	197.615	1	
N IV	195.202	20d -A	15.21	Ti	197.629	6	
Cl XIII	195.22			Mn	197.64	500	
Cl VI	195.23	150		Ca V	197.648	100	
N IV	195.258	100d -A	15.20	Ca V	197.685	20	
Ne V	195.37	50		Ti	197.697	6	
Fe VII	195.476	1000		F V	197.780	10	
Ni XV	195.52			C IV	197.82		
Na III	195.538	10		Mn XX	197.82	5	5.05
Ne V	195.55	30		Ti	197.843	3	
K XIV	195.59			Sc VII	197.875	50	
N IV	195.610	1 -A	15.19	O V?	198.031	150	
Ne V	195.62	20		Ti	198.079	1	
Co XIV	195.66			Ti	198.137	3	
Cl XI	195.69			Mn	198.23	400	
Mn X	195.85	500		Sc VII	198.232	200	
O IV	195.863	60		Ti	198.311	3	
O IV	196.009	90		Cl XIII	198.40		
Fe VIII	196.046	750		Mn X	198.42		
Cl VII	196.12	500		F V	198.476	100	
S X	196.14	100		K XIII	198.49	150	
C IV	196.27	2	5.07	K VIII	198.536	125	
K XIV	196.31			Ti	198.540	3	
Cl XII	196.33			S VIII	198.550	50	
O IV	196.348			Fe XII	198.58		
F IV	196.351	400	1d -A	N IV	198.740	250b	6.05
Mn IX	196.38	500		N IV	198.764	250b	6.05
F IV	196.390	500		F V	198.765	1	
Cl VII	196.39	400		N IV	198.821	300	6.05
O IV	196.435			K VIII	198.975	250	
Ti	196.443	1	1d -A	Ti VI	198.977	400	
F IV	196.448	600		F IV	199.004	300	
Co XIV	196.48			C IV	199.04	10	
Fe XIII	196.531	50		Mn X	199.08	800	5.04
Mn	196.54	500		F IV	199.086	300	
Cu IV	196.585	30 -A		N IV	199.087	300	
Fe XII	196.649	50		N IV	199.159	200d -A	15.15
F V	196.713	200				450b -A	15.14
P VIII	196.76	400		Sc VII	199.166	100	
Ti	196.785	1		Fe XVII	199.26		
N IV	196.802	100d -A	15.18	Li II	199.282	300	
S X	196.83	200		Mn IX	199.32	600	
N IV	196.866	500b -A	15.17	Cl XII	199.37		
F V	196.870	100		Sc VII	199.522	50	
N IV	196.921	400b	6.05	K XIII	199.54	50	
N IV	196.944	400b	6.06	Ca V	199.553	300	
C IV	196.96	2	5.06	F IV	199.607	100	
F IV	196.968	100		Cu	199.723	100	
Ca V	196.970	250		Ca XVII	199.74		
N IV	197.000	400	6.06	Ti VI	199.759	200	
Co XIV	197.01			F IV	199.761	500	
C V	197.024	4	26	Na IV	199.769	600	
				F IV	199.804	500	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N IV	199.806	20 -A	15.13	Na III	202.184	400	
F IV	199.849	500		O V	202.191	300	14
N IV	199.857	50 -A	15.13	O V	202.224	300	14
Ca V	199.890	150		O V	202.283	300	14
K VIII	199.921	375		Ti	202.303	1	
Mn XXIII	199.93	P		O V	202.334	300	14
F IV	199.934	500		Mn XI	202.38		
Ti	199.960	3		O V	202.393	380	14
Ti	199.993	?		Cr XIX	202.42	?	
F IV	200.001	500		N IV	202.485	300d -A	15.12
Fe XIII	200.033	60		Na III	202.490	200	
F IV	200.089	700		Cl XII	202.54		
O VIII	200.15	P		N IV	202.595	500b -A	15.11
N IV	200.340	300 -A	12.20	S VIII	202.605	50	
K VI?	200.341	50		S IX	202.62	250b	
Fe	200.37			Sc VI	202.638	50	
Ca V	200.512	250		Fe XI	202.67		
Cu VII	200.665	1000		Na III	202.720	300	
Mn XI	200.67	50		Fe XI	202.723	30	
C IV	200.68	25d	5.03	Na III	202.760	300	
Ti	200.691	1		Cr VII	202.78	900	
Co XIV	200.75			Mn VII	202.86	900b	
Fe XVII	200.80	100		Mn X	202.86	900b	
Sc VI	200.810	100		O IV	202.885	15	
O IV	200.827	2 -A		Sc VI	202.921	200	
Cu VII	200.851	750		F IV	202.989	10	
Ca V	200.860	150		Ca VII	202.989	150	
F V	200.861	100		O IV	203.044	25	
O IV	200.915	2		Na III	203.050	300	
Cr VI	200.94	600		C IV	203.057	50d	5.02
Cu VII	200.948	500		F IV	203.152	100	
Cl XII	200.96			Ti VI	203.200	6	
O IV	200.966	2		Sc VI	203.216	50	
O IV	200.995	5		Na III	203.282	200	
F IV	201.011	600		Na III	203.324	200	
O IV	201.022	1		Ar XIV	203.35		
F IV	201.063	700		Cu	203.432	600	
C IV	201.073	2		Ti VI	203.434	3	
O IV	201.098	?		N IV	203.642	50b -A	5.10
F IV	201.101	600		N IV	203.694	50b -A	5.10
Fe XII	201.134	70b		Ca VII	203.701	100	
Fe XIII	201.134	70b		N IV	203.780	50 -A	15.10
Cy VI	201.15	300		O V	203.783	330	13
F IV	201.160	800		Cl X	203.80		
F IV	201.222	600		Fe XIII	203.81	70	
Sc XVI	201.25			O V	203.821	380	13
Ti VI	201.311	50		O V	203.851	330	13
Cu	201.329	150		P X	203.87		
Cr VI	201.33	300		O V	203.890	420	13
F IV	201.465	400		O V	203.935	330	13
Sc VII	201.476	40		Na IV	203.959	200	
K XIII	201.48	200		Ca VII	204.002	250	
Cl X	201.50			Cu	204.056	150	
Cr VI	201.54	600		Mn VII	204.13	900	
Cr VIII	201.54			S VI	204.19	50	
Cu	201.615	200		Fe XIII	204.26		
Ar XIII	201.69			Ne IV	204.27	75	
Fe XII	201.745	30		Mn XI	204.29		
Ti VI	201.865	125		N IV	204.302	150d -A	18.21
N IV	201.988	100d -A	18.22	Sc VI	204.310	100	
K XIII	202.01	50		Ca VII	204.376	50	
Fe XIII	202.056	80		Mn IX	204.43	600	
Cu	202.065	200		Ne IV	204.53	125	
Cl XIII	202.10			Sc VI	204.610	50	
O V	202.161	300	14	Ar XIV	204.64		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
O IV	204.708	1d		Co XV	206.94		
Sc VI	204.719	200		Mn XI	207.02		
Cu	204.725	200		Mn X	207.06		
Ca VII	204.736	150		Cr VIII	207.07	300	
Fe	204.77	400		O IV	207.183	40	
Ne IV	204.79	75		O IV	207.239	60	
O IV	204.905	1 -A		Cu IV	207.282	20 -A	
Ne IV	204.91	25		Cu XIX	207.31	20	
Mn XII	204.92			O IV	207.348	15	
Fe XIII	204.951	50		P X	207.35		
N VII	204.98 F			Ca X	207.386	25	
Mn XI	204.98			Cl X	207.41		
O IV	204.996	1 -A		Cr VI	207.44	200	
Cr VIII	205.01	700		Na III?	207.458	10	
Sc VI	205.072	100		N IV	207.500	20d	12.18
O V	205.105	150		S X	207.53	200	
Ar XIII	205.24			K VII	207.568	20	
Mn	205.27	900		Cr VI	207.61	300	
Ni VII	205.275	100		P X	207.67	200	
Cu IV	205.278	60 -A		Cu	207.733	150	
Fe	205.31			Cl VII	207.76	200d	
Ni VII	205.359	20		O V	207.794	550	16
P X	205.38	50		N IV	207.812	200d -A	18.20
Co XIII	205.38			Co XIV	207.85		
Cl X	205.40			Cu	207.925	350	
Ca VII	205.402	150		Mn X	207.98	400	
Cl XIII	205.47			Mn XI	208.02		
Na IV	205.487	600		N IV	208.066	400d -A	15.09
F V	205.552	400		Al VII	208.1	?	
Cu	205.610	300		N IV	208.113	400b -A	15.08
Ni VII	205.637	320		F XIII	208.12	150	
Cr VIII	205.65	400		N IV	208.131	400b -A	15.08
Ni VII	205.662	10		N IV	208.150	400b -A	15.08
Ar XIII	205.77			Ni VII	208.182	240	
K IX	205.772	300		V XVIII	208.22	?	
F V	205.778	300		F IV	208.254	900	
Ni VII	205.807	200		Ar XIV	208.31		
O IV	205.842	1		S X	208.33	200	
Co XV	205.85			Fe	208.44	200	
K IX	205.862	375		Ne IV	208.49	500	2
Ti	205.880	1		Cu IV	208.502	15 -A	
Ni VII	205.885	240		N III	208.513	30d -A	
N IV	205.940	500b	6.04	N IV	208.513	100d	12.17
Ar XIII	205.94			Cr IX	208.53		
Na IV	205.956	400		F IV	208.549	200	
N IV	205.968	500b	6.04	Ni VII	208.580	200	
O IV	206.002	2		Cr VIII	208.63	200	
Cl X	206.02			Ca XV	208.66		
N IV	206.028	500	6.04	N III	208.670	50d -A	
Ni VII	206.030	100		Ni VII	208.679	80	
Na IV	206.155	300		Fe XIII	208.690	20	
Co VII	206.23	150		N III	208.730	50 -A	
K XIX	206.3		P	Nc IV	208.73	500	2
Cu	206.355	600		Ne IV	208.90	400	2
Si XIV	206.4		P	Ni VII	208.940	240	
F V	206.430	200		Sc VI	209.050	100	
Cr	206.53	100		Cl XI	209.18		
F V	206.594	300		Ni XV	209.18		
P XV	206.6		P	N V	209.274 P	800	2
Co VII	206.60	10		N V	209.308 P	800	2
C IV	206.641	150d	5.01	N IV	209.378	400b	6.03
N IV	206.707	10d	12.19	Al VII	209.4	?	
Ca X	206.746	50		N IV	209.407	400b	6.03
Cu	206.842	350		Cr IX	209.44	200	
Na III?	206.871	10		N IV	209.471	400b	6.03

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn XI	209.57			Sc VI	212.121	50	
Fe XIII	209.634	40		S XII	212.14	150	
Ca VII	209.723	250		Co VII	212.15	1000	
Fe	209.75	300		Co VII	212.23	80	
Cl XIII	209.81			Ni VII	212.316	160	
Co VII	209.815	10		N III	212.359	50d -A	
Sc VI	209.821	200		C IV	212.421	250	5
N IV	209.842	150b	12.16	N III	212.465	100 -A	
Fe XIII	209.927	50		Ni VII	212.516	700b	
Cl XI	209.93			Ne IV	212.56	750	6
N IV	209.976	100b -A	15.07	Ni VII	212.560	20	
P V	210.00	10		O IV	212.578	5d	
N IV	210.028	200 -A	15.07	S X	212.60		
Cl X	210.08			Co VII	212.61	250	
N IV	210.092	100b -A	15.07	Ni VII	212.625	60	
Li II	210.1	f		Co VII	212.64	1000	
N IV	210.111	100b -A	15.07	Co XVI	212.78		
Mn XI	210.16			Mn XII	212.81		
Cu	210.217	150		Ni VII	212.856	20	
Co XVI	210.23			Ni VII	212.904	600	
Mn XII	210.34			Co VII	212.91	900	
Co VII	210.37	40		Ni VII	212.949	400	
Fe	210.40	300		O IV	212.974	10d	
Ar XIII	210.46			Cr VIII	213.03	200	
F IV	210.480	100		V VI	213.04	20	
Sc VI	210.523	40		Co VII	213.06	20d	
F IV	210.545	100		O IV	213.061	10d	
Sc	210.550	200		N III	213.086	100d -A	
Cu	210.612	150		Ni VII	213.096	300	
Cr IX	210.62			Sc VI	213.118	200	
Fe X	210.67	2i		K V?	213.121	50	
Co VII	210.68	10		Ni VII	213.133	80	
Co VII	210.71	10		N III	213.164	200d -A	
Cr VII	210.77	80		Sc VI	213.192	100	
Ar XIII	211.00			Ca VII	213.194	10	
Cr XXVII	211.0	P		Ni VII	213.258	100	
N VII	211.037	160		V VI	213.32	30	
Cu IV	211.109	50 -A		Ni VII	213.339	200	
F IV	211.152	10		N III	213.364	50d -A	
Co VII	211.25	10		Ar XIV	213.42		
Ni VII	211.298	80		Ni VII	213.422	240	
Cr IX	211.32			N IV	213.443	300d -A	18.19
Fe XIV	211.32	80		N III	213.447	100d -A	
N IV	211.405	400	2.03	Ni VII	213.496	300	
Sc VI	211.416	400		Ni VII	213.515	500	
Cr VIII	211.42	200		S XI	213.55	125	
Ni VII	211.435	240		V VI	213.61	10	
Sc	211.505	170		Cu IV	213.617	8 -A	
Ni VII	211.539	10		F V	213.684	10d	
Mn XI	211.54			Sc VI	213.702	100	
Sc VI	211.612	200		Ni VII	213.714	500	
Ni VII	211.649	240w		Mn XI	213.75		
Co VII	211.65	40		Fe XIII	213.781	40	
N IV	211.679	250d	12.15	F IV	213.848	700	
Sc VI	211.696	50		V VI	213.87	60	
Cu	211.707	200		Ni VII	213.908	600	
Fe XII	211.749	30		Ni VII	213.924	200	
Ni VII	211.759	280		O IV	213.975	15	
O IV	211.808	1d -A		O IV	214.028	25	
K XVI	211.81	?		Ni VII	214.042	300	
Cr IX	211.97			F IV	214.062	700	
Ni VII	211.993	180		Ni VII	214.111	140	
N III	212.019	20d -A		O IV	214.152	40	
N III	212.049	50 -A		Ni VII	214.166	40	
N III	212.087	80 -A		O IV	214.205	15	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Na III	214.235	400		Si VIII	216.800	20d	
Ni VII	214.237	20		Fe XIII	216.88	35	
O IV	214.249	2		Si VIII	216.918	100	
S VI	214.28	20		Fe XIV	216.95		
O IV	214.290	2		Ca VIII	216.955	100	
N IV	214.291	250	12.14	O IV	216.960	1	
K V?	214.351	100		Ni VII	217.018	160	
N IV	214.414	50d - A	18.17	Ca VIII	217.040	200	
Fe XII	214.415	20		Mn XII	217.10		
Ni VII	214.440	120		Fe IX	217.108	400	
Ni VII	214.492	140d		Co VII	217.13	20	
V VI	214.50	10		Ni VII	217.138	240	
Na III	214.596	200		Sc IV	217.189	40	3
Si VIII	214.756	100		Cr	217.19	300	
F III	214.804	3		Ar XII	217.21		
N IV	214.843	10	12.13	N IV	217.218	500	13.11
S XI	214.85	125		P V	217.22	20	
F III	214.862	3		Fe XII	217.283	30	
Na III	214.868	400		Ne IV	217.34	75	
S XI	214.98	100		Na	217.385	10	
Mn XII	215.03			Cr	217.55	200	
O V	215.040	380	4	Cr	217.61	200	
Cr IX	215.04			S XI	217.63	200	
Na III	215.042	200		Ne IV	217.64	75	
O V	215.103	420	4	Ni VII	217.658	160	
S XII	215.18	150		Cu	217.743	200	
Na III	215.230	400		Cl XIII	217.77		
O V	215.245	500	4	Ne IV	217.78	75	
Co VII	215.26	80d		Ni VII	217.781	10	
Ti XVII	215.31			Si VII	217.826	350	
Na III	215.340	400		Ne IV	217.83	125	
Ca XV	215.37			Mn X	217.88		
Cr	215.38	300		Co VII	217.88	20	
Ne IV	215.40	25		N IV	217.895	500d - A	15.06
Ar XII	215.49			N IV	218.044	400b - A	15.05
Na III?	215.498	10		N IV	218.067	400b - A	15.05
Sc IV	215.522	100	4	N IV	218.088	400b - A	15.05
Cu	215.611	500		V VI	218.09	90	
Na III	215.671	400		Mn X	218.11		
F V	215.676	10		Co VII	218.11	20	
Ne IV	215.71	15		N IV	218.116	400b - A	15.05
N IV	215.755	75	12.12	Ne IV	218.13	100	
Ni VII	215.759	600		Cr	218.15	100	
Ne IV	215.84	75		Ne IV	218.18	50	
Mn XI	215.86			S XII	218.20	250	
Na III	215.870	100		Fe XIV	218.21		
Ni XV	215.94			N IV	218.250	400	12.13
S XI	215.95	250		Ar XII	218.29		
Cr IX	215.97			Ne IV	218.34	75	
O V	216.018	500	15	N III	218.349	50 - A	
Cu IV	216.063	50 - A		N III	218.378	70 - A	
Ni VII	216.064	400		Ni XVI	218.39		
Na III?	216.120	100		N III	218.416	100 - A	
Mn XII	216.12			Co VII	218.42	40	
Co VII	216.205	20		Ne IV	218.48	100d	
Ni VII	216.408	300		Ni VII	218.531	100	
Ne X	216.41	P		Mn XII	218.56		
Cu	216.454	250		Co VII	218.56	10	
Cr XXII	216.51	F		Ne IV	218.64	125	
Ni VII	216.550	140		V VI	218.64	60	
Mn XI	216.60			Mn XII	218.70		
Cr VIII	216.67			Ni VII	218.766	100	
Co VII	216.70	250		Ne IV	218.77	250	
Cr X	216.72	400		Sc VI	218.837	400	
Na XI	216.8	P		Ni VII	218.846	20	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr X	218.88			Cu XIX	221.37	35	
N III	218.949	100d -A		Cl XIII	221.38		
K VII	218.987	20		Cr VIII	221.41	200	
S XI	218.99	125		S XII	221.44	175	
V VI	219.00	30		Ce VII	221.45	1000	
K VII	219.063			K VII	221.480	150	
Co VII	219.09	10		T.	221.497	i	
Ni VII	219.127	40		Co VII	221.52	1000	
S XI	219.13	200		Al	221.543	10	
Fe XIV	219.13	60		K VII	221.567	10	
N III	219.168	250 -A		K VII	221.597	10	
F III	219.277	1		Ni XXVI	221.6	P	
Cr	219.29	400		Co VII	221.62	250	
Fe XII	219.453	40		O IV	221.648	15	
Ni VII	219.497	100		N IV	221.729	300b -A	15.04
Cl XII	219.53			Co VII	221.75	1000	
Mn XII	219.54			N IV	221.789	450 -A	15.04
F III	219.588	0		Fe XIII	221.830	40	
Co VII	219.64	40		N IV	221.854	300b	15.04
Ni VII	219.782	20		N IV	221.871	300b -A	15.04
Ar VI	219.90	120		Ni XV	221.93		
P VII	219.91	450		V VII	221.95	200	
Cu IV	219.927	6 -A		Co VII	221.96	900	
Cr	219.94	200		Ti	222.021	i	
Co XVI	219.94			K VII	222.122	100	
As VI	220.0	800		Ge VI	222.14	100	
Cr IX	220.02			Cr XIV	222.16	200	
Ti	220.045	1		Fe VIII	222.189	200	
Co VII	220.07	400		O V	222.235	200	
Fe XIV	220.09	60		Co VII	222.37	10	
Co VII	220.10	10		Ca VII	222.373		
N IV	220.124	50	12.09	K VII	222.450	100	
Co VII	220.23	10		Co VII	222.53	10	
N IV	220.280	400	12.08	Co VII	222.57	1000	
Co VII	220.34	150		Ne IV	222.60	200	
O V	220.352	800		Co VII	222.67	750	
Co VII	220.37	150	10	Cl XII	222.72		
Co VII	220.405	150		Co VII	222.72	10	
Ni XVIII	220.41	10		O IV	222.765	25	
Cr X	220.42			O IV	222.777	15	
Cr XI	220.42			C IV	222.791	350	
Co VII	220.515	150		Co VII	222.84	80	4
Co VII	220.62	1000		Sc VI	222.844	150	
K VII	220.629	100		Sc VI	222.855	300	
Ti	220.739	1		N IV	222.893	30d -A	18.41
F IV	220.765	700		Co VII	223.08	1000	
Co VII	220.77	40		Ni XVI	223.09		
Co VII	220.81	20d		Cl XII	223.10		
N IV	220.885	2d -A	18.42	N VII	223.12	P	
Co VII	220.89	20		Cl XII	223.14		
Ar VI	220.95	200		Co VII	223.19	900	
Co VII	220.96	40		Ne IV	223.235	125	
Co VII	220.98	150		Ni VII	223.248	20	
As VI	221.0	1000		S IX	223.27	100	
Co VII	221.02	750		V VI	223.30	100	
K VII	221.035	100		Co VII	223.30	1000	
Co VII	221.06	150		Ge VI	223.32	600	
Ar XV	221.10			Co VII	223.37	750	
Co VII	221.15	20		Ni VII	223.377	100	
Cr X	221.18			F IV	223.394	300	
Sc VI	221.204	330		Sc VI	223.408	100	
Co VII	221.24	80		N IV	223.421	500d -A	18.16
S IX	221.26	100		F IV	223.456	200	
Co VII	221.30	80		P VII	223.48	350	
Co VII	221.37	10		F IV	223.497	100	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ge VI	223.52	400		Ti V	225.347	400	
Co VII	223.54	1000		Co VII	225.43	40	
Mn XII	223.56			Ni VII	225.476	40	
Ne IV	223.60!	125		V V	225.48	30	
Si IX	223.72	P		C IV	225.49	4	11.09
O IV	223.728	1		Cu IV	225.497	25	-A
Co VII	223.73	1000		Co VII	225.68	80	
Ni VII	223.762	60		Co VII	225.71	40	
Ni VII	223.819	60		Ni VII	225.734	200	
O IV	223.841	1		N IV	225.741	50d	-A
Cr X	223.86						18.40
Co VII	223.86	750		Ni VII	225.760	40	
Cr IX	223.87			V VII	225.79	500	
Fe VIII	223.870	200		Co VII	225.83	750	
C IV	223.9	2	11.11	Ge VI	225.83	700b	
Co VII	223.91	550		N III	225.837	300d	-A
Ni VII	223.948	20		Co VII	225.87	10	
Co VII	223.99	250		Ni VII	225.889	60	
F V	223.999	1		V VI	225.90	70	
Ni XV	224.04			N III	226.030	300	-A
Co VII	224.08	80		Co VII	226.03	1000	
Co XIV	224.13			O III	226.038	50d	
Cl VII	224.14	300		F III	226.055	6	
Ti	224.169	1		Ni VII	226.062	180	
Cu XIX	224.22	3		F III	226.094	10	
Ar XII	224.25			N III	226.122	300	-A
Co VII	224.335	550		F III	226.169	20	
Co VII	224.36	10		Cr VI	226.20	500	
Ni VII	224.381	320		Ni VII	226.215	20	
Ce VI	224.40	1000b		Cr X	226.24		
Ge VI	224.40	1000b		Ni VII	226.268	40	
Ge VI	224.49	1000		Ca VII	226.292	50	
C IV	224.5	2	11.10	F V	226.341	200	
V VI	224.50	900		Ni VII	226.347	140	
V VI	224.59	90		Ni VII	226.399	20	
Cl XIII	224.60			Ti	226.409	1	
Co VII	224.60	10		Cr XI	226.45		
Mn XII	224.62			Ti	226.462	1	
N IV	224.629	450b	12.07	N III	226.520	50d	-A
Co VII	224.71	1000		Ti	226.561	10	
Ni VII	224.724	280		S IX	226.59	100	
Cr X	224.74			F V	226.608	90	
Fe XV	224.745	40		Ti	226.629	1	
S IX	224.75	450		Ni VII	226.658	40	
Ti	224.818	1		V VI	226.66	60	
N III	224.873	50d	-A	Ti	226.680	1	
V V	224.90	30		Ge VI	226.69	300	
Ni VII	224.919	240		C IV	226.72	6	11.08
Co VII	224.93	10		Ti	226.722	1	
Ge VI	224.94	700		As VI	226.8	100	
Si IX	225.073	800		Ge VI	226.82	500	
Ti	225.083	1		Co VII	226.83	20	
Cl VII	225.08	500		N III	226.832	350	-A
N IV	225.110	800b	6	N III	226.910	400	-A
F V	225.114	10d		Mn XIII	226.91		
Co VII	225.12	80		F IV	226.944	600	
N IV	225.142	800b	6	Co VII	226.98	150d	
V VII	225.16	800		Si IX	227.007	800	
Ni VII	225.182	20		N IV	227.026	100	12.06
N IV	225.212	800	6	F IV	227.079	300	
S IX	225.23	50		F IV	227.101	500	
Co VII	225.23	150		Co VII	227.11	20	
Ni VII	225.238	60		Ni VII	227.191	140	
O IV	225.299	25		C V	227.192	100	13
N III	225.302	70d	-A	S VI	227.20	200	
				Cr VI	227.20	400	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
F IV	227.211	400		Co VII	229.13	20	
Fe XV	227.22	20		Cl XIII	229.15		
Si IX	227.30			K VII	229.258	150	
O V	227.372	300		Ge VI	229.26	700	
Ni VII	227.377	40		Ge VI	229.35	400	
Cr X	227.42			V VII	229.38	600	
O V	227.469	300		He II	229.431	P	11
Cl XII	227.47			Ar VIII	229.44	250	
N III	227.479	250b -A		Ni VII	229.569	80	
S XII	227.50	150		Co VII	229.61	1000	
O V	227.511	380		Ti	229.619	3	
N III	227.515	250b -A		Ca VI	229.734	350	
O V	227.549	300		He II	229.736	P	10
Ni VII	227.570	10		P V	229.83	200	
K VII	227.625	100		Na III	229.868	300	
O V	227.634	300		Co VII	229.87	1000	
Ni VII	227.636	180		O IV	229.896	1	
Ti	227.639	i		Ar XVIII	229.9	P	
Ca VI	227.642	20		V VIII	230.00		
O V	227.689	300		N IV	230.035	100d -A	18.39
Fe XV	227.70			O IV	230.040	1	
Ni VII	227.734	40		F III	230.117	35	
Cl XII	227.83			V VIII	230.12	500	
Ni VII	227.831	20		He II	230.139	P	9
S VI	227.84	200		Ti	230.155	1	
Ge VI	227.86	300		Ge VI	230.25	500	
V VII	227.88	400		Cr XI	230.29		
Co VII	227.88	20		Ti	230.304	1	
Ni VII	227.889	160		Co XIV	230.34		
Ca VI	227.922	100		Co VII	230.36	40	
Ni VII	228.023	200		Ti	230.425	1	
Ni VII	228.039	80		C IV	230.43	25d	11.06
Ti	228.135	1		Co VII	230.45	20	
V VIII	228.15			Ca VI	230.495	250	
S X	228.18	250		F III	230.553	1	
P IX	228.25	P		N III	230.591	300b -A	
Ni VII	228.255	100		Ti	230.591	1	
C IV	228.27	25d	11.07	Na III	230.593	200	
Cl XII	228.29			F III	230.603	1	
Ni VII	228.299	10		N III	230.626	300b -A	
Ge VI	228.41	900		K VIII	230.678	250	
Co VII	228.425	40		N III	230.681	300b -A	
Ni VII	228.484	80		O IV	230.682	2	
F IV	228.496	1		He II	230.686	P	8
Mn XI	228.52			K VIII	230.706	300	
Ni VII	228.541	100		K VIII	230.745	375	
F IV	228.552	10		O IV	230.755	5	
Sc V	228.565	300		N III	230.765	250b -A	
Mn XII	228.61			N III	230.789	250b -A	
Ca VI	228.628	350		V VIII	230.82	200	
F IV	228.645	100		Ge VI	230.82	200	
V VIII	228.67	400		Sc V	230.848	100	
S X	228.70	350		N III	230.861	250b -A	
Cr X	228.71			N III	230.879	250b -A	
N III	228.762	250b -A		Ar VIII	230.88	350	
N III	228.790	250b -A		C IV	230.9	2	11.05
S IX	228.84	100		F III	231.011	6	
N III	228.844	250b -A		O IV	231.031	10	
Ni VII	228.864	40		Fe VII	231.043	100	
Fe VII	228.866	20		O IV	231.070	60b	
O III	228.893	10		O V	231.070	380b	
Ti V	228.909	100		O IV	231.101	40	
Ni VII	228.927	100		O IV	231.140	15	
O III	228.988	10		O IV	231.200	40	
Co XVI	229.67	10		Cr X	231.21		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
O IV	231.239	40		O IV	233.457	60	7
O IV	231.299	60		N III	233.459	350b -A	
F IX	231.3	P		V VII	233.47	700	
Co VII	231.32	40		O IV	233.496	60	7
V VIII	231.33			N III	233.498	350b -A	
F III	231.381	1		O IV	233.521	40	7
He II	231.454	P	7	F IV	233.526	400	
N III	231.465	150 -A		C IV	233.53	1000d	11.04
Co VII	231.48	20		O IV	233.561	90	7
N III	231.497	150 -A		O IV	233.596	40	7
N III	231.540	200 -A		N III	233.599	300b -A	
Ti	231.553	1		N III	233.620	300b -A	
P XI	231.67	100		N III	233.696	300b -A	
Co VII	231.68	40		N III	233.716	300b -A	
Fe VII	231.726	300		Mn XIII	233.73		
Mg III	231.730	1000	2	Co VII	233.75	250	
Ge VI	231.78	700		Fe VII	233.762	50	
Co VII	231.79	20		Ti	233.787	1	
O V	231.823	380		Ni XVII	233.79	35	
V VII	231.99	300		Cr X	233.80		
N IV	232.112	100	5.07	Fe XV	233.865	30	
Mn XIII	232.12			Co VII	234.01	40	
N IV	232.145	150	5.07	Co VII	234.05	10	
Ge VI	232.16	500		N IV	234.124	600b	5.05
Cr XI	232.18			Ti	234.184	3	
As VI	232.2	100		C IV	234.19	4	11.03
N IV	232.223	200	5.07	N IV	234.195	600b	5.05
Fe VII	232.256	200		Mn XIII	234.24		
Ca VI	232.275	300		N IV	234.249	600b	5.05
Co VII	232.35	150		Mg III	234.258	850	1
Ti	232.361	1		Co VII	234.27	20	
Co VII	232.425	40		Ne IV	234.319	125	
Fe VII	232.442	200		Fe VII	234.336	200	
Ti	232.466	1		Co VII	234.34	1000	
Ni XVI	232.49			He II	234.347	P 40	5
Co VII	232.51	250		Co XV	234.41		
Ca VI	232.531	250		S XII	234.48	75	
Co VII	232.56	900		V XXI	234.49	P	
Ge VI	232.57	200		Cl XII	234.64		
He II	232.584	P 24	6	Ge VI	234.65	400	
Co VII	232.65	900		Cl XI	234.67		
K V?	232.673	50		Ti	234.680	1	
Ti	232.711	1		Cr XI	234.68		
Co VII	232.80	80		Ne IV	234.704	125	
Ti	232.847	1		Fe VII	234.754	200	
N III	232.854	300d -A		Co VII	234.79	1000	
Si VIII	232.864	10		P XI	234.84	400	
Co XXV	232.9	P		Cl XI	234.84		
Fe VII	232.948	100		Ti	234.902	1	
Cr X	232.96			Co XVII	234.91	P	
Fe VII	233.021	300		P IX	234.94	P	
Co VII	233.06	20		O IV	234.988	10	
Ge VI	233.14	500		Ge VI	235.05	500	
F IV	233.159	200		Mn XIII	235.08		
Si VIII	233.159	10		Ti	235.096	10	
Cl XI	233.17			Co VII	235.13	10	
F IV	233.222	600		Si VIII	235.221	10	
Cr XI	233.26			P X	235.27	400	
F IV	233.297	200		Cu IV	235.299	30	
N III	233.332	400b -A		Ti	235.316	3	
N III	233.368	400b -A		Ti	235.353	6	
N III	233.393	350b -A		Ti	235.450	6	
F IV	233.393	500		Cr XI	235.52		
N III	233.424	400b -A		Mn XI	235.55		
Co VII	233.425	20		Si VII	235.563	20	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ge VI	235.57	800		N III	238.134	300	-A
Fe VII	235.659	200		Ge VI	238.14	500	
Ti	235.683	20		Co VII	238.17	20	
V IX	235.72	400		C IV	238.200	100d	11.02
Cr XI	235.74			C IV	238.250	150d	11.02
F V	235.840	100		Co VII	238.27	80	
Ti	235.887	10		Ti	238.294	1	
V VIII	236.01	300		O IV	238.360	400	
N IV	236.068	550	12.05	Co VII	238.37	900	
C IV	236.071	2d		Fe VII	238.386	100	
Co VII	236.09	250		P X	238.53		
Co XIV	236.11			O IV	238.571	500	
Cr XI	236.26			N IV	238.657	500b	15.03
Ar XIII	236.27			N IV	238.683	500b	15.03
Cu IV	236.343	5		Ti	238.689	3	
Ni XVII	236.36	3		N IV	238.694	500b	15.03
Fe VII	236.388	50		N IV	238.731	500b	15.03
Ge VI	236.40	400		N IV	238.769	500b	15.03
Cl V	236.44	100		N IV	238.802	600	15.03
Co VII	236.45	80		Cu XVIII	238.87	P	
Co VII	236.51	150		Ge VI	238.97	700	
O III	236.710	50d		Al VII	239.030	100d	
Fe VII	236.779	20		N IV	239.146	450b	15.02
Co VII	236.82	10		N IV	239.174	450b	15.02
Fe VII	236.865	20		C IV	239.196	25	11.01
Ti	236.914	1		N IV	239.212	450b	15.02
P X	236.95			N IV	239.243	450b	5.03
N IV	236.954	150d -A	18.38	Ge VI	239.28	700	
P XI	237.00	400		Ca VI	239.296	20	
Ti	237.059	3		Co XIV	239.33		
Si XIV	237.2	P		Co VII	239.37	10	
Cl V	237.23	200		Ti	239.404	3	
Cr XI	237.24			Co XV	239.42		
Ti	237.250	1		V	239.44	300	
He II	237.331	P	4	Ar XIII	239.5	P	
Ge VI	237.36	500		Ni XVI	239.53		
Cl XI	237.42			Ca VI	239.535	350	
V VII	237.50	300		O IV	239.592	10	
Ti	237.519	1		N IV	239.616	500b	5.03
N III	237.532	450b -A		N IV	239.632	400b	5.03
N III	237.565	450b -A		N IV	239.659	400b	5.03
Co VII	237.575	10		N IV	239.679	400b	5.03
N III	237.624	450b -A		N IV	239.708	400b	5.03
V IX	237.66			Fe VII	239.728	100	
Cl XIV	237.70			N IV	239.763	400b	5.03
Co VII	237.73	10		S XI	239.81	150	
Mn XII	237.78			Fe VII	239.851	50	
Cr XI	237.79			F IV	239.856	700	
Ge VI	237.80	600		Ti	239.933	1	
Ti	237.826	1		O IV	239.935	1	
Ni XVI	237.87			Ge VI	240.00	700	
N IV	237.873	400b	5.04	Ti	240.009	1	
N IV	237.908	400b	5.04	F IV	240.017	700	
F IV	237.913	300		Fe VII	240.049	50	
F IV	237.955	400		Fe VII	240.076	50	
N IV	237.991	500	5.04	O IV	240.079	2	
F IV	238.012	300		F IV	240.079	900	
N III	238.034	350	-A	F IV	240.146	700	
Fe VII	238.040	20		Fe VII	240.216	200	
Ge VI	238.04	800		V VIII	240.22	300	
F IV	238.042	200		F III	240.231	3	
Ti	238.054	6		S XII	240.26	175	
N III	238.093	350	-A	F III	240.264	1	
F IV	238.099	100		F IV	240.275	700	
Co VII	238.11	40		V IX	240.30		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
P XI	240.31	100		Mn XIV	243.45		
Ti	240.321	3		Ti	243.593	1	
N IV	240.363	200	12.04	V IX	243.58		
F IV	240.371	700		V VIII	243.69	100	
F III	240.546	3		F IV	243.736	200	
Cr XI	240.56			Ar XIV	243.74		
Fe VII	240.565	50		Al VI	243.760	600d	
Ge VI	240.65	700		Fe XV	243.782	50	
Fe XIII	240.713	50		F IV	243.796	300	
F III	240.720	6		Sc V	243.823	40	
Ca VI	240.721	500		Cl VI	243.85	600	
F III	240.735	1		Sc V	243.872	500	
Co VII	240.745	10		Cl VI	243.88	150	
Al VII	240.770	200d		N I XIV	243.88		
Cl VII	240.83	300		F IV	243.922	400	
F III	240.857	1		Ti	243.968	3	
Cl VII	240.87	200		O III	244.049	100d	
Ti	240.926	10		N IV	244.100	300b	18.14
O III	240.979	100d		Fe XVII	244.152	10	
Ti	241.013	1		Ti	244.291	1	
O III	241.037	100d		V IX	244.46	100	
Mn XIV	241.07			Ti	244.482	1	
F III	241.135	1		Fe VII	244.535	100	
V	241.14	200		P VIII	244.55	100	
Ti	241.240	1		Cr XII	244.70		
Ti	241.271	1		F III	244.701	6	
Cr XI	241.48			F III	244.769	20	
Cu	241.583	150		Ti	244.779	1	
Fe XIV	241.739	60		V IX	244.89		
Ti	241.750	1		C IV	244.907	500	3
O III	241.819	50		Fe XXIV	245.00	P	
Cr XI	241.87			F III	245.005	10	
O III	241.875	50		N III	245.021	400d -A	
Ar XIII	241.90			N III	245.115	400d -A	
V VII	241.91	200		Fe VII	245.151	120	
Ti	241.917	3		Ti	245.258	1	
Ge VI	242.00	700		V X	245.35	100	
O IV	242.045	5		Fe VII	245.492	120	
Ti	242.059	1		Ti	245.535	1	
O IV	242.140	10		Ti	245.637	1	
O IV	242.183	1		O IV	245.7	2d	
Ar XIII	242.22			Cr XI	245.70		
Ca VI	242.265	150		C IV	245.775	200d	11
F V	242.324	300		C IV	245.830	250d	11
Ca	242.384	150		F III	245.866	3	
Ti	242.403	1		V	245.89	200	
F V	242.439	200		Ti	245.894	1	
Ti	242.475	3		Ti	245.937	1	
S XI	242.57	125		S XI	245.94	75	
Ca VI	242.592	150		Si VI	246.001	400	
Ti	242.604	1		Fe VII	246.005	20	
Ca VI	242.631	250		Si VII	246.06		
Cl XI	242.76			Ti	246.198	6	
S XI	242.82	175		N III	246.206	650b -A	
Ti	242.847	3		Fe XIII	246.210	50	
Cl VI	242.89	250		Ti	246.235	1	
He II	243.027	130	3	N III	246.249	650b -A	
Ti	243.035	3		O III	246.265	150	
S XII	243.06	200		N III	246.311	650b -A	
Cl VI	243.19	400		P VIII	246.32	50	
Cl VI	243.21	100		Ti	246.395	3	
Ti	243.259	1		Sc V	246.424	400	
F III	243.357	3		O IV	246.465	5 -A	
Fe VII	243.370	400		O IV	246.503	10 -A	
F III	243.407	1		O IV	246.563	15 -A	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti	246.564	10		S VI	248.99	400	2
Ti	246.699	1		Si VI	249.125	400	
Ti	246.743	1		Ni XVII	249.180		
S XI	246.90	200		O IV	249.223	10	
O III	247.980	50		F IV	249.228	100	
S XI	247.12	250		Ti	249.229	1	
S XII	247.12	250		S VI	249.27	400	2
Ti	247.135	1		Ti	249.278	1	
N IV	247.205	906	2	N IV	249.316	300d -A	18.37
Ti	247.278	1		P VIII	249.32	100	
C V	247.31		17	O IV	249.365	15	
C IV	247.357	25	10.01	Ar VII	249.38	100	
Ti	247.385	1		Ca IV	249.408	150	
Al VIII	247.40	45		Cu	249.415	150	
C IV	247.415	50	10.01	Ar XIII	249.46		
Ne IV	247.42	50		Ti	249.471	1	
Ti VI	247.450	250		Ti	249.529	1	
Fe VII	247.458	50		Ti	249.589	3	
Ti	247.536	1		Ti	249.632	1	
N V	247.561	85	5	Mn XIV	249.64		
Co XVII	247.62	P		Ti	249.688	1	
P VIII	247.64	250		F IV	249.744	10	
Cr X	247.67			Ti	249.785	1	
V IX	247.70			Co XVII	249.85	P	
N V	247.706	100	5	Ar VII	249.886	250	
Ti	247.719	3		Cu	249.908	100	
Co XV	247.76			Ca VI	249.914	150	
Ne IV	247.81	40		Ti	249.920	20	
S XI	247.83	75		Mn VII	249.929	20	
Ti	247.929	3		Ti	249.984	3	
P XI	247.94			P IX	250.05	P	
Ne IV	248.00	40		Ti	250.050	1	
Ti VII	248.037	3		N IV	250.121	300	18.12
Be IV	248.04	P		Al VIII	250.139	100	
P VIII	248.04	150		Ca IV	250.153	150	
S XI	248.09	75		Ca VI	250.265	200	
Ti	248.150	1		Ti	250.339		
Cu	248.153	100		P IX	250.37	150	
N III	248.320	350 -A		Cu	250.400	300	
O III	248.320	50d		Si VIII	250.45		
N III	248.371	350 -A		Ti VI	250.482	1000	
N IV	248.383	500	15.01	Na III	250.515	800	
N III	248.428	350 -A		P IX	250.73	200	
N IV	248.433	500b	15.01	Mn VII	250.771	40	
Al VIII	248.45	83		Si VIII	250.79		
O V	248.459	330	9	Ti	250.790	3	
N IV	248.461	500b	15.01	Ti VII	250.913	3	
N III	248.478	350 -A		Ar VII	250.940	350	
Ti	248.481	1		Sc V	250.978	400	
N IV	248.484	500b	15.01	Ti	250.999	10	
O III	248.538	50		F IV	251.026	1000	
N IV	248.540	500	15.01	Fe XVI	251.058	20	
N IV	248.563	500	15.01	Ti VI	251.071	700	
O III	248.574	60		O IV	251.114	2 -A	
Ti	248.592	1		Ne III	251.12	200b	5
O III	248.618	100		O IV	251.148	2 -A	
N IV	248.654	450	18.1	P VIII	251.23	150	
C V	248.661	200	22	Ti	251.266	6	
C V	248.668	10	22	Cu IV	251.278	20	
Ar XIII	248.68			Al VIII	251.347	10	
C V	248.738	200	22	Ca IV	251.354	150	
C V	248.744	20	22	Na III	251.371	600	
Ti	248.908	20		Ca VI	251.465	200	
V IX	248.91			Mn VII	251.479	10	
Ti	248.980	6		Cr XII	251.52		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti	251.533	6		F IV	254.491	200	
Ne III	251.54	200	5	Cu	254.510	500	
Mg V	251.600	100		P XI	254.54		
V V	251.60	20		Ti	254.574	1	
V IX	251.61			F IV	254.595	100	
Ti	251.622	35		F IV	254.681	10	
Cu	251.670	200		Ti VII	254.687	200	
Ti	251.715	1		Cu	254.772	700	
Ne III	251.72	200	5	Ti	254.859	1	
Ti	251.800	6		O III	255.044	10	
Ca VI	251.816	50		Ti VII	255.076	250	
V	251.87	100		S X	255.08	20	
S VI	251.91	200		N IV	255.148	380	18.10
Cu	251.947	200		O III	255.158	50	
Fe XIII	251.949	50		V X	255.24		
Ti	252.065	20		O IV	255.252	25	
Ti VII	252.162	200		O III	255.302	10	
V X	252.17	100		O IV	255.302	1	-A
Fe XIV	252.190	40		Ti VI	255.375	300	
Cu	252.223	150		Sc V	255.379	50	
Ti VII	252.275	800		Cu	255.417	350	
V V	252.40	20		Ti	255.439	1	
O IV	252.564	40d -A		K	255.530	50	
Ti VII	252.571	60		V X	255.54		
Cr X	252.62			V X	255.54		
Cu	252.780	750		P V	255.60	500	
Si VIII	252.79			Ti	255.628	3	
Sc V	252.846	500		F III	255.632	3	
Ti	252.874	3		Sc V	255.636	300	
S XI	252.93	25		F III	255.667	1	
O IV	252.948	40		P V	255.69	500	
Ti V	252.958	900		F III	255.723	35	
V IX	252.96			Ti	255.754	1	
O IV	253.082	60		F III	255.770	60	
Ti XII	253.142	35		Ti	255.813	10	
Co XV	253.34			F III	255.863	100	
S XI	253.36	50		Ti	255.875	6	
Ti	253.427	1		Co XV	255.88		
Cu	253.465	150		Ti	256.149	6	
Ti	253.518	1		Be IV	256.27	P	
V X	253.53			Ti	256.305	10	
O III	253.548	10		He II	256.317	P	2
Ti	253.591	1		Cr XI	256.32		
S XI	253.62	150		Ti	256.338	3	
Ti	253.674	1		F III	256.358	35	
Ni XIV	253.69			Cu	256.365	300	
Sc V	253.733	500		Fe XIII	256.42		
Si X	253.772	70		O III	256.425	100	-A
Cu	253.786	150		Ti	256.454	10	
Ti VII	253.811	200		O III	256.460	150	-A
P XI	253.90			O III	256.506	150	-A
V IX	253.90			Ti	256.525	1	
Ti	253.906	3		F III	256.526	3	
S X	254.00			Si VIII	256.53		
Ti XX	254.01	P		Si X	256.569	10	
Ti VII	254.022	800		Ti	256.586	20	
Ti VI	254.03	200		S XIII	256.66	250	
P XI	254.05			F III	256.675	3	
Cr X	254.15			Ti	256.685	3	
F III	254.165	20		F III	256.723	1	
Ti	254.188	3		Ti	256.732	6	
F III	254.197	10		Ti	256.815	1	
Ti	254.288	20		K VI	256.831	150	
N IV	254.338	100 -A	18.36	Ti	256.869	1	
Ti	254.485	6		F III	256.894	6	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu	256.898	400		Si IX	259.75		
Fe XV	256.919	40		N IV	259.824	450	12.03
V X	257.00			Ti	259.835	10	
Ti	257.603	10		Ca V	259.856	150	
Ti	257.155	6		Cu	259.871	250	
Sc V	257.157	200		Ti	259.895	3	
S X	257.16	100		Ca V	259.978	150	
Si IX	257.27			K IX	260.052	125	
Cu	257.315	200		Sc V	260.054	50	
Ar XIV	257.37			N III	260.090	800d-A	
Ti	257.382	1		C V	260.136	4	
Fe XIV	257.385	50		Ti XII	260.145	1	21
Cl XII	257.43			C V	260.229	4	
Ti	257.430	6		Cu	260.245	250	21
N III	257.502	300d-A		Ar VIII	260.25	200	
Cu	257.626	200		Ti	260.251	60	
Ti	257.645	6		F III	260.307	20	
K VI	257.657	100		Ar VIII	260.33	300	
Cl XVII	257.8	P		Ni VI	260.348	400	
Ti VI	257.855	250		F III	260.372	10	
N III	257.953	500d-A		O IV	260.389	150	
Ca V	257.976	265		Ti	260.408	1	9
Ar XIV	257.98			Mn XIV	260.41		
Cu	258.004	150		Ca V	260.446	165	
Ti	258.008	1		N IV	260.447	600	12.02
K VI	258.018	200		F III	260.496	10	
Mn XXIII	258.02	P		Ti	260.527	6	
Ti	258.056	1		O IV	260.555	120	9
Si IX	258.10	P		Ti	260.566	1	
O IV	258.116	5		Ni VI	260.591	300	
Ti	258.178	1		Ti VII	260.704	250	
O IV	258.207	10		Ni VI	260.713	250	
Sc V	258.238	150		F III	260.782	3	
Ca V	258.251	150		Ti	260.829	1	
Cu	258.265	450		K IX	260.834	75	
Ti	258.267	1		Ti IX	260.916	6	
V X	258.28			V X	260.93		
N IV	258.320	150	18.09	Ti	260.986	3	
Si X	258.347	120		Ti	261.026	10	
Si IX	258.36			O III	261.027	200d	
K VI	258.411	50		Al VII	261.053	10	
Ti	258.467	1		K II?	261.200	50	
N III	258.499	650d-A		Al VII	261.219	10	
Ti VIII	258.610	700		Ti	261.224	1	
Sc V	258.808	40		Si X	261.27	P 200	
Ti	258.868	3		Ti	261.280	1	
K VI	258.873	150		N III	261.282	800d-A	
Cu	258.927	800		Ti	261.365	1	
Ti	258.930	3		Si IX	261.41		
Ti	258.969	3		N VII	261.45	P	
Al VII	259.035	10		Ti	261.493	10	
Cr VII	259.18			Ti	261.578	1	
N III	259.189	700d-A		Cu	261.606	300	
Al VII	259.219	10		F III	261.713	100	
Ti VI	259.232	250		Ti VIII	261.725	60	
Ti	259.311	6		F III	261.749	60	
Mn XII	259.33			Cu	261.806	200	
Ti	259.448	35		S VI	261.81	50	
C IV	259.471	300	10	Cr XIII	261.83		
S X	259.52	150		Ti VII	261.851	60	
C IV	259.542	350	10	Ti	261.916	1	
Ca V	259.576	150		P XI	261.92		
Cr XIII	259.59			V X	262.04		
K VI	259.609	100		O III	262.113	100	
Ti	259.649	20		N III	262.184	800b	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr XIII	262.22			Ti	265.255	I	
N III	262.233	800b		N III	265.271	500d -A	
N III	262.289	800b		C III	265.287	10d -A	7.26
C III	262.289	10		V XI	265.31		
Ne X	262.3	P		N III	265.339	200b	
Ti	262.300	3		K	265.353	50	
Cl XII	262.32			O V	265.550	250	
B V	262.37	P		Ti	265.574	6	
Cu	262.4+2	200		P X	265.62		
Ti	262.479			Ti	265.666	1	
C IV	262.550	150	9.01	V X	265.70		
Cl XII	262.60			Co XVI	265.74		
C IV	262.624	200	9.01	P X	265.79		
Ti	262.651	10		N III	265.852	200b	
Ti VIII	262.718	10		Ti VII	265.951	60	
O III	262.729	10		N III	265.978	200b	
N III	262.867	400d -A		Cu	266.061	200	
O III	262.882	50		Co VI	266.114	100	
Ti	262.894	1		Ti	266.180	3	
N III	262.914	500d -A		N V	266.196	120	4
T	262.967	1		N III	266.255	500d	
Fe XVI	262.967	60		K VI	266.344	200	
P X	263.22			N V	266.379	150	4
Ti VI	263.246	250		Co VI	266.498	600	
Ti	263.384	6		Ti VII	266.502	200	
Co XIII	263.41			Cu	266.584	100	
Ti VIII	263.564	120		N III	266.613	200b	
Ti	263.658	6		Co VI	266.634	400	
O III	263.692	150		Ti	266.670	3	
O III	263.728	200		O IV	266.690	1 -A	
O III	263.768	150		O IV	266.729	1 -A	
F III	263.808	150		N III	266.737	250b	
O III	263.818	250		Sc VII	266.800	200	
Ti	263.822	1		N III	266.805	350	
O III	263.861	150		N III	266.847	400	
O III	263.903	10		C V	266.863	150	
Ti VII	263.944	35		Na III	266.893	500	
Cu	264.029	150		Co VI	266.905	400	
S X	264.24	200		N III	266.930	400	
O III	264.257	200		O IV	266.932	40	
Mn XII	264.26			O III	266.967	250b	
Ti	264.272	20		O IV	266.967	25b	
O III	264.338	250d		Co VI	266.973	800	
Ti	264.367	3		N III	266.974	350	
P XI	264.41			O III	266.985	350	
O III	264.480	300		Ti	267.024	3	
Ti	264.650	1		O III	267.030	350	
Ti	264.739	1		O III	267.050	150	
Cl XIII	264.78			Ne III	267.07	300b	4
Fe XIV	264.799	60		O III	267.121	200	
N III	264.822	400b		Co VI	267.131	500	
Ti VII	264.823	250		Ti VII	267.136	60	
N III	264.846	400b		Ti	267.187	1	
P V	264.94	300		F IX	267.19	P	
N III	264.945	400b		N III	267.199	500d	
Ti	264.958	1		C V	267.267	30	25
N III	264.966	400b		Co VI	267.297	600	
Ti VII	264.997	35		Ti VI	267.343	200	
Fe XVI	265.007	3		Ti VIII	267.401	60	
C III	265.029	10d -A	7.27	Co VI	267.402	500	
C VI	265.05	P		Ne III	267.53	300b	4
Ti VII	265.059	90		Cu	267.562	250	
O IV	265.062	1 -A		Na III	267.642	800	
Ti	265.145	3		Cr XIII	267.65		
N III	265.232	500d -A		N III	267.661	250	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ne III	267.71	200	4	Ti VIII	270.530	1	
Ca V	267.772	400		Ti VIII	270.554	50	-A
N III	267.787	300b		Ca V	270.570	100	
N III	267.848	500		C III	270.583	100d	-A
Na III	267.868	600		N III	270.613	150	-A
Ti IX	267.941	120		Ti	270.675	10	
N III	267.952	500b		F III	270.677	20	
N III	267.966	500b		N III	270.685	50	-A
P XI	268.02			Cu	270.740	200	
Ti VII	268.035	200		Ti VII	270.748	10	
Ti VII	268.196	35		Ti	270.913	6	
Ti VIII	268.178	120		Na II	270.947	7	
N III	268.212	300	-A	O V	270.982	10	
N III	268.255	300	-A	N IV	270.994	650	
F	268.269	6		C III	271.014	100d	-A
N III	268.314	400	-A	Ti	271.030	6	
N III	268.347	600d		N III	271.077	300	
O III	268.451	50d		Ca V	271.141	200	
N III	268.473	600d		Co XIII	271.16		
Ti VII	268.493	1		Be IV	271.18		P
Ti	268.566	1		N III	271.209	350	
Ca V	268.583	100		Ti	271.234	6	
Na III	268.623	500		Na II	271.373	5	
Ti	268.699	1		Co XVI	271.38		
N III	268.703	500	-A	O III	271.403	50	
Ti	268.748	1		Ca V	271.440	50	
N III	268.756	400	-A	Ti	271.488	6	
Cl XII	268.77			O III	271.523	50	
Cu	268.773	500		Ti VII	271.591	3	
F IV	268.785	400		Co I	271.595	500	
F IV	268.817	100		O III	271.611	10	
Mg VI	268.986	650		Co VI	271.711	50	
Ti	269.010	1		V XI	271.75		
Cu	269.044	400		K IV	271.820	150	
N III	269.072	250		Ti	271.892	1	
F IV	269.076	300		O IV	271.990	40	
Mn XV	269.11			Si X	271.995	40	
N III	269.199	300		Co VI	272.022	600	
Cl XII	269.21			Ti VIII	272.037	90	
F IV	269.225	200		Cr XXII	272.06		P
Mg VIII	269.295	10		O IV	272.076	40	
Ti	269.314	1		Mn XIII	272.09		
P X	269.48			O IV	272.127	60	
Ti VIII	269.533	175		Co VI	272.149	50	
O IV	269.559	1d	-A	O IV	272.174	25	
Cu	269.653	200		Ca V	272.265	250	
Ti	269.708	1		O IV	272.273	40	
Ti VII	269.759	90		O IV	272.310	40	
Mn XII	269.82			Ca V	272.336	150	
Ti	269.939	10		Ti VIII	272.369	10	
Na II	269.993	10		Ti	272.417	3	
N III	270.004	400b		Cu	272.424	150	
Ti	270.067	3		Na III	272.441	10d	
N III	270.073	650d		Co VI	272.481	700	
N III	270.201	650d		N III	272.523	650d	
F IV	270.225	600		Ti	272.569	3	
Ti	270.281	10		Si VII	272.641	200	
Ca V	270.305	300		N III	272.654	650d	
C III	270.324	10d	3.09	Ti	272.707	1	
V IX	270.38			F III	272.712	20	
Mg VI	270.394	750		F III	272.756	10	
Co XV	270.43			Cu	272.807	100	
Ti	270.443	1		Ti VIII	272.843	6	
Ca V	270.494	150		Ca VII?	272.866	150	
Fe XIV	270.512	50		F III	272.919	10	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca V	272.982	200		Co VI	276.285	700	
K IV	273.065	100		N III	276.326	700	
P V	273.13	10		Co VI	276.424	50	
N IV	273.140	300	18.07	Cr XIII	276.5		
Ti VIII	273.178	90		Ti	276.565	35	
F III	273.206	6		Co VI	276.570	400	
Cu XIX	273.34	10		Mg V	276.581	1000	
Cu	273.417	200		Ti VIII	276.701	10	
N III	273.462	400 -A		Co VI	276.721	700	
N III	273.503	100 -A		N IV	276.741	10	18.06
N III	273.524	450 -A		F III	276.780	35	
K IV	273.546	50		Ti IX	276.785	20	
N III	273.562	300 -A		Si VII	276.839	200b	
Ti	273.562	6		Si VIII	276.839	200b	
Ca III	273.595	50		F III	276.897	20	
Ti	273.916	3		Ti	276.909	1	
Na II	273.940	12		Fe VI	276.947	300	
N III	273.977	400		Mg VII	277.007	300	
Na II	274.023	12		Ti	277.034	1	
Ti	274.028	6		Si VIII	277.054	200	
C III	274.051	200d	3.08	Co VI	277.079	500	
N III	274.108	400		Ti	277.111	3	
Si VII	274.175	200		Ti	277.168	1	
Fe XIV	274.22	60		Cl XIII	277.17		
N III	274.258	400b -A		Si X	277.261	50	
F III	274.260	60		O III	277.385	350	12
N III	274.276	400b -A		Mn XIII	277.42		
N III	274.316	400b -A		O III	277.514	50	
N III	274.374	400b -A		Fe VI	277.569	600	
Ti IX	274.411	10		Co VI	277.579	400	
N IV	274.451	250	11.04	Cl XIII	277.59		
Ca III	274.461	10		Fe VI	277.610	200	
Ti VIII	274.514	3		Ti	277.760	1	
Co VI	274.534	100		Cu	277.761	100	
K IV?	274.552	150		Sc	277.809	200	
Cu	274.601	150		N III	277.813	300 -A	
Na II	274.931	20		Ti VIII	277.813	35	
Na II	275.003	20		Co VI	277.853	200	
Al XIII	275.1	P		Ti	277.856	3	
Ti	275.128	3		N III	277.873	300b -A	
Na II	275.218	5		N III	277.901	300b -A	
Cu	275.244	100		Sc VI?	277.943	300	
Sc XIX	275.25	P		Fe VI	277.951	300	
O III	275.281	100		N III	277.961	300 -A	
Al VI	275.350	300d		Ti	277.984	3	
Si VII	275.352	250		Co VI	278.013	200	
N IV	275.354	450	18.35	Ti	278.065	35	
O III	275.366	150		Co VI	278.113	300	
O III	275.513	200		Fe VI	278.149	500	
Si VII	275.665	200		Si X	278.15		
Mn XII	275.78			Co VI	278.184	700	
Co VI	275.818	500		Co VI	278.298	200	
N III	275.829	400b -A		P XII	278.30		
N III	275.852	400b -A		Ti	278.331	60	
Ti IX	275.867	60		Fe VI	278.339	500	
N III	275.871	400b -A		Co VI	278.360	100	
N III	275.883	400b -A		Mg VI	278.406	400	
N III	275.931	400b -A		N III	278.436	400	
Co VI	275.944	300		Si VII	278.445	200	
Ti	275.979	1		Fe VI	278.471	300	
V IX	276.08			N III	278.572	400	
Cl XI	276.13			Si X	278.61		
Mg VII	276.145	200		Ti	278.627	10	
Co VI	276.167	200		Co VI	278.632	700	
N III	276.193	700		Co VI	278.685	500	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al V	278.699	800		F III	281.204	10	
Ti IX	278.713	225		Sc VI	281.327	200	
Co VI	278.790	600		F III	281.343	20	
Ti VIII	278.806	20		C III	281.390	200	-A 7.22
Ti	278.926	6		Al V	281.397	700	
Al VII	278.95			S XI	281.49	175	
Co VI	278.981	500		Ar VI	281.43	120	
C VI	279.02	P		Ti IX	281.446	6	
Co VI	279.040	200		Cu	281.492	500	
Ti IX	279.074	20		Na II	281.691	25	
Ti	279.140	35		Cu	281.744	400	
Cu	279.150	100		Na II	281.788	25	
Al VII	279.16			Co XVI	281.88		
Ti	279.195	3		Ti VII	281.898	200	
Co VI	279.210	400		Ar VI	281.92	160	
Al VII?	279.256	10		N III	282.070	700	
Co VI	279.301			Ti	282.086	6	
Cr XIII	279.32			Mn VII	282.095	30	
Co VI	279.400	500		Mn XV	282.18		
K VII	279.433	20		N III	282.209	700	
O IV	279.456	5 -A		Sc VI	282.209	700	
Co VI	279.508	700		O IV	282.213	2	
Ti VII	279.516	200		Ti VI	282.215	1	
K VII	279.521	20		K V?	282.355	150	
O IV	279.631	150	4	Ar VI	282.42	240	
Ti	279.654	6		Al IX	282.45		
F III	279.689	100		Ne III	282.49	10	8
Co VI	279.780	500		Sc VI	282.497	600	
O III	279.787	150		Ti	282.520	1	
F IV	279.834	300		Ar VI	282.56	40	
K IV	279.877			Sc VI	282.587	300	
O IV	279.933	200	4	Ti IX	282.613		
Ti VIII	279.940	20		Al VII	282.65		
Co VI	280.003	700		Na II	282.709	35	
F III	280.007	60		Ti IX?	282.720	40	
Ti IX	280.027	20		Na II	282.803	35	
O III	280.030	100		Ti VII	282.898	1	
C III	280.043	300	3.07	Co VI	283.089	800	
Co VI	280.060	600		Ne III	283.15	300b	3
O III	280.116	50		Ar VI	283.16	120	
Ti IX	280.141	3		Ne III	283.17	600	3
Al IX	280.16			Ti	283.204	1	
Co VI	280.199	600		Na II	283.258	15	
O III	280.234	50		V XII	283.28		
O III	280.265	150		Ti	283.316	1	
Ti	280.284	20		Co VI	283.405	500	
Co VI	280.309	400		N IV	283.419	900b	5
O III	280.328	50		N IV	283.476	900b	5
Mn XV	280.35			S VI	283.50	300	
Co VI	280.350	200		N IV	283.583	900	5
O III	280.412	50		Ti VI	283.586	20	
Co VI	280.464	400		Fe XII	283.64		
O III	280.483	50		Ne III	283.66	500b	3
C III	280.522	200d -A	7.23	Fe VI	283.770	500	
P V	280.61	150		O VIII	283.83	P	
Fe XIV	280.69			N III	283.863	400b -A	
Co VI	280.706	300		Ne III	283.87	300	3
Mg VII	280.744	300		Co VI	283.883	300	
Co VI	280.775	300		N III	283.898	400b -A	
F III	280.802	1		Mn XIII	283.91		
F III	280.905	3		Sc V	283.911	900	
Ca V	280.992	400		N III	283.937	400b -A	
Sc V	280.997	400		N III	283.977	400b -A	
Mg XII	281.1	P		Sc VI	283.99	40	
Ti	281.193	1		N III	283.996	400b -A	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
P IV	284.0	20h		Al VIII	287.13		
N III	284.040	400b-A		Si X	287.16		
Al IX	284.042	10d		Ne IV	287.21	50	
Mn VII	284.059	100		V XXI	287.25		P
Fe XV	284.15	80		Cl V	287.35	300	
Sc VI	284.263	900		Fe VI	287.333	165	
N III	284.277	400b-A		Ti	287.355	6	
N III	284.308	400b-A		Ti	287.405	6	
Cl XIV	284.31			Sc VII	287.48	40	
N III	284.336	400b-A		Sc VIII	287.55	50	
Ti	284.349	20		N III	287.56	300d-A	
N III	284.365	400b-A		Ca V	287.657	150	
Co VI	284.366	500		Co VI	287.666	400	
Fe XXIII	284.41 ?			Sc	287.873	400	
Co XVI	284.42			F IV	287.994	1	
Sc V	284.450	800		Co VI	288.031	400	
Fe VI	284.504	400		F IV	288.078	10	
Ca V	284.794	100		Sc	288.104	300	
Ti	284.829	1		Ti	288.125	6	
K VI	284.860	20		Ti	288.232	6	
Sc VI	284.884	600		F V	288.267	100	
Co VI	284.885	400		Sc V	288.286	600	
Cr XI	284.97			Ti VI	288.355	60	
Ca V	284.978	300		C III	288.423	10	3.05
Co VI	285.034	300		S XII	288.45	175	
Ti IX	285.128	20		Fe XIV	288.45		
Sc VI	285.191	800		Ti X	288.462	1	
P IX	285.36			Co VI	288.509	300	
Ti	285.417	95		Fe XIII	288.52 ?		
Al VIII	285.467	50d		Fe VI	288.551	400	
Ti	285.543	35		Mg VI	288.652	10	
N IV	285.561	600	11	V XII	288.69		
S XI	285.58	250		Ti	289.019	3	
Co VI	285.645	300		S VI	289.09	200	
Ti	285.672	6		Fe VI	289.112	500	
O IV	285.710	40		Al VIII	289.12		
Co VI	285.713	200		C IV	289.143	450	9
Ti	285.726	3		Fe XIV	289.17		
Al VII	285.81			Ti	289.178	1	
S XI	285.83	206		Si X	289.186	100	
O IV	285.834	60		C IV	289.230	500	9
N III	285.855	450		O IV	289.292	10	
Ti	285.860	10		Fe VI	289.302	400	
Sc	285.966	300		Ti	289.318	10	
Ti IX	285.981			Cu IV	289.358	0 -A	
N III	286.000	450		Ti VIII	289.375	1	
O III	286.038	10		Ti	289.455	1	
Ti IX	286.112	20		Fe VI	289.468	300	
Cl V	286.13	200		O IV	289.469	5	
Ti	286.233	1		N IV	289.479	300	18.33
Cl XIV	286.26			Fe VI	289.520	400	
Ti	286.333	1		P IX	289.53		
V V	286.36			Ti IX	289.579	90	
O V	286.448	330		Ti X	289.579	90	
Ne IV	286.45	75		Sc V	289.589	900	
Al IX	286.45			O IV	289.590	2	
Ti	286.532	20		Fe VI	289.672	200	
Co XII	286.64			Cr XIV	289.70		
Al VIII	286.65			Ti	289.731	1	
Sc IV?	286.677	40		Mn XIII	289.74		
V V	286.88			Sc IV	289.850	900	
Sc VII	286.927	1000		Fe VI	289.851	400	
Ne IV	286.93	75		O IV	289.898	5	
Ca V	286.96	450b		O IV	289.933	2	
Ti	287.041	10		Ti	289.992	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe VI	290.038	400		Si X	292.220	60	
Fe VI	290.089	400		Fe VI	292.343	100	
S VI	290.13	300		Sc VI	292.344	600	
Fe VI	290.146	400		Sc VII	292.344	600	
F IV	290.147	400		Fe XV	292.36		
Ti	290.215	10		Ti	292.401	1	
Sc VII	290.232	800		N III	292.447	750	
Cr XI	290.27			N III	292.595	750	
Fe VI	290.271	600		Fe VI	292.597	400	
Ti X	290.294	1		Fe VI	292.736	700	
Fe VI	290.302	500		O VIII	292.8	P	
Ti	290.344	3		Si IX	292.83	P	80
Ti	290.385	20		Ti XI	292.901		1
F IV	290.440	300		Fe VI	292.925	500	
F IV	290.461	200		Mg VI	293.026	200	
Sc IV?	290.487	300		Ti	293.033	1	
Fe VI	290.499	200		Fe VI	293.046	200	
Ti	290.506	1		K V	293.050	100	
Cl XIV	290.51			Ne IV	293.12	75	
Fe VI	290.577	400		Mg VI	293.124	400d	
Ti	290.601	6		Fe VI	293.214	100	
F IV	290.608	200		Ti	293.240	1	
Si IX	290.63	20	P	Sc V	293.248	800	
Cl XIII	290.7		?	Cl VII	293.25	400	
Sc VII	290.700	600		Cu	293.257	100	
Ti	290.726	3		Fe VI	293.292	400	
Fe VI	290.737	400		K V	293.332	150	
Ti X	290.815	1		Fe VI	293.384	400	
F III	290.846	60		Ne IV	293.45	50	
N III	290.865	400b-A		K VI?	293.438	100	
Fe VI	290.890	200		Fe VI	293.488	400	
N III	290.916	400b-A		Ti	293.549	1	
N III	290.930	400b-A		Ti	293.640	1	
F III	290.945	35		Ne IV	293.65	25	
N III	290.965	400b-A		Ti X	293.684	10	
Ti VIII	290.971	35		Fe VI	293.745	800	
Fe XII	290.997			Ti X	293.798	1	
S XVI	291.0		P	Fe VI	293.820	100	
Fe VI	291.020	500		Ti	293.944	20	
N III	291.023	400b-A		Ne IV	293.95	5	
N III	291.031	400b-A		Fe VI	293.966	800	
O IV	291.054	2 -A		Fe VI	294.040	50	
Fe VI	291.184	600		Ar VI	294.05	240	
Ti	291.186	60		Ne IV	294.10	15	
O IV	291.203	3 -A		Ti	294.239	1	
Fe VI	291.229	600		Fe VI	294.265	700	
C III	291.3261	500	3.03	Sc VI	294.292	700	
Mg VI	291.348	300		Ti	294.302	3	
Ti	291.403	6		Fe VI	294.339	500	
Mg VI	291.458	200		Ne IV	294.39	15	
Fe VI	291.473	500		Ge V	294.5	300	
Ti	291.585	3		K	294.515	50	
S XI	291.59	200		Fe VI	294.529	700	
Fe VI	291.632	200		Cr XII	294.63		
Fe VI	291.800	500		Fe VI	294.665	400	
Fe VI	291.529	500		K V	294.836	300	
S XI	291.83	0		Fe VI	294.850	400	
Fe VI	291.931	50		Cl VII	294.90	500	
Sc V	291.932	1000d		Mn XIII	294.95		
Ti	291.958	1		Fe VI	294.960	400	
Ca VI?	291.976	50		Fe VI	295.014	400	
Ni XVIII	292.00	10		Fe VI	295.047	200	
Ni XIV	292.03			Cl XIV	295.05		
Fe VI	292.038	200		O IV	295.051	2	
Ar VI	292.15	200		Ti	295.070	f	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
O IV	295.140	2		Co VI	297.551	600	
Ca VII?	295.171	150		N IV	297.657	600b	15
Ti	295.207	6		Ar VII	297.66	200	
Co VI	295.268	100		Ar VII	297.70	300	
F III	295.369	6		N IV	297.704	600b	15
Mg VIII	295.393	10		N IV	297.770	600b	15
Ca VII?	295.396	150		V XII	297.77		
F III	295.404	3		N IV	297.816	700	15
Co VI	295.419	400		Ti	297.858	1	
Sc VI	295.478	900b		Ti	298.014	3	
Sc VIII	295.478	900b		Cr XI	298.03		
O III	295.511	150		Sc VI	298.194	800	
Ti X	295.584	35		Co VI	298.318	300	
Ge V	295.6	500		Si IX	298.32		
O III	295.619	250		Ga V	298.36	1000	
S XI	295.63	200		Ti	298.380	1	
Fe VI	295.634	400		Co XIV	298.38		
O III	295.657	300		Ca XVIII	298.40	P	
F III	295.703	35		Sc VI	298.428	800	
O III	295.716	300		Sc VII	298.557	600	
O IV	295.874	5		Co VI	298.649	300	
F III	295.889	60		Sc	298.66	200	
O III	295.944	150		Cu	298.901	200	
Co VI	295.976	100		Co VI	298.989	500	
O III	296.012	200		Sc IV	299.041	900	1
Co VI	296.050	300		Co VI	299.051	200	
Ti VII	296.056	35		Co VI	299.157	200	
P V	296.11	70		Cu	299.217	150	
Sc V	296.166	400		O III	299.275	100d-A	
K V	296.169	200		Ca IV	299.315	200	
Si IX	296.19	150	P	Ga V	299.41	800	
Co VI	296.206	100		Co VI	299.456	500	
O III	296.22	50d-A		O IV	299.499	10	
Fe XV	296.226	20		S XII	299.50	175	
Sc IV	296.316	500	2	Ti	299.563	3	
Fe VI	296.317	100		Fe VI	299.579	100	
Sc VII	296.539	400		Co VI	299.586	200	
Ca IV	296.554	250		O IV	299.620	5	
Co XIV	296.68			Co VI	299.659	200	
Co VI	296.719	400		N III	299.661	550	
Ge VI	296.723	300		O IV	299.710	5	
Ga V	296.75	100		Fe VI	299.803	100	
Fe VI	296.808	500		N III	299.818	550	
C IV	296.857	300	8	Co VI	299.822	500	
Co VI	296.923	700		O IV	299.853	15	
C V	296.951	350	8	Ti	299.889	1	
Ca III	296.958	300		S XIII	299.89	75	
Fe VI	296.988	600		N III	299.903	200b-A	
Cu	297.057	100		Cr XII	299.95		
K V	297.064	200		Ga V	299.95	30	
Mn XXII	297.07		?	Sc V	300.004	700	
Ti	297.106	3		Na II	300.153	160	4
Fe VI	297.131	200		Na II	300.202	160	
Ti VII	297.197	20		Cr XIV	300.23		
Sc VII	297.269	700		K V	300.252	200	
Fe VI	297.308	700		N IV	300.318	650	18.05
Ti	297.312	1		Ti	300.416	1	
Co VI	297.372	700		O III	300.455	150d-A	
Ti	297.418	1		K V	300.503	200	
Ti	297.527	6		Ga V	300.51	900	
Fe VI	297.568	800d		Co VI	300.537	500	
N IV	297.595	600b	15	Al IX	300.60		
Cr XIII	297.6			Sc VI	300.677	300	
Ar VII	297.62	150		Ga V	300.73	200	
N IV	297.634	600b	15	Sc	300.817	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe VI	300.997	200		Co VI	303.555	100	
Ne III	301.12	400	7	Co VI	303.619	200	
Ca V	301.139	20		O III	303.621	350	6
Ga V	301.15	800		Co VI	303.685	300	
Co VI	301.203	400		O VIII	303.69	P	
C III	301.206	200	7.21	O III	303.693	350	6
C III	301.243	300	7.21	C VI	303.70	P	
Ti	301.244	1		Be IV	303.72	P	
C III	301.279	100	7.21	Ti XX	303.75	P	
Ti VIII	301.297	6		He II	303.781	665	1
Sc VII	301.301	300		He II	303.786	335	1
Na II	301.318	90		Ti	303.791	1	
Sc VI	301.426	400		O III	303.799	450	6
Na II	301.436	100	3	Ga V	303.81	800	
V XII	301.50			N III	303.825	450b -A	
Co VI	301.604	50		N III	303.856	450b -A	
Co VI	301.713	100		N III	303.880	450b -A	
Ca III	301.741	200		Ti	303.891	35	
Cr XIV	301.78			N III	303.910	450b -A	
Sc VII	301.820	500		Co VI	303.943	200	
Ti VI	301.913	20		N III	303.960	450b -A	
Co VI	301.955	500		N III	303.985	450b -A	
Ti	302.007	1		Ga V	304.01	10	
Co VI	302.061	50		N III	304.035	450b -A	
Co VI	302.123	400		N III	304.103	300b -A	
Co VI	302.157	200		Co VI	304.116	200	
Cl XIII	302.24			N III	304.203	300d -A	
Co VI	302.261	100		Fe VI	304.221	700	
Ni XIV	302.27			Ca III	304.330	150	
Ti VIII	302.272	60		Co VI	304.374	50	
Co VI	302.408	400		Cu	304.434	100	
Sc VI	302.436	100d		Sc VIII	304.456	100	
Sc VII	302.436	100		Ti IX	304.498	1	
Na II	302.446	60		Co VI	304.531	50	
Fe XV	302.45			Fe VI	304.551	700	
Co VI	302.471	400		Co VI	304.607	100	
Si IX	302.51			N III	304.786	500b -A	
Ti	302.558	1		N III	304.812	500b -A	
Ga V	302.65	10		Mn XIV	304.85		
K VI?	302.657	100		N III	304.877	500b -A	
Co XVI	302.69			Ca III	304.910	150	
Co VI	302.736	300		N III	304.921	500b -A	
Ti	302.906	1		Fe XV	305.00		
N IV	303.006	500b	14	Ge V	305.0	50	
N IV	303.048	500b	14	Co VI	305.037	400	
Co VI	303.071	100		Al IX	305.10		
N IV	303.078	500b	14	Fe VI	305.200	400	
N IV	303.124	500b	14	Sc VIII	305.260	100	
Sc VIII	303.157			Co VI	305.322	100	
N IV	303.162	500b	14	O III	305.596	400	5
N IV	303.191	500b	14	Co VI	305.612	100	
Co VI	303.191	300		O III	305.656	450	5
N IV	303.280	500	18.04	O III	305.703	400	5
Si XI	303.31	500		Ti VII	305.730	1	
Ni XIII	303.31			N III	305.761	500	
S XII	303.37	50		O III	305.769	500	5
Fe XV	303.40			Cr XII	305.81		
Co VI	303.410	200		O III	305.836	400	5
O III	303.411	350	6	Fe VI	305.837	100	
C III	303.432	400d	7.20	O III	305.879	200	5
O III	303.460	350	6	N III	305.920	500	
C III	303.468	100	7.20	Ti	306.083	1	
Cu XIX	303.51	P		Ti XI	306.144	1	
O III	303.515	350	6	Co VI	306.145	100	
Fe VI	303.558	400		Ga V	306.20	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn XI	306.46			Al VI	309.596	400d	
Fe VI	306.460	100		S XII	309.6	P	
Co VI	306.567	100		Ga V	309.61	200	
O IV	306.623	90		Fe VI	309.627	100	
Fe VI	306.823	200		Al VI	309.852	300d	
O IV	306.884	60		Sc VIII	310.042	500	
Fe VI	306.922	500		Sc VII	310.043	100	
Al IX	306.95			Mn VI	310.058	200	
Ga V	306.99	1900		C III	310.1697	700	3
Fe VI	307.013	200		Mn VI	310.182	180	
Sc VII	307.083	600		Fe VI	310.274	500	
Mn VI	307.109	100		Cu IV	310.380	20	-A
Na V	307.152	800		Ga V	310.42	10	
Al VI	307.248	350d		Ti	310.518	1	
Sc VII	307.320	200d		P V	310.58	200	
Al IX	307.33			Fe VI	310.601	400	
S XIII	307.36	50		Mn XI	310.61		
Fe VI	307.775	400		Mn XII	310.63		
Fe VI	307.404	300		Co XV	310.69		
Sc VIII	307.447	40		Cu	310.727	150	
Ti	307.493	1		N III	310.746	50b -A	
Ca VII?	307.563	100		N III	310.803	100b -A	
Si VIII	307.65	20	P	Fe VI	310.807	50	
Fe XV	307.78			Cr XXI	310.90	?	
Fe VI	307.800	300		Al VI	310.908	300d	
C IV	307.806	50f	2.01	Mn VI	310.908	800b	
Mn VI	307.842	60		N III	311.007	350d -A	
Fe VI	307.884	50		N III	311.113	350d -A	
Mn VI	307.999	400		Sc VIII	311.138	200	
Fe VI	308.007	300		Fe VI	311.138	100	
O III	308.051	50		C III	311.157	10d	7.19
Sc VII	308.189	600		Fe VI	311.236	200	
Fe VI	308.187	200		K V	311.243	200	
Ga V	308.24	700		Sc VIII?	311.332	100	
Ti XI	308.250	10		P V	311.35	250	
Si VIII	308.26	50	P	F III	311.413	20	
Na V	308.264	1000		O IV	311.499	25	
O III	308.306	100		N III	311.550	500	
Ga V	308.32	200		Cr XII	311.55		
Fe VI	308.383	200		N III	311.636	500	
Ti	308.408	3		Ti XI	311.659	1	
Fe VI	308.534	400		O IV	311.682	40	
Nc III	308.56	100	10	Fe VI	311.702	700	
Al VI	308.560	300d		N III	311.721	400	
Mn VI	308.560	400		O IV	311.726	10	
Ti IX	308.568	35		Ni XV	311.73		
Ti XI	308.568	35		Mn VI	311.748	200	
Fe XI	308.61			Ga V	311.77	800	
Fe VI	308.644	500		Mg VIII	311.806	10d	
Mn XIII	308.75			Na VI	311.921	400	
Ca XX	308.8		P	Sc VI	311.947	400	
Mn VI	308.853	300		Sc VIII	312.239	200	
Sc	308.895	300		Al VI	312.241	300d	
V X	308.90			Fe VI	312.263	700	
S XIII	308.91	125		Mg V	312.311	1000	
Mn XIII	308.92			Ga V	312.39	400	
Fe VI	308.960	300		C IV	312.422	750	2
Fe VI	308.993	300		P IV	312.44	160	
Al VII	309.012	100d		C IV	312.453	700	2
Al VII	309.122	100d		Cu	312.505	200	
Sc VII	309.161	500		Co XVII	312.57	P	
Ni XVI	309.40			Na VI	312.608	300	
P X	309.44			S XIII	312.68	25	
Mn VI	309.440	240		Mn VI	312.692	160	
Mn VI	309.579	200		K V	312.770	250	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
P X	312.87			Mg VIII	317.029	100d	
Ga V	312.91	10		O III	317.24	50d -A	
Ne III	313.05	400	2	P XI	317.24		
Ti XI	313.229	10		Fe VI	317.319	300	
V XIII	313.38			Sc VIII?	317.437	40C	
Ca VII?	313.478	100		N IV	317.596	200	18.31
Ga V	313.66	300		Fe XV	317.62		
Ne III	313.68	300	2	Na VI	317.641	600	
Ti XI	313.710	;		F III	317.791	3	
Mg VIII	313.743	100d		Ti VIII	317.992	1	
Na VI	313.748	500		Ca IV	318.094	200	
Mn XI	313.80			F III	318.126	1	
Ne III	313.92	100	2	Fe XIII	318.21		
Co XIII	313.95			P X	318.29		
V X	314.00			Fe VI	318.364	300	
Sc VI	314.049	400		Ca IV	318.385	50	
Fe VI	314.299	300		Sc VIII	318.408	500	
Si VIII	314.31	50		Al IX	318.50		
N IV	314.324	20	18.01	Ti	318.543	1	
C III	314.41	100d	7.18	Sc IX	318.615	400	
Sc VIII	314.53	200d		Cl IV	318.75	100	
Mg VI	314.554	300		Cr XII	318.82		
Ca VI?	314.609	100		Co XI	318.85		
Mg VI	314.676	400		K V?	318.969	50	
N III	314.715	800	7	Ni XV	319.01		
Fe VI	314.814	100		Mg VII	319.016	400d	
N III	314.850	800b	7	C III	319.29	300d	7.16
N III	314.877	800b	7	Ga V	319.40	800	
Ti	314.940	3		Ti VIII	319.463	1	
Mn VI	314.979	120		Cl IV	319.51	100	
Mg VIII	315.022	200d		Cl IV	319.62	300	
Fe VI	315.027	400		Na IV	319.638	1000	
N IV	315.060	600	18	F IV	319.695	300	
Sc VIII	315.163	350		F IV	319.740	10	
K V	315.181	200		Si VIII	319.829	100d	
F III	315.219	150		Ti	319.887	1	
Sc VIII	315.420	300		Cl IV	319.99	10	
Fe VI	315.526	300		O III	319.996	150	
F III	315.536	100		F IV	320.004	200	
K V	315.537	150		Mn VI?	320.146	120	
P XI	315.64			F IV	320.192	100	
Ti	315.670	1		Cr XII	320.20		
Ca VII?	315.702	100		Cl IV	320.25	100	
F III	315.747	60		He I	320.392	20	-A
Ti	315.779	3		Sc VII?	320.406	100	
Sc	315.786	300		Ca VI?	320.445	100	
Ti XI	315.844	3		Mg VII	320.50		
Mn XIV	315.88			Ga V	320.53	100	
Sc	315.890	200		Ni XVIII	320.56		
Ga V	315.94	100		Mn VI	320.598	180	
Ca V	316.115	150		V XI	320.60		
Si VIII	316.202	100		Mn VI	320.681	180	
Ca VI?	316.389	20		O III	320.720	100d -A	
Ga V	316.47	200		Mn VI	320.874	180	
F III	316.484	20		Cl IV	320.88	100	
Ni XIV	316.53			Fe XIII	320.93		
Sc	316.567	200		O III	320.979	600	11
Cr XIII	316.6			Mn VI	320.979	180	
Al IX	316.78			Mg IV	320.994	1000	
F III	316.822	10		Mg VII	321.00		
S XIII	316.84	50		Al IX	321.05		
Ca VI?	316.947	165		N III	321.079	500b	
O III	316.967	150		N III	321.135	500b	
Ti	316.987	1		N III	321.162	500b	
F III	316.995	6		Mn VJ	321.176	220	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N III	321.198	500b		Mn VI	325.146	400	
N III	321.278	500b		Cl VI	325.16	1000	
C III	321.372	10d	7.15	K III	325.278	20	
O IV	321.457	2		Ca V	325.282	250	
Mn VI	321.541	180		Al VIII	325.29		
Ca IV	321.593	120		P XI	325.31		
Ca V	321.609	120b		Mn XIV	325.34		
Sc XIX	321.77	P		Ne II	325.393	10	
Fe XV	321.82			P XI	325.52		
V XII	321.9			C III	325.570	100d -A	11.13
K	322.146	50		Cu	325.687	200	
Ca V	322.166	500		Co XIII	325.70		
Ga V	322.30	600		Ti	325.767	1	
Sc	322.35	150		N III	325.788	20d -A	
N IV	322.506	700	4	N III	325.841	50d -A	
N IV	322.572	700	4	V XI	325.97		
C III	322.5741	800	2.03	V XX	326.07	?	
Cu	322.617	150		Ga V	326.13	400	
F III	322.647	20		Co XII	326.17		
F III	322.675	10		Ti	326.259	1	
Ti VIII	322.698	1		P XI	326.45		
N IV	322.722	700	4	Ne II	326.542	40	
V X	322.74			Mn VI	326.571	40	
Ti XI	322.75			Cu	326.575	200	
Ca V	322.757	250		Ga V	326.76	400	
Mg XII	322.9	P		Ne II	326.787	50	
Ga V	322.92	300		Sc	326.791	400	
Ga V	322.98	800		P XII	327.0		
Ga V	323.10	300		K V	327.031	100	
N IV	323.178	600b	17	C III	327.112	400d	7.13
S XII	323.18			Mn VI	327.131	20	
Ca V	323.223	300		Si IV	327.137	P	2.02
Ca VI	323.223	300		C III	327.176	400d	7.13
V XIII	323.23			Si IV	327.181	P	2.02
N III	323.263	600d -A		Ti XI	327.192	3	
Mg VII	323.29			Ne II	327.262	30	
Mg IV	323.307	900		P XII	327.27		
Cl VI	323.36	600		Ne II	327.355	20	
Ti V	323.365	85		K V	327.376	250	
N III	323.436	500	6	Cu	327.383	150	
N III	323.493	500	6	K III	327.605	50	
Al VIII	323.54			Ne II	327.626	20	
N III	323.620	500	6	C III	327.784	100 -A	11.12
N III	323.675	500	6	Ca VI	327.806	200	
K XVII	323.74	P		Mn XIV	327.84		
Cu	323.816	600		Ne II	328.090	20	
F IX	323.9	P		Mn VI?	328.129	40	
Cl VI	323.94	800		Al VIII	328.200	10d	
Ti	324.047	1		F IV	328.213	10	
Ca V	324.110	150		Mn VI	328.232	200	
Sc IX	324.199	600		Ti	328.248	1	
Ti VIII	324.207	1		Cr XIII	328.29		
Ga V	324.24	500		S XII	328.39		
Ca V	324.477	250		Cu	328.412	500	
Cu IV	324.485	70 -A		Mn VI	328.431	400	
Ne II	324.570	20		C III	328.448	500	10
Sc IX	324.570	50		P V	328.46	300	
V XIII	324.58			S VI	328.51	600	
Cu	324.607	500		Cu	328.536	250	
Ti IX	324.712	1		Mn VI	328.558	180	
Ga V	324.94	500		Ca IV?	328.577	50	
Ca V	325.020	150		Ga V	328.64	300	
Cu	325.038	200		O III	328.742	450	
Sc VII?	325.121	200		P V	328.77	300	
Cr XII	325.13			Cu	328.831	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
K III?	328.845	100		Ca IV	332.808	150	
K III?	328.933	150		Cu	332.893	1000	
K V	328.973	100		Cr X	332.97		
Mn VI	329.043	100		Ti IX	333.385	3	
Cu	329.047	1000		Sc VII	333.386	200	
K III	329.053	100		Ca V	333.438	200	
Ca IV	329.116	250		Ca VI	333.44		
Mn VI	329.177	40		Sc X	333.521	200	
N III	329.242	50d -A		Cu	333.562	300	
Mn XII	329.28			Ca V	333.570	200	
Ca VI	329.298	150		Mn X	333.73		
N III	329.307	100d -A		Ca V	333.857	150	
K V	329.307	50		P XII	333.88		
Mn VI	329.320	100		Na V	333.910	900	
Ca IV	329.391	150		Ca VII?	334.136	200	
Al VIII	329.63			Sc VII	334.138	500	
Sc VII	329.640	300		Ca VI	334.14		
Cu IV	329.805	30 -A		Fe XIV	334.15		
Cu	329.851	300		Cu	334.204	300	
Ca VII	330.010	200		Co XIV	334.22		
Ne II	330.146	5		Ca VII?	334.357	100	
Ne II	330.205	5		N III	334.407	200 -A	
Co XV	330.25			Ti VI	334.457	20	
N III	330.26	300d -A		N III	334.476	250 -A	
P XII	330.29			Na XI	334.5		P
Sc	330.39	100		Al VIII	334.51		
Ca VII?	330.403	100		Ca V	334.545	300	
Mn XIV	330.49			Ti	334.859	1	
C III	330.617	100	7.12	Ca VII?	334.904	40	
Ne II	330.626	5		N IV	335.052	850	10
K III	330.684	250		Fe XII	335.06		
C III	330.687	100	7.12	P XII	335.07		
Ti VI	330.703	60		K VI?	335.175	150	
Ne V	330.718	10		Sc	335.18	100	
Ne II	330.790	20		Cr VI	335.20		
Ca	330.809	50		Mg VIII	335.230	10d	
Ca V	330.937	300		F VII	335.27		
V XI	330.94			Ca VI	335.33		
Al VIII	331.03			Ca V	335.344	250b	
Ne II	331.069	1		Fe XVI	335.407	6	
Ti	331.074	1		Cu	335.470	150	
P XV	331.1		P	Sc	335.58	50	
K V?	331.168	50		Sc	335.89	50	
Sc VI	331.309	200		Cu	335.919	250	
K III	331.416	50		Cr XI	336.06		
Ca IV	331.442	200		Cu	336.279	250	
Ne II	331.515	2		Cr VI	336.30		
Ca VII?	331.650	160		Ca V	336.554	200	
Sc X	331.679	40d		Ar V	336.56	150	6
Ti VI	331.767	6		V XI	336.68		
Cl IV	331.84	200		Ti IX	336.895	6	
Cl XII	331.94			Ca	337.020	50	
Cr XII	331.95			Ar VIII	337.26	100d	
K	331.966	50		Cr VI	337.28		
Ca IV	331.991	250		Mn XII	337.29		
Cr XII	332.06			Ca	337.396	100	
Ti VII	332.081	6		Ca V	337.541	200	
N III	332.140	650		Ar V	337.56	150	6
Ca VII?	332.184	60		Sc X	337.911	200d	
N III	332.333	650		Ar V	338.00	300	6
Cu	332.405	100		Sc X	338.03		
Ca IV	332.531	235		Ca V	338.056	250	
Na V	332.550	800		K VI?	338.161	150	
Ti	332.554	1		O VIII	338.19		P
Al X	332.78			Ar VIII	338.22	10d	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe XII	338.27			Ma XII	342.67		
N III	338.349	500 -A		Cr XIII	342.69		
P XII	338.41			K V?	342.703	100	
Si VIII	338.43			Cu	342.713	800	
Ar V	338.43	100	6	N III	342.741	300 -A	
Sc X	338.447	200		K IV	342.805	100	
N III	338.808	250d -A		Ca VII	342.818	50	
Co XIII	338.82			Ti XIX	342.82 ?		
Ca VII	338.824	100		Sc	342.91	50	
Ca IV	338.828	200		Si IX	342.97		
N III	338.937	300d -A		V XII	343.12		
Mg VIII	339.007	100d		O V	343.168	40	
Ar V	339.01	150	6	Ca IV	343.194	100	
Cu IV	339.038	10		Ca V	343.194	100	
Mn XIV	339.19			Al VII	343.290	10	
O IV	339.330	2		Ca IV	343.438	200	
O IV	339.436	1		K V?	343.468	150	
Ca VI	339.453	150		Si VIII	343.49		
Sc VIII	339.52	200		Mn XIV	343.60		
Co XVII	339.58 P			Ca V	343.640	200	
Ca IV	339.790	150		Al VII	343.650	10d	
Ar V	339.89	150	6	Ti	343.668	1	
Ca VI	339.953	150		F III	343.893	35	
Ca VII	339.965	150		Co XII	343.93		
Ca VI	340.037	200		Ca IV	343.933	250	
Cr X	340.05			F III	343.934	5	
N III	340.20	500d -A		Ca V	344.219	100	
Al VIII	340.23			K III?	344.270	200	
Cl VII	340.23	750		F III	344.385	20	
Ca IV	340.286	200		Cu XVIII	344.59 P		
Cl VII	340.30	900		K III?	344.635	200	
Ca V	340.389	150		N IV	344.916	600b	13
K IV	340.462	300		Ca IV	344.958	200	
Ca VI	340.516	150		N IV	345.025	600b	13
Ti XII	340.66			N IV	345.062	600b	13
Ca VII	340.700	50		Si VIII	345.10		
K IV	340.745	150		Si IX	345.10	20	
Ti VI	341.109	20		N IV	345.111	600b	13
Fe XI	341.115	10		Ca IV	345.130	215	
C III	341.143	500	7.10	N IV	345.207	600b	13
C III	341.179	600	7.10	N IV	345.261	600b	13
C III	341.242	700	7.10	O III	345.309	500	15
Ca IV	341.284	200		Cu	345.368	900	
O V	341.391	10		K III	345.405	100	
Ca IV	341.455	200		K III	345.545	100	
Cu	341.483	250		Fe X	345.75	10	
Ca XVIII	341.54 P			Cu	346.004	600	
Sc VI	341.62	200		Mn XII	346.04		
Ti IX	341.691	10		V XI	346.11		
Mg VIII	341.75			Cn VI	346.335	100	
Mg	341.790	10		O IV	346.372	15	
F III	341.921	10		O IV	346.374	15	
K III?	341.924	300		S XI	346.52		
P XII	342.06			O IV	346.692	10	
Mg VIII	342.07			Ti VI	346.728	1	
K XIX	342.2 P			Fe XII	346.859	20	
Co XIV	342.25			Ca VI	347.005	200b	
Ca VII	342.394	150		Ca VII	347.021	100	
K IV	342.410	150		N III	347.072	100 -A	
Cu IV	342.432	20 -A		N III	347.148	200 -A	
Ca IV	342.447	250b		P V	347.24	150	
Sc X	342.53			Ca VI?	347.334	50	
Mn XIV	342.56			Si X	347.43	100	
Ti VI	342.595	35		Si X	347.71		
N III	342.665	250 -A		C III	347.777	300	7.08

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
C III	347.854	300	7.08	Ca VIII	352.998		
Ca VI	347.967	150b		C III	353.000	300d	11.11
Ca VII	347.972	100		Cu	353.031	150	
K III	347.999	150		N IV	353.056	700	18.30
Ca VII?	348.043	150		Mg V	353.094	1000	
Sc X	348.14			Ne II	353.2149 st	50	
P V	348.19	250		Cr X	353.22		
Fe XIII	348.20	40		Na VII	353.294	800	
Cu	348.413	150		Mg V	353.300	650	
Ca VI	348.650	50		K	353.325	150	
N III	348.683	800b - A		F II	353.423	2 - A	
F II	348.795	1 - A		K	353.455	150	
N III	348.816	800b - A		Sc X	353.55		
Ca VI?	348.927	50		Cu	353.568	100	
Fe XI	348.97			P XI	353.59		
Ca VII	348.999	20		Ca VIII	353.699	20	
Mg VI	349.155	700d		Ti	353.757	1	
Ti	349.299	1		Al VII	353.776	200d	
K V	349.504	200		Cr XIII	353.81		
Ti VI	349.574	6		Fe XIV	353.84	50	
Mn XIV	349.64			Sc VII	353.845	200	
K V	349.793	150		Mg VIII	353.86		
O III	349.825	150		Ti VI	353.877	6	
Ti XI	349.91			Ne II	353.9349 st	30	
O III	349.918	100		Ti IX	353.939	6	
Ti XII	349.933	1		K IV	354.139	100	
Si IX	349.96	50		Ca VIII	354.165	150	
O III	349.961	50		Mg V	354.223	700	
Cu	350.056	100		Sc XI	354.24	100	
C III	350.132	10d - A	11.27	Sc XI	354.350	100	
C III	350.35	200d - A	11.26	K	354.397	50	
Si VIII	350.38			Ca VII	354.418	150	
S XI	350.40			Ca VIII	354.488	50	
Cu IV	350.421	8		K	354.627	20	
Ti X	350.596	6		Ti	354.843	!	
Na VII	350.645	500		K IV	354.927	300b	
Ti XI	350.732	1		Na VII	354.950	400	
Ar V	350.88	150	8	Cr X	354.96		
Ti XII	351.06			Ne II	354.9622 st	60	
Mg V	351.089	850		Ca VIII	354.975	100	
Ti	351.126	6		F IV	355.045	200	
Cr XIII	351.14			V XII	355.11		
Ti	351.351	1		O III	355.137	300	
Ca VII	351.373	100		Sc	355.16	50	
Ca VII	351.469	100		O III	355.293	150	
Ar XVI	351.60 P			Mg V	355.326	850	
N IV	351.931	500b	16	O III	355.333	250	
N III	351.979	500b - A		Ne II	355.4541 st	20	
Ca VII	352.008	50		O III	355.469	250	
N III	352.114	20 - A		Co V	355.52	1000	
Fe XII	352.115	30		Ne II	355.6559 st	40	
Al VII	352.160	100d		Ca VIII	355.704	100	
Mg V	352.262	700		K V	355.800	50	
Ne II	352.2466 st	30		Ti X	355.811	1	
P XI	352.26			Ne II	355.839	1	
Na VII	352.275	600		Co V	355.88	900	
Ti	352.348	1		C VI	355.89 P		
V XI	352.43			Ne II	355.9476 st	40	
Mg VIII	352.46			Cu IV	355.977	5	
K V	352.463	100		Mg VIII	356.000	10	
Ti	352.574	1		Co V	356.06	600	
Fe XI	352.680	30		Si X	356.07	100	
K V	352.750	100		Cr XIII	356.12		
Ca V	352.915	450		Ne II	356.1290 st	40	
Ne II	352.9561 st	90		Ca V	356.246	250	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
K IV	356.260	150		Ca VII?	360.296	100	
K V	356.372	50		Ca VIII	360.298	100	
Ne II	356.4410 st	30		Na V	360.319	800	
Ne II	356.5405 st	30	6	P XI	360.36		
Fe XI	356.55			Na V	360.367	800	
O III	356.558	10		C III	360.557	600	7.05
Fe XIV	356.60			K IV	360.568	100	
K V	356.615	150		C III	360.623	700	7.05
O III	356.625	50		F IV	360.635	100	
O III	356.725	100		C III	360.675	500	7.05
O III	356.768	10		Na IV	360.761	600	
Ne II	356.7995 st	50	6	Fe XVI	360.798	3	
Ne II	356.8769 st	20		Mn XV	360.97		
Al VII	356.885	250d		N III	361.061	100	-A
Ca VIII	356.907	50		Ca VI?	361.114	200	
Cu	357.052	100		N III	361.143	50	-A
N III	357.238	400	-A	N III	361.205	50	-A
N III	357.324	450	-A	F IV	361.208	10	
Ca VIII	357.348	150		Cu	361.220	250	
Ca VIII	357.497	50		Ca VI	361.241	20	
Si X	357.51			Na VI	361.250	800d	
Ne II	357.5355 st	40	6	N III	361.288	200	-A
K V	357.685	150		Sc XVIII	361.36	?	
Ne IV	357.831	250	5	Si XI	361.41		
Sc X	357.85			Ne II	361.4326 st	90	5
Cu IV	357.897	100		Si IV	361.560 P		2.01
Ne V	357.95	400	3	S XI	361.57		
Ca VIII	357.977	100		Mn XIII	361.57		
Ca III	357.980	150b		Ca VI?	361.645	100	
Sc VIII	358.107	50		Si IV	361.659 P		2.01
Ca VI?	358.153	150		Cu	361.838	150	
Sc	358.22	250		Ca VIII	361.984	20	
V XI	358.23			K IV	362.085	250	
N III	358.278	600b	11	K IV	362.154	150	
Si IX	358.29			Sc VIII	362.308	100	
Si XI	358.29			S XI	362.34	0	
Si X	358.30			Na VI	362.444	400	
N III	358.327	600b	11	Ne II	362.4554 st	60	5
N III	358.356	600b	11	Ti IV	362.520	1	
N III	358.401	600b	11	Ca VI	362.617	100	
N III	358.469	600b	11	Ca VI?	362.788	50	
Ne V	358.48	500	3	N III	362.831	700b	10
N III	358.509	600b	11	N III	362.876	700b	10
N III	358.578	600b	11	N III	362.902	700b	10
Si XI	358.63			N III	362.949	700b	10
Fe XI	358.64			N III	362.982	700b	10
Ne IV	358.72	1000d	5	Ti IV	363.003	1	
C III	358.740	400	11.10	N III	363.004	700b	
Cu	358.865	900		K IV	363.021	150	
V XI	358.89			Ti V	363.145	1	
P XI	358.94			Cr IX	363.26		
O III	359.016	400		Sc	363.31	50	
O III	359.223	400		K XVII	363.37 P		
Ca VIII	359.364	200		Ca VIII	363.391	50	
O III	359.384	350		Mn XI	363.46		
Ne V	359.39	500	3	Ca VI?	363.525	100	
Fe XV	359.53			K	363.647	50	
P IV	359.63	20		C III	363.7538	400	7.04
Fe XIII	359.63	10		Mg VII	363.770	10	
Ca VIII	359.647	50		Na VI	363.774	200	
K IV	359.730	300		C III	363.7852	500	7.04
Fe XIII	359.85			Sc	363.82	50	
Cu	359.873	500		C III	363.8598	600	7.04
K IV	359.907	200		Cr XIII	363.96		
Ti X	360.133	10		Cu	363.967	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V IX	364.18			Cu	370.622	100	
V X	364.18			N III	370.640	300	-A
Fe V	364.292	300		N VII	370.74		P
Na VI	364.477	300		Ti XI	370.789	1	
Fe XII	364.477	40		N III	370.794	350	-A
Si XI	364.50			Cr XI	370.87		
O III	364.739	150		Mg VII	371.08		
Fe V	364.795	400		Sc VIII?	371.184	300	
O III	364.867	100		Ca V?	371.225	300	
O III	364.940	50		Cu	371.267	100	
Fe V	364.973	300		Ti	371.332	1	
Mg VII	365.230	200d		V IX	371.38		
Fe V	365.339	300		Ti	371.410	6	
Si XI	365.42			Si XI	371.48		
Fe V	365.440	600		C III	371.694	1000	7
Fe X	365.57			C III	371.747	1000	7
Ni XVII	365.60	P		C III	371.784	800	7
Ne V	365.61	1000	5	Mn X	371.88		
Fe V	365.634	300		Ca IX	371.902	100b	
Ti X	365.636	1		Ca X	371.902	100b	
C III	365.778	100d	A 11.25	Na II	372.074	200	2
Fe V	365.858	600		K V	372.148	500	
Fe VIII	365.873	400		Sc IV?	372.415	300	
F III	365.876	60		K V	372.462	200	
Sc	365.89	50		Sc XI	372.507	300	
Fe V	366.001	300		Cl V	372.59	200	
Mn XI	366.01			K V	372.774	200	
Na VI	366.110	400		Fe XV	372.78		
C III	366.19	400d	-A 11.24	Ca V?	372.904	300	
Na VI	366.240	10		K V	373.074	100	
F III	366.391	35		Cl V	373.17	200	
Ca VII?	367.011	150		V XII	373.20		
Sc VIII	367.083	50		Fe VIII?	373.20	300	
O IV	367.192	5		K V?	373.318	150	
K VI?	367.378	100		Ca VI	373.417	100	
F VII	367.43			Fe V	373.720	500	
Na V	367.557	200		Cl V	373.78	300	
Mg VI	367.679	400d		Ca IX	373.802	400	
F VII	367.87			O III	373.805	400	4
K IV	368.030	100		Cl V	373.91	10	
Cr XIII	368.06			Ca IX	373.979	600	
Mg IX	368.071	100d		Mg VII	373.99		
Sc VIII?	368.088	100d		Ca V?	374.000	200	
N IV	368.108	450	18.29	Ti XI	374.00		
Fe XIII	368.12			O III	374.005	400	4
Si XI	368.28			O III	374.075	500	4
Ca	368.303	150		O III	374.165	400	4
K	368.465	50		N III	374.204	900	5
K	368.580	100		Fe V	374.240	400	
Ti	368.818	3		O III	374.331	400	4
Cr XIII	369.13			O III	374.436	400	4
Fe XI	369.23			N III	374.441	900	5
C III	369.415	500	7.02	Fe V	374.464	200	
Sc	369.42	50		Kr IX	374.54	20	
C III	369.472	100	7.02	Sc VIII	374.658	250	
Ca	369.647	250		Cl V	374.66	100	
Na V	369.743	300		Ca IV	374.744	250	
Ca VI	370.033	250		Fe V	374.864	500	
Sc IV	370.034	400		Cr XI	374.90		
K VI?	370.115	100		K VI	374.940	250	
Sc VIII	370.174	150		Sc V	375.048	400	
Ti	370.408	1		Cl V	375.10	200	
Fe VIII	370.432	500		F II	375.237	10	
K V?	370.523	150		F II	375.303	100	
K V?	370.580	150		Ca V?	375.333	150	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
F II	375.432	10		Si XIV	380.2	P	
Ti	375.508	I		Ca V?	380.396	250	
F II	375.702	40		Mn XIII	380.42		
Sc VIII?	375.705	300		K III	380.477	250b	
F II	375.784	10		K IV	380.477	250b	
F II	375.927	40		Fe V	380.664	300	
K IV	375.955	300		V XII	380.87		
K V	375.955	300		F II	380.896	100	
K	376.061	150		Al VIII	381.15		
Ca VI?	376.279	135		Sc XI	381.151	700	
B III	376.330	100		Fe V	381.152	200	
Na II	376.377	200	1	Fe V	381.260	300	
Sc IV?	376.449	300		Na VII	381.300	300	
Mg	376.665	100		Ar XVIII	381.4	P	
F II	376.684	10		Ca VI?	381.464	100	
O II	376.693	10		Fe V	381.467	50	
O II	376.745	10		Sc	381.546	100	
Mn XI	376.81			Ca V?	381.601	150	
Mn IX	376.86			Fe V	381.671	50	
O II	377.045	10		Al VII	381.689		
F II	377.133	1		Al VIII	381.689	10	
Ca V	377.181	250		B V	381.70	P	
K VI?	377.263	100		K IV	381.702	200	
N III	377.286	100	-A	F II	381.824	1	
Cu	377.355	100		Ca VI?	381.849	100	
N III	377.380	100	-A	F VII	381.87		
N III	377.444	100	-A	Fe V	381.881	400	
N III	377.540	250	-A	Ca XVII	382.03	?	
Cr XIII	377.60			Mn V	382.061	100	
Cu	377.756	150		Mn XI	382.07		
K V	377.763	250		O III	382.214	50d	
Sc	377.79	50		K III	382.229	300	
Ca IX	378.089	300		K IV	382.229	300	
Ti X	378.09			N VII	382.45	P	
Na III	378.143	1000		K IV	382.487	10	
K V	378.219	150		Ar III	382.61	12	
Na VII	378.22			K IV	382.646	200	
Ca VII	378.258	150		Sc X	382.650	200	
Ca IX	378.382	40		Mg VII	382.72		
Ca IX	378.551	50b		O V	382.757	20	
F III	378.580	10		Mn XIII	382.76		
Ti XI	378.630	1		Fe XII	382.83		
Ca VI?	378.653	50		O III	382.903	50d	
Sc V	378.677	100		K IV	382.906	300	
Ca VI?	378.745	50		Mn V	382.907	600	
Fe V	379.032	100		Mn V	382.980	100	
C III	379.065	100	-A	Mn X	383.00		
K III	379.118	300	11.43	K V	383.318	100	
K V	379.118	300		Mn V	383.422	200	
Ca VI?	379.128	100		Fe V	383.484	300	
C III	379.254	10d	11.09	Sc X	383.58		
K IV	379.279	100		V XII	383.63		
Fe V	379.294	300		Mn V	383.681	400	
Nc III	379.31	700	6	Al VIII	383.70		
O III	379.505	200		Zn III	383.759	1	
O III	379.575	150		Al VIII	383.785	50	
O III	379.631	100		Ti X	383.83		
F II	379.719	1		Mn V	383.939	500	
Ti X	379.74			Cl XV	383.96		
Sc	379.77	50		C IV	384.032	800	7
O IV	379.780	15		K IV	384.095	250	
K IV	379.877	300		C IV	384.178	850	7
O IV	379.923	10		Fe V	384.212	300	
Ca VI?	380.003	50		Na XI	384.3	P	
Na III	380.107	800		K V?	384.400	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
K VI	384.514	100		K VI	388.241	150	
Fe V	384.610	200		P IV	388.32	240	
K	384.689	50		K VI?	388.485	100	
Mn XV	384.74			Fe V	388.500	200	
Fe V	384.826	100		Fe V	388.607	200	
Al IX	384.95			Si X	388.62		
Fe V	384.957	600		F VII	388.65		
K V	385.020	50		Sc V	388.682	200	
Fe V	385.023	400		Ca VI?	388.685	150	
C III	385.043	P	2.01	Ca IX	388.77		
Na VII	385.061	10		Mn X	388.91		
Ca VI?	385.091	100		Mn XII	388.91		
Ti	385.211	1		K IV	388.920	250	
Na VII	385.254	10		S VI	388.94	600	4
V XII	385.54			C III	388.9687	500	6.02
K VI	385.547	200b		C III	389.0045	600	6.02
Ca IX	385.61			K IV	389.069	250b	
K V	385.689	100		K V	389.069	250b	
Fe V	385.740	500		C III	389.0898	700	6.02
Fe V	385.869	500		Co XV?	389.17	P	
Sc IX	385.878			Ca VII?	389.195	50	
Ca VI?	385.941	50		Ti X	389.25		
Al VII	386.09			K V	389.428	100	
Ca VI?	386.106	50		Ar III	389.49	25	
Ti XI	386.140	3		Ca VI?	389.495	20	
Fe V	386.156	400		P V	389.50	200	
K VI	386.193			K VI?	389.531	100	
C III	386.2028	850	2	Si X	389.59		
Ca VI?	386.254	50		K V	389.750	100	
Fe V	386.256	50		Cr XIV	389.81		
Mn X	386.27			Sc VIII	389.866	200	
Mn XII	386.27			Ti X	389.99		
Fe V	386.483	100		C III	390.055	300	11.08
K VI?	386.505	100		K V	390.114	250	
Fe V	386.585	100		Cl V	390.15	400	
K IV	386.610	200		K IV	390.415	250	
Fe V	386.737	300		K IV	390.574	300	
Fe V	386.783	400		P V	390.70	550	
Fe V	386.897	400		O V	390.755	120	
Fe XV	387.00			S VI	390.86	800	4
Ca V	387.080	200		Sc IX	390.888	400	
Ne IV	387.141	700	10	K IV	391.462	200	
Fe V	387.199	500		F VII	391.76		
N IV	387.353	500	9	O II	391.912	50	
O III	387.398	100		O II	391.943	100	
Ar III	387.45	100		O II	392.002	150	
O III	387.482	150		Al VII	392.07		
N III	387.483	500b-A		K IV	392.274	100	
Fe V	387.500	600		O II	392.322	150	
Al VII	387.52			Al IX	392.40		
Fe V	387.616	400		Cl V	392.43	500	
O III	387.639	200		K IV	392.467	200	
Ar XVI	387.66	P		V XII	392.60		
Zn III	387.740	1		Fe V	392.907	600	
Fe V	387.775	400		Cr XII	392.94		
Mg VI	387.787	200d		K IV	393.142	500	
K V	387.800	300		V X	393.16		
K VI	387.809	300		Cu IV	393.172	3	
Al VIII	387.83			Fe V	393.270	500	
Sc IX	387.906	40		Mn V	393.324	300	
Al VIII	387.970	100		F II	393.680	40	
Fe V	387.983	300		Mn XI	393.69		
Mg VI	388.020	300d		Sc	393.71	200	
Ne IV	388.218	500	10	Fe V	393.911	400	
Zn III	388.224	0		K	394.063	50	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti	394.153	1		K VII	399.006		
F II	394.207	10		N III	399.045	600b - A	
Mn V	394.322	100		N III	399.06	600b - A	
F II	394.438	1		K VI	399.075	100	
K VI	394.480	150		Na VII	399.182	400	
Sc IX	394.652	600		Mg VI	399.289	600	
Si X	394.71			K V	399.400	150	
Al X	394.83			K VI	399.419	100	
K V	394.909	150		K VII	399.495	50	
Ca IX	395.01			Sc V	399.501	200	
Fe V	395.155	300		Mn V	399.538	400	
Sc V	395.317	400		Al VIII	399.57		
Al X	395.36			C III	399.612	600d - A	11.22
K V	395.395	250b		Ar IV	399.63	120	
K VI	395.407	150		C III	399.688	600d - A	11.22
Al IX	395.44			V X	399.74		
F III	395.443	6		K V	399.754	200	
Mn IX	395.47			V XII	399.76		
O III	395.558	600		Ne VI	399.82	50	
Si X	395.68		9	Sc IX	399.890	200	
Fe V	395.789	200		Ca VI	399.928	50	
Ar III	395.92	50		Cl VI	399.94	250	
Cr X	395.92			Cl VI	399.96	350	
F III	395.972	3		Cl VI	400.00	400	
Ca VII	396.038	50		Ti IX	400.009	1	
Ca VI	396.044	100		K VII	400.147	100	
Al IX	396.05			K IV	400.210	400	
N III	396.186	450		Al X	400.43		
K VI	396.242	50		F II	400.582	10	
F II	396.244	1		Fe V	400.625	400	
Ti	396.288	1		Fe XV	400.65		
Na VII	396.335	200		Mg VI	400.676	700	
Ar III	396.37	200		Na V	400.722	1000	
Sc	396.440	400		Ca VI	400.827	200	
V XII	396.61			K VI	400.963	200	
N VII	396.68	P		Fe V	401.030	200	
K III	396.763	20		Al X	401.12		
Fe V	396.773	300		Ne VI	401.14	150	
Ar IV	396.87	160		K VII	401.553	150	
Fe V	396.902	50		Fe V	401.639	200	
Ca VI	396.918	100		Ti VIII	401.739	1	
O III	397.120	100		Mn V	401.787	300	
O III	397.231	50		K VII	401.790	100	
O III	397.310	10		B V	401.83	P	
Mn XII	397.46			Ne VI	401.93	250	
Na VII	397.490	300		K III	402.104	200	
Ar III	397.67	50		K VII	402.132	100	
K VII	397.691	20		Fe V	402.197	100	
Al X	397.76			K VII	402.291	20	
Cr X	398.09			Mn V	402.525	400	
K VI	398.104	150		Ca VII	402.552	50	
Ar III	398.17	125		Mn V	402.754	300	
V VIII	398.26			K IV	402.907	300	
Mn X	398.28			Mn XIV	402.99		
K VII	398.354	50		Mn V	403.007	50	
K V	398.363	200		O II	403.035	10	
C III	398.42	200d - A	11.23	O II	403.087	10	
Ar IV	398.55	160		Ne VI	403.26	100	
Mn V	398.604	200		O II	403.273	10	
Ca VII	398.623	50		Mn V	403.281	50	
K III	398.633	150		Mg VI	403.315	800	
K V	398.878	200		O II	403.372	10	
N III	398.885	500 - A		Al X	403.55		
Ar I, I	398.91	50		Mn V	403.552	300	
K VII	398.943	200		Mn V	403.680	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca III	403.724	450		Mn V	410.311	800	
Mn V	403.754	400		Na IV	410.371	1000	
K VII	403.800	300		Mn V	410.459	500	
Sc	403.84	100		Ca VII	410.501	150	
K IV	403.967	250		Na IV	410.540	600	
K VII	403.991	150		Mn V	410.611	800	
Mn V	404.358	800		Cr XII	410.88		
K IV	404.412	150		Sc X	410.89		
Mn V	404.455	400		Mn V	410.990	800	
K VI?	404.684	200		N III	411.056	350	-A
Ne X	404.8	P		V XII	411.12		
Mn V	405.094	500		Na VIII	411.145	100	
V X	405.15			Cl III	411.16	300	
K VI?	405.178	100		N III	411.173	200	-A
K XVI	405.20	?		N III	411.243	200	-A
K VII	405.345	100		Mn V	411.329	700	
K VI?	405.475	50		Na IV	411.333	700	
F II	405.638	100		N III	411.361	400	-A
Mn V	405.654	800		Cl III	411.37	400	
K VI?	405.675	100		Mn V	411.585	700	
K IV	405.773	100		Ca X	411.690	75	
Ne II	405.853	150	4	C III	411.697	10	-A 11.42
Mn V	406.037	700		Mn V	411.789	300	
K VI?	406.102	100		B III	411.804	300	
F VI	406.12			Cl III	411.81	400	
Mn V	406.240	100		Mn V	411.920	300	
Cl III	406.27	100		C III	411.9577	300	11.06
Al X	406.31			Cr XIV	411.99		
Mn V	406.417	100		K V?	412.080	300	
Cu IV	406.439	8		Si IV	412.155	P	9
K III	406.484	300		Ca VII?	412.175	100	
Mn V	406.845	600		Na IV	412.240	800	
K VII	406.850	20		K III	412.289	250	
K	406.912	50		Mn V	412.534	500	
F II	407.041	200		Co	412.59	100	
Ne II	407.1376	120	4	Zn IV	412.671	3	
Mn V	407.301	200		K VI?	412.790	50	
Cl XIII	407.48			Si IV	412.939	P	9
Cr IX	407.50			Cr VIII	412.99		
F II	407.503	100		O V	413.30	160	
Cl III	407.51	10		Mn V	413.384	400	
Ca VII	407.780	100		N III	413.681	450	
Sc	407.85	150		K III	413.792	500	6
K IV	408.076	250		N III	413.797	450	
K VII	408.210	50		Na VI	414.370	200	
Ti XI	408.28			K V	414.465	150	
Mn V	408.322	600		Cr IX	414.47		
V X	408.38			Co	414.52	50	
Mn V	408.390	100		P IV	414.60	10h	
Ti VIII	408.535	3		O V	414.612	40	
Na IV	408.682	800		Ca VII	414.666	200	
Mn V	408.733	400		Fe V	414.790	100	
K III	408.959	400		K III	414.870	300	
Mn V	409.217	100		Mn V	414.933	300	
C III	409.325	600	11.07	Fe V	415.006	400	
Mn V	409.335	200		P IV	415.02	20	
Mn V	409.546	300		K V	415.052	250	
Na IV	409.615	800		Ti XI	415.07		
K	409.737	400		Cl III	415.20	100	
Mn V	409.795	400		Mn V	415.207	500	
Ca III	409.954	350		Cl III	415.33	100	
O VIII	409.97	P		Mn V	415.336	50	
Be IV	410.01	P		Fe XV	415.41	?	
P V	410.07	150h		K V	415.465	150	
K III	410.102	400		Cl XV	415.50		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Na VI	415.505	400		Sc IX	421.18		
Mn V	415.622	700		Na VI	421.465	100	
K V	415.793	200		Ne IV	421.609	750	9
P IV	415.82	40		Fe V	421.682	200	
Fe V	415.825	100		Fe V	421.765	400	
Co	415.94	10		Cl III	421.77	300	
Fe V	415.972	300		Cl III	421.99	300	
Mn V	415.980	800		Cr XI	421.99		
K III	416.001	300		F II	422.013	40	
Sc IX	416.036	200		Sc	422.07	100	
Ne V	416.20	800	4	K V	422.178	400	
Fe V	416.208	500		Ne V	422.21	150	
Mn XIV	416.42			Mn V	422.228	100	
K VI?	416.509	50		Fe V	422.287	600	
Cr X	416.62			Ne V	422.34	50	
K VIII	416.628	75		Ga IV	422.5	200	
C III	416.769	500	11.41	K VIII	422.511	250	
Ne V	416.82	250		F II	422.623	10	
Fe V	416.910	200		K VIII	422.642	50	
Fe V	417.048	100		Cl III	422.71	100	
K IV	417.280	150		V XIII	422.81		
Fe V	417.382	600		Sc X	422.850	400	
Sc IX	417.46			F II	422.884	1	
Fe V	417.516	50		K	423.371	50	
K III	417.535	300	6	Zn IV	423.424	0	
Na VI	417.595	600		C III	423.438	P	11.05
S XIV	417.60			Ar IV	423.48	10	
Ti XI	417.85			Ti IV	423.487	6	
F II	417.872	10		Zn IV	423.533	5	
Fe V	418.033	600		K	423.558	50	
C IX	418.15			Ga IV	423.6	250	
K VI?	418.160	100		Si III	423.817	P	3.04
K VIII	418.443	175		Na VI	423.821	200	
F V	418.457	500		Fe V	423.833	200	
F VIII	418.571	25		Cr IX	424.03		
G II	418.598	50		Ti IV	424.160	6	
C III	418.609	200d	11.21	Ca IX	424.34		
K III	418.623	300		O II	424.577	10	
N III	418.712	650	16	N V	424.61	35	35
O II	418.812	10		Fe V	424.733	300	
N III	418.919	650	16	N V	424.75	40	35
K V	419.045	100		Ca V	425.000	750	
K V	419.310	100		K V	425.159	300	
Ti XI	419.45			Na	425.245	10	
Cl XIII	419.46			O II	425.273	10	
C IV	419.525	650	5	C II?	425.326	10	
F IV	419.645	800		Fe V	425.476	100	
C IV	419.714	700	6	Na VII	425.493	100	
K V	419.731	50		K V	425.588	500	
Ca X	419.757	200		Fe V	425.589	100	
Zn III	419.807	1		Ti XI	425.74		
Fe V	419.915	300		Zn III	425.799	15	
F IV	420.045	900		Fe V	425.840	50	
Ca VII?	420.191	50		Zn IV	425.891	40	
Ne V	420.39	100		Fe V	426.045	500	
Ca X	420.493	25		Fe V	426.097	500	
Fe V	420.546	500		Sc IX	426.252	200	
F IV	420.729	1000		K VI	426.338	100	
N IV	420.769	500	18.27	O II	426.526	50d	
Sc	420.82	250		Fe V	426.609	100	
Fe V	420.874	200		Si III	426.644	P	3.03
Ne V	420.94	150		Fe V	426.745	300	
Cr IX	420.94			Fe V	426.814	400	
Zn III	421.035	3		Sc IX	426.86		
Fe V	421.045	500		Fe V	426.969	300	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Si IX	427.10			F II	431.832	100	
Fe V	427.190	300		Mn V	431.973	50b	
Fe V	427.320	100		Al IX	432.03		
Fe V	427.442	200		Cr IX	432.33		
Cr X	427.51			Fe V	432.340	300	
Cl XVII	427.6	P		Al IX	432.66		
Ca	427.655	50		Ca VIII	432.866	150	
Fe V	427.782	100		Fe V	432.919	100	
Ne III	427.84	300	9	Cr V	433.13	50	
Fe V	427.918	200		Ne VI	433.18	400	
Fe V	428.000	50		Ne IV	433.24	250	
Ca VIII	428.100	150		C III	433.3391	800	11.04
Fe V	428.131	300		Ti IX	433.54		
N III	428.180	600b	15	Mn V	433.558	700	
N III	428.244	600b	15	Ca VII	433.599	250	
Mg VIII	428.27			Cl III	433.74	10	
Fe V	428.292	50		Cl III	433.77	10	
K VI?	428.315	100		N III	433.911	650b	9
K VI	428.538	250		V IX	433.97		
Zn IV	428.541	30		K VIII	434.01		
Mn V	428.600	500		N III	434.014	650b	9
Fe V	428.763	500		N III	434.066	650b	9
Zn IV	428.788	10		N III	434.129	650b	9
Ca VII?	428.819	50		Mn V	434.210	300	
Fe V	428.909	500		Cr V	434.22		
Mn V	429.054	500		N III	434.246	650b	9
Mg VII	429.134	100d		O III	434.256	200	
Fe V	429.206	100		N III	434.280	650b	9
Mn XIV	429.24			Kr	434.28	100	
V XI	429.29			Cr V	434.33	400	
Zn IV	429.299	25		Mn V	434.403	50	
K VI?	429.438	100		Zn IV	434.407	0	
F III	429.512	250		Sc	434.43	150	
O II	429.557	100		B III	434.561		
Ti XI	429.60			Ca IV	434.570	600	
O II	429.647	250		Mn V	434.575	200	
O II	429.716	200		B III	434.625	50	
O II	429.918	250	3	O III	434.646	150	
Mn V	429.984	100		Mg VII	434.710	10d	
O II	430.041	300	3	K III	434.722	750	
Fe V	430.053	100		O III	434.840	100	
Kr	430.15	50		Mg VII	434.923	200d	
F III	430.152	300		Ti XI	434.94		
O II	430.177	300	3	O III	434.975	500	14
F III	430.222	150		Kr	435.01	60	
K VIII	430.31			Zn IV	435.023	5	
Si IX	430.37			Mn V	435.069	200	
Mg VIIi	430.467	10d		Cr V	435.16	300	
Zn IV	430.586	15		Mn V	435.291	100	
Cr VIIi	430.60			Mn V	435.594	100	
Fe V	430.624	200		F II	435.636	200	
Sc	430.74	150		Ne VI	435.65	400	
F IV	430.759	900		Cr V	435.66	250	
Mg	430.767	10		K III	435.676	500	
F II	430.914	300		Zn IV	435.762	20	
Ar XV	431.03	P		V IX	435.80		
Cr XI	431.07			Mn V	436.093	200	
Mg VII	431.318	200d		Mg VI	436.13		
Ne IV	431.47	125		Ca VIII	436.134	200	
Zn IV	431.535	15		Mn V	436.174	800	
Fe V	431.541	300		Sc	436.20	50	
F II	431.552	200		Zn IV	436.248	15	
Zn IV	431.613	25		F II	436.281	100	
K III	431.622	50		Cr V	436.37	250	
Sc	431.82	50		Zn IV	436.381	5	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet	
O II	436.510	50		Ne VI	440.40	100		
F II	436.565	40		K III?	440.429	750		
Cr V	436.61	200		O II	440.552	150		
O II	436.649	10		O II	440.598	100		
Mn V	436.660	100		Ne VI	440.60	10		
Ar V	436.67	120		Al XIII	440.9	P		
Mg VIII	436.726	100d		K IV?	440.905	100		
Zn IV	436.812	10		Li III	441.00	P		
N V	436.85	60	42	Mn V	441.008	100		
Mn V	436.857	100		Si IX	441.03			
Na V	436.946	10		Ca VIII	441.084	150		
Na VI	436.96			Cr V	441.11	400		
Cr XIII	437.05			Zn IV	441.146	15		
C II?	437.102	100d		Sc VIII	441.197			
K III?	437.216	150		Mg IX	441.20			
Si III	437.255	P		Mg VI	441.22			
Ca IV	437.271	100	3.02	Mg VIII	441.22			
O II	437.332	150		K VIII	441.33			
B V	437.36	P		K VI?	441.370	150		
S V	437.37	100	4	Cl III	441.40	300		
Cr V	437.43	200		Zn IV	441.543	8		
Al IX	437.46			Ge IV	441.58	20		
O II	437.683	150		Zn IV	441.693	20		
Cr V	437.69	200		Sc	441.72	200		
Ca IV	437.773	250		Mn V	441.725	700		
Cl IV	437.83	400		N VII	441.75	P		
Si IV	437.849	P		Mg VIII	441.76			
K V	438.023	250	8	K II?	441.812	250		
Al IX	438.09			O II	442.001	200		
S V	438.19	100	4	O II	442.048	200		
O V	438.197	20		K IV	442.300	200b		
Cu IV	438.265	10		Sc	442.30	50		
Cr V	438.62	300		Kr	442.33	50		
K V	438.647	100		Zn IV	442.381	40		
Cr V	438.65	400		Mn V	442.495	700		
Cr V	438.66	500		K IV	442.518	100b		
Mg IX	438.69			Ca	442.607	50		
Si IV	438.734	P		O IV	442.705	2		
Mn V	438.735	500	8	Cu IV	442.753	10		
Sc	438.800	200		O IV	442.873	1		
C II	438.824	P	-A	6.09	K III?	442.913	150	
C II	438.897	P	A	6.09	Cl III	442.95	200	
Ca IV	438.930	100		Mg IX	443.40			
Cu IV	438.930	200		Ar IV	443.40	80		
Si IX	438.94	14		V XIII	443.48			
K VI?	439.047	150		K IV	443.567	300		
Mg IX	439.180	10		Cu IV	443.677	26		
Cl IV	439.26	300		O II	443.681	10		
Sc	439.28	150		Ca IV	443.821	750		
Ti IX	439.30			Kr	443.88	60		
Mn V	439.352	500		Mg IX	443.981	10d		
O V	439.517	120		S XII	444.16			
Cu IV	439.599	10		Cu IV	444.212	14		
Ti IX	439.60			P IV	444.25	20		
S V	439.65	100	4	Ca	444.254	50		
Ca III	439.691	250		K III	444.344	750	5	
Ge IV	439.77	20		Zn IV	444.383	60		
Mg VI	439.82			Zn IV	444.455	30		
Ca	440.118	100		F VI	444.47			
Cl IV	440.25	200		Cu IV	444.745	13		
Na VI?	440.266	300		Ca IV?	444.766	150		
Kr	440.27	80		Mg VI	444.90			
Sc	440.29	50		Cu IV	444.996	36		
Ga IV	440.3	50		Ca IV	445.018	50		
Ti VII	440.361	125		Ne II	445.0397 st	200	3	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Na V	445.045	500		Cu IV	449.658	10	
Na V	445.190	600		K V	449.708	200	
P IV	445.19	20		V VIII	449.74		
Kr	445.33	150		Cr XIII	449.76		
Cu IV	445.391	15		Zn IV	449.970	40	
O II	445.601	200		Cu IV	450.024	37	
K IV	445.607	200		N V	450.08	50	28
Cu IV	445.612	12		Ar V	450.08	50	5
O II	445.638	200		Kr VI	450.20	200	
S XIV	445.78			Ar	450.44	80	
K V?	445.878	50		Ca IV	450.565	500	
Ca V?	445.933	50		Mg VII	450.69		
Mg IX	445.97			C III	450.7338	800	11.03
Ar V	445.997	250	5	Cu IV	450.935	14	
K VI?	446.009	200		Zn IV	450.985	50	
Ca V?	446.036	50		Mn V	451.065	300	
Mn XIV	446.07 ?			K IX	451.078	50	
Ne II	446.2256 st	300	3	Cu IV	451.159	48	
Cu IV	446.264	18		Ar IV	451.20	15	
V XI	446.32			K VI?	451.320	100	
Cu	446.359	100		Zn IV	451.624	10	
F VI	446.39			Ne VI	451.84	200	
Cu IV	446.412	37		N III	451.869	900	4
Zn IV	446.582	40		Ar IV	451.87	45	
Ne II	446.5931 st	250	3	Cu IV	452.202	28	
Ti XI	446.69			N III	452.226	900	4
Cr V	446.71	50		K V	452.227	100	
Kr IX	446.76	80		Cu IV	452.502	34	
K IV	446.830	250		K VI	452.658	10	
K IV	446.926	100		Sc VII	452.704		
Ar V	446.949	400	5	Ne VI	452.74	300	
Cu IV	446.995	25		Mn V	452.758	200	
K V?	447.085	150		Se VI	452.8	200	
O V	447.226	120h		Zn IV	452.803	50	
O V	447.356	160		K V	452.900	290	
Cu IV	447.371	10		Ar IV	452.91	80	
Ti IX	447.49			Kr III	453.06	80	
Mn V	447.498	400		Cu IV	453.127	42	
Ar V	447.53	200	5	N II	453.257	20	
Sc VII	447.554	400		V IX	453.33		
Ca VII	447.681	20		N II	453.340	100	
Ti IX	447.69			Cu IV	453.425	66	
O VI	447.712	10		K IX	453.882	20	
Kr III	447.77	20		Ne VI	454.07	300	
Ne II	447.8150 st	180	3	Sc VII	454.106	500	
O VI	447.840	10		Si IV	454.112 P		7
Zn IV	447.850	8		Ca IV	454.553	50	
Cu IV	448.039	14		Ne II	454.6535 st	150	2
Mn V	448.262	300		Cu	454.791	100	
N III	448.285	350 -A		Cu IV	454.982	14	
Mg IX	448.29			Si IV	455.065 P		7
N III	448.384	450 -A		Cl VII	455.27	100	
Cu IV	448.428	34		Ne II	455.2738 st	200	2
N III	448.549	450 -A		Sc X	455.32		
K III	448.595	750b	5	Ca IX	455.34		
K IV	448.595	750b		Li III	455.63 P		
Kr	448.61	120		K V	455.670	250	
K VI	449.009	50		P XIII	455.78		
K V	449.013	150b		Ar VI	455.81	80	
Ar V	449.065	900	5	N III	456.077	600	
Kr	449.12	120		Cu IV	456.081	13	
Zn IV	449.131	1		Ne II	456.2749 st	10	2
Sc X	449.28			V VII	456.29		
Ar V	449.49	200	5	Cr V	456.31	200	
N III	449.559	450		K IV	456.328	400b	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
K V	456.328	400b		Ti XII	460.69		
Ne II	456.3483 st	120	2	Ne II	460.7284 st	1000	1
Cr V	456.36	100		Cl XIV	460.8 ?		
Ar VI	456.38	120		V X	461.04		
S XII	456.55			Na V	461.051	850	
Cl VII	456.56	50		Ca IV	461.085	250	
Zn IV	456.671	35		Cu IV	461.115	27	
Cr V	456.68	150		C II	461.120	100d -A	6.08
Cu IV	456.734	20		Ar V	461.23	300b	4
Cr V	456.79	150		Ar VI	461.23	300b	
Sc	456.83	50		Cu IV	461.321	46	
Ne II	456.8962 st	90	2	Cr XIII	461.60		
V IX	456.96			Ca VIII	461.705	150	
Ca IV	456.981	250		K VI?	461.737	150	
O II	456.997	50		Ar VI	461.90	40	
V VIII	457.0			Sc	461.91	50	
Ar VI	457.01	200		Kr	461.91	100	
Cr V	457.08	400		Ar VI	462.007	1000d	
Cl III	457.17	300		V VIII	462.11		
F II	457.179	600		Ar VI	462.15	160	
Kr III	457.23	50		Cr V	462.26	50	
Cl III	457.24	200		Cu IV	462.275	19	
V X	457.29			Kr	462.35	120	
Zn IV	457.315	50		Mn VII	462.363	150	
K VI?	457.323	50		Cu IV	462.387	23	
K VI?	457.427	20		Ne II	462.3908 st	500	1
Cl III	457.44	10		Ar V	462.42	150	4
Ar VI	457.48	800b		Cu IV	462.545	10	
Cr V	457.56	150		Ca VIII	462.591	50	
Cu IV	457.759	26		Sc	462.61	200	
Si IV	457.818	250	2	Kr III	462.79	150	
Ar VI	458.04	40		Cl IV	463.01	300	
K VI	458.043	50		Na V	463.263	1000	
Ar IV	458.1			Cu IV	463.714	60	
Ar V	458.12	150	4	N IV	463.740	650	15.24
Si IV	458.155	200	2	Sc	463.74	50	
Sc X	458.18			Cu IV	463.922	43	
Cu IV	458.222	12		Ar V	463.938	350	
Cl XIV	458.39			Cr V	464.03	1000	4
O II	458.422	10		O II	464.194	100	
Cu IV	458.423	31		Ar VI	464.26	160	
Kr	458.61	60		K VI	464.274	250	
B III	458.646			F III	464.288	200	
Cu IV	458.712	43		Cl IV	464.29	300	
B III	458.716	100		O II	464.310	50	
Ar V	458.98	100	4	F V	464.367	400	
K V?	459.005	150		Cu IV	464.642	62	
Ar VI	459.32	400		S VI	464.68	1000	
Sc X	459.38			O II	464.785	150	5
C III	459.462	900	6	Se VI	464.8	200	
K IX	459.498	50		Cu IV	464.823	67	
Cu IV	459.510	46		Cl IV	464.86	400	
C III	459.521	950	6	Ne X	465.0 P		
Ar VI	459.60	100		Sc X	465.01		
C III	459.633	1000	6	Ar	465.02	150	
Ar V	459.73	50	4	K II	465.078	50	
Ca	459.811	50		F III	465.113	250	
V VIII	459.82			Cu IV	465.185	27	
Na V	459.897	600		Ne VII	465.221	700	
Cu IV	459.995	42		Kr VI	465.27	400	
C III	460.0487	800	11.02	Cl IV	465.35	300	
Ar VI	460.06	40		F V	465.374	500	
Ar VI	460.20	40		O II	465.529	50	
K VI	460.438	150		Sc	465.54	250	
Cu IV	460.651	39		V VIII	465.55		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar VI	465.59	80		V X	470.25		
O II	455.760	100		O II	470.408	200	
Ar II	465.8365 st	15		Cr V	470.56	100	
Mg VIII	465.972	10		Ar	470.57	80	
F V	465.976	600		Sc VII	470.68		
Ca VIII	465.993	100		Cr V	470.75	50	
Si III	466.129	80	3.01	Cr V	471.03	40	
Cl IV	466.13	300		Ca VIII	471.070	100	
Ca IX	466.227	300		Ar IV	471.09	60	
Sc	466.24	300		Ca VIII	471.183	100	
C II	466.352 P	10 -A	6.07	Kr	471.19	120	
C II	466.407 P	100 -A	6.07	O IV	471.273	2	
Kr	466.44	150		K III	471.569	750	4
C II	466.491 P	200 -A	6.07	Ti X	471.595		
Ar III	466.53	250		O IV	471.603	1	
C II	466.547 P	10 -A	6.07	Sc	471.83	400	
Cu IV	466.593	28		F II	471.921	10	3
K III	466.793	750	4	F II	471.952	200	3
Ar V	466.82	60		Ar IV	471.952	60	
Zn IV	466.924	60		F II	471.999	450	3
Ar VI	466.93	160		Zn IV	472.066	75	
K IX	466.943	100		Kr V?	472.16	150	
F V	466.994	400		C V	472.21		29
Cu	467.106	150		N III	472.239	550	18
Cl IV	467.19	300		Cu IV	472.332	54	
V IX	467.19			N III	472.399	550	18
Cu IV	467.282	34		Zn IV	472.655	70	
Kr III	467.35	300		F II	472.681	100	
Ar III	467.39	300		F II	472.711	300	
N III	467.432	500 -A		Cu IV	472.767	29	
Zn III	467.630	0		Sc VII	472.77		
N III	467.649	450 -A		V VII	472.80		
Mn VII	467.662	300		Ar II	472.8114 st	30	
N III	467.795	350 -A		V VIII	472.91		
O II	467.926	10		P IV	472.96	80	
Kr VIII	468.20	80		Zn IV	473.014	60	
Br V	468.36	500		F II	473.015	200	
Ar	468.38	80		Ar III	473.03	300	
Zn IV	468.426	40		Sc	473.03	150	
K V?	468.447	100		K IV	473.207	100	
Ar III	468.47	200		C III	473.410 P		11.37
Cu IV	468.499	23		Zn IV	473.501	75	
Ca	468.540	50		Kr	473.55	80	
Sc X	468.74			Cu IV	473.664	20	
O II	468.766	100		Ar III	473.92	300	
Cu IV	468.880	27		Ar VII	473.938	200	
C III	468.94	10	11.38	Kr iII	474.09	100	
Ar III	468.96	150		Cu IV	474.176	20	
O V	469.150	40		Cu IV	474.397	20	
Kr	469.26	100		N II	474.493 P	10	
Cr V	469.34	300		O VIII	474.54 P		
F VI?	469.48			N II	474.546 P	10	
K II	469.50			Zn IV	474.558	60	
Ar II	469.6301 st	30		N II	474.602 P	10	
Cr V	469.65	300		N II	474.706 P	20	
Ne IV	469.773	700	4	Sc	474.76	150	
Ne IV	469.820	1000	4	N II	474.787 P	20	
Ar III	469.83	200		K VIII	474.83		
Ne IV	469.866	900	4	N II	474.891 P	200	
Ne IV	469.921	700	4	K III	474.920	450	4
Cr V	469.95	200		Cu IV	475.370	19	
Ar III	469.97	200		Sc	475.41	150	
K III	470.089	1000	4	Cu IV	475.486	31	
Zn III	470.211	1		P V	475.61	550h	
Sc	470.25	300		N II	475.647 P	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar VII	475.656	400		N III	482.030	500	
Kr	475.68	100		Zn IV	482.089	50	
N II	475.698 P	200		K III?	482.107	100	
Ar VII	475.73	100		Br V	482.11	1000	
N II	475.75? P			Li III	482.14 P		
Zn IV	475.768	8		Sc	482.220	400	
N II	475.803 P	250		K	482.281	50	
N II	475.884 P	100		K III	482.408	100	
Ar II	475.9054 si	180		Ar II	482.4451 st	15	
K II?	476.029	100		Ar III	482.55	400	
Ca	476.177	100		Ca	482.663	50	
Cu IV	476.192	46		Zn IV	482.668	2	
Zn IV	476.413	60		S XVI	482.7 P		
Ar III	476.43	350		K V	482.796	200	
Ca V?	476.606	100		Ca	482.769	100	
V XII	476.85			Ne V	482.99	500	2
Cu IV	477.083	31		Al VIII	483.03		
Ar II	477.1048 st	120		V V	483.099	25	
Ca	477.300	50		Na VII	483.216	200	
F VI	477.55			Na VII	483.328	300	
Ar II	477.6068 st	30		Sc	483.40	200	
C III	477.6246	300	11.01	Cu IV	483.415	34	
Kr IX	477.93	80		C III	483.567	300	11.19
Ca	478.305	200		C III	483.618	400	11.19
Zn IV	478.646	75		Cu IV	483.678	30	
Zn IV	478.898	60		C III	483.733	500	11.19
Ti VIII	479.01			K V	483.745	200	
Ar II	479.1678 st	30		O II	483.752	200	9
K III	479.185	400		O II	483.976	250	9
Ar II	479.2177 st	60		O II	484.025	100	9
Kr	479.34	120		Ar III	484.12	250	
Ar VII	479.379	600		K III	484.200	50	
Ar VII	479.49	100		K VII	484.261	250	
Zn III	479.743	1		Cu IV	484.353	36	
K VII	479.780	200		Ca	484.368	150	
F VI	479.85			Kr V	484.39	100	
Ti XII	479.86			Ar III	484.45	250	
Al VIII	480.11			Cu IV	484.524	62	
Ca	480.345	100		S III	484.58	50	
Ti VIII	480.35			F II	484.601	850	
K VI?	480.397	50		V V	484.621	10	
Ne V	480.41	250	2	Sc	484.69	50	
P XIII	480.42			Cu IV	485.051	74	
Ca	480.471	150		O II	485.086	300	8
Sc	480.51	200		Mg VIII	485.13		
Ar II	480.8108 st	30		Ar III	485.15	300	
Cr XIII	480.82 ?			S III	485.22	50	
O III	480.955	200		K IV	485.359	100	
O V	481.14	240		O II	485.465	10	8
Ne V	481.28	150	2	Zn IV	485.476		
Sc VIII	481.33	300		O II	485.515	250	8
O III	481.354	150		Ar III	485.52	200	
Ne V	481.36	250	2	O II	485.572	50	
O III	481.381	100		Mg VIII	485.59		
Kr	481.43	120		O II	485.631	200	
Fe XV	481.52			Ar	485.79	60	
O II	481.587	200b	10	N II	485.849 P	10	
O III	481.587	200b		Cl IV	486.17	800	
O II	481.635	10	10	F III	486.430	10	
V V	481.657	2		Ar	486.60	300	
O II	481.704	50	10	Sc VIII	486.618	200	
O II	481.755	150	10	Na VII	486.740	400	
N III	481.778	500		Ca VII?	486.838	100	
Ar III	481.85	300		Cu IV	486.851	10	
Cu IV	481.888	29		Al III	486.8839	70	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al III	486.9124	30		Ar IV	492.64	50	
Ne V	487.07	30d		Ar II	492.6454 st	30	
K VII	487.102	350		C III	492.6500	700	11.36
F III	487.223	6		Na VIII	492.79		
Ar II	487.2272 st	300		Al VIII	493.18		
Kr	487.35	60		C III	493.341	500	11.18
P XI	487.43			Sc VII	493.350		
F III	487.643	3		C III	493.364	500	11.18
Ti X	487.672			Zn IV	493.365	?	
Sc	487.89	250		C III	493.396	500	11.18
Ar III?	487.99	350		C III	493.464	500	11.18
Ne III	488.10	200	1	C III	493.519	500	11.18
K VI	488.134	250		C III	493.587	700	11.18
Ar III	488.45	350		Kr	493.89	100	11.18
V XII	488.53			Cu IV	494.115	41	
Ar II	488.7926 st	270		Na VI	494.160	300	
Ne III	488.67	700	1	Na VI	494.382	700	
Ne V	488.94 P			Sc VIII	494.446	600	
Ar II	488.9615 st	120		Ar II	494.6676 st	15	
Zn IV	489.183	1		S XIII	495.0 P		
Ar II	489.1953 st	240		K II?	495.144	300	
Cu IV	489.297	10		Cu IV	495.242	10	
Ne III	489.50	1000	1	Cu IV	495.315	13	
Na VI	489.580	500		Ar IV	495.55	80	
Kr	489.59	80		Kr	495.72	200	
Ne III	489.64	400	1	Na VIII	495.81		
Ca VII?	489.700	50		Sc VII?	495.89		
Sc VII?	489.77			Na VIII	496.249	100	
Mg VIII	489.86			Kr V	496.25	250	
Cu IV	490.030	20		Zn III	496.423	1	
Sc X	490.23			Sc	496.52	300	
Cu IV	490.257	18		Ar II	496.6322 st	15	
Mg VIII	490.29			Zn IV	496.719	1	
Ne III	490.31	700	1	Sc	496.84	150	
K VI?	490.423	100		Ar V	496.91	40	
Al VIII	490.44			Cu IV	496.983	64	
Ca III	490.549	200		C V	497.09		33
F IV	490.568	700		K III	497.104	750	3
Ar II	490.6495 st	290		Sc	497.19	150	
Kr VIII	490.67	150		Sc VII	497.349		
Ar II	490.7012 st	70		F IV	497.375	60	
Zn IV	490.956	3		Zn IV	497.701	3	
Ca IV	490.999	10		F IV	497.830	100	
F IV	491.001	1000		C III	497.910	100	11.35
Mg VII?	491.045	10		Ca IX	497.996	40	
Ne III	491.05	900	1	Kr	498.01	150	
Ca VII?	491.097	50		O VI	498.090	10d	
Ar II	491.12	200		Sc VII?	498.15		
Sc VII	491.140			O VI	498.431	100d	
Na VI	491.240	300		Cu IV	498.457	28	
Na VI	491.340	600		Kr IX	498.68	100	
Ca VI?	491.386	100		Cu IV	498.748	65	
O III	491.714	10		F IV	498.796	150	
K VII	491.722	200		F IV	498.907	35	
Cu IV	491.829	67		Br VI	499.20	400	
Sc VII?	491.90			Si XII	499.37		
Na VII	491.950	400d		V XII	499.41		
O III	491.980	50		C III	499.425	700	11.17
Cu IV	492.229	53		Cu IV	499.454	25	
Ar III	492.23	150		C III	499.462	800	11.17
Na VIII	492.329	10		C III	499.530	900	11.17
Ar II	492.4083 st	150		C III	499.583	700	11.17
Sc VI	492.423	600		Sc VII	499.615		
Sc VII	492.423	600		Zn III	499.678	2	
Kr	492.56	50		Sc	499.70	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Kr	499.72	150		Ti VII	505.899	100	
Na VIII	499.78			Se V	505.9	200	
F IX	499.8	P		He I	505.9122	8	
Cu IV	499.836	55		Cu IV	505.955	70	
Ti VII	499.855	125		N II	505.986	100	-A
Ti VIII	499.86			N II	506.054	P	200 -A
O II	499.871	100		V V	506.11		
Zn III	499.915	2		N II	506.153	P	300 -A
Ar II	499.9192	st	0	F V	506.159		300
S III	499.98	300		Ca IX	506.163		160
K IV	499.993	100		Cu IV	506.189		38
K IV?	500.047	100		He I	506.2000		10
K IV?	500.125	150		C V	506.31		32
Zn III	500.342	2		Cu IV	506.567		62
O II	500.343	50		He I	506.5702		15
S XIII	500.42			C III	506.63		10
Kr V	500.77	120		Zn III	506.646		3
Ar II	500.8016	st	30	F III	506.674		3
F III	500.953		10	Cu IV	506.748		74
Ar IV	501.01	120		Ca IV	506.767		77
Ca VII	501.168	20		He I	507.0576		20
Ar II	501.1897	st	60	Ca IX	507.101		20
Zn III	501.264	5		Ti IX	507.12		
Ar II	501.3872	st	15	Kr V	507.20		200
F III	501.425		6	Zn III	507.202		5
Cu IV	501.650	10		Sc	507.32		350
K VI	501.664	20		Cu IV	507.367		31
Cu IV	501.799	10		O III	507.391		800
F III	501.804	6		O III	507.683		850
Cu IV	501.999	41		He I	507.7178		30
Ar II	502.0276	st	15	F V	508.075		400
Ar II	502.1629	st	60	Sc	508.16		100
F III	502.280		3	O III	508.182		900
F II	502.511		6	F III	508.386		400
Zn III	502.632		5	Cu IV	508.423		23
Cu IV	502.665	20		Ar III	508.44		450
Br VII	502.69	400		N II	508.484	P	10
F III	502.713		6	F III	508.506		6
K	502.798	50		Ti VI	508.575		1000
Cu IV	502.868	12		Ar III	508.61		300
Ca IX	503.261	20		Cu IV	508.642		20
Cu IV	503.469	29		He I	508.6431		40
Ar II	503.6503	st	60	N II	508.668	P	
Kr	503.66	150		Ar III	508.68		180
K	503.697	50		N II	508.697	F	150
Br VI	503.70	800		Cu IV	508.848		49
Cu IV	503.861	26		N II	508.928	P	10
Cu IV	503.924	40		N II	509.006	P	15
Zn III	504.227	1		Ti VII	509.127		60
Br VI	504.52	600		F VI	509.26		
Cu IV	504.584	74		Ca V?	509.293		100
Ca VII?	504.591	150		Cu IV	509.372		51
C VI	504.65	P		V V	509.38		
Ti VIII	504.70			O V	509.415		120
Ar II	504.8117	st		Ti VII	509.511		550
Cu IV	504.858	49		N III	509.586		400
Ar II	505.0121	st	30	N III	509.897		350
Sc XI	505.117	400		He I	509.9979		50
Ca VI	505.199	400		Se V	510.0		300
Cu IV	505.4	8		Si III	510.079	P	6.08
Ar	505.45	60		Na V	510.102		10
He I	505.5001	4		He I	510.2586		f
He I	505.6840	6		Si III	510.414	F	6.08
Cu IV	505.711	68		Ca VI	510.435		150
K IV?	505.761	50		Ar II	510.5509	st	30

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar II	510.5564 st	200		Br VI	517.29	100	
N II	510.758 P	250		Mg XII	517.5 P		
B III	510.768	200		Se III	517.57	200	
B III	510.854	300		Kr	517.70	50	
Si III	511.096 P		6.08	K VII	517.794	50	
Al III	511.1384	250		K VII	517.926	100	
Al III	511.1907	150		O II	517.937	200	16
Na V	511.193	100		Mn XIV	518.16		
F VI	511.33			Se III	518.17		
K	511.371	50		B III	518.238	450	
Ti VII	511.442	125		O II	518.242	250	16
Ar III	511.51	300		B III	518.265	250	
C III	511.5225	1000	11.33	Zn	518.550	20	
Ca VI	511.523	50		Ar II	518.9088 st	150	12
Ar III	511.57	180		S IV	519.50	200	
N V	511.86	70	41	Ar II	519.3269 st	300	12
Ar V	511.89	25		K VIII	519.372	250	
Si III	511.994 P		6.07	Ar VIII	519.43	150	
Ca IX	512.060	20		Se V	519.6	400	
He I	512.0982	70	6	O VI	519.610	200d	
Si III	512.219 P		6.07	Cu IV	519.667	14	
He I	512.5183	f		O VI	519.723	200d	
B V	512.53 P			Zn III	519.998	8	
Si III	512.557 P		6.07	S IV	520.11	200	
Zn	512.656	20		Br VII	520.26	400	
Cu IV	512.674	30		K	520.493	150	
Si III	512.681 P		6.07	C VI	520.6 P		
Ar III	512.77	180		K III	520.611	500	2
Si III	512.772 P		6.07	Si XII	520.66		
Zn	512.812	15		Si III	520.79	10	6.06
Si III	513.245 P		6.07	S IV	520.83	300	
F II	513.644	300		K VII	520.857	100	
N II	513.849 P	50		Si III	520.92	20	6.06
Ar V	513.91	150		S IV	521.63	100	
F V	513.969	100		V XII	521.10 ?		
F V	514.082	100		Si III	521.149 P		6.06
Ti VIII	514.17			Kr	521.15	60	
Ar II	514.3100 st	210		Si III	521.510 P		6.06
Na V	514.350	10		Ti VII	521.561	250	
Ca	514.498	50		Ne IV	521.741	125	8
O VIII	514.80 P			Ne IV	521.820	125	8
Kr	514.85	80		Si III	521.861 P		6.06
K III?	514.943	100		Zn III	521.872	4	
F II	514.944	600		Sc IX	521.896		
Ti VII	515.008	125		S IV	521.99	200	
Si IV	515.118	150	6	P IV	522.02	10h	
Br VI	515.16	800		Se III	522.05	100	
K V?	515.320	50		Ar V	522.09	150	3
Kr	515.36	60		He I	522.2128	160	4
O II	515.498	250	17	F III	522.285	10	
Ca IX	515.576	40		S IV	522.54	200	
He I	515.6165	100	5	Br VII	522.60	50	
O II	515.640	200	17	Ti XI	522.66		
Na	515.952	100		Mn IV	522.780	120	
Na VI	516.00			Ar II	522.7924 st	450	12
Ti IX	516.14			Sc XI	522.810	200	
Si IV	516.348	200	6	K IV	523.001	250	
He I	516.3592	f		Mn IV	523.036	80	
Kr III	516.38	80		Mn IV	523.234	70	
Br VI	516.45	800		Sc IX	523.490	100	
C II	516.652	10d-A	9.09	Se III	523.53	50	
Zn III	516.837	8		F III	523.662	60	
K VII?	516.853	50		He I	523.7238	f	
C II	517.07	100d-A	9.08	K III	523.792	250	2
Ar V	517.25	25		Se III	524.01	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti VI	524.113	900		C II	530.359 P	400	6.06
Se III	524.15	300		C II	530.454 P		6.06
Ar V	524.19	250	3	Ar II	530.4954 st	450	
Zn	524.323	15		Sc	531.13	250	
Sc	524.43	100		Se III	531.14	300	
F V	524.594	200		Kr III	531.255	50	
K VII?	524.639	100		C II	531.721 P	5 -A	9.07
Ar II	524.6803 st	450		C II	531.742 P	5 -A	9.07
Cu IV	524.787	17		Sc	531.82	250	
Zn III	525.109	5		C II	531.917	100d -A	9.07
Se III	525.13	50		Br V	532.00	1000	
F V	525.292	300		Zn	532.310	12	
Kr	525.33	150		Ar III	532.41	350	
Ca IX	525.43			C II	532.659 P	100 -A	9.06
Sc	525.49	200		Cl VII	532.7		
K VII	525.612	150		C II	532.705 P	200 -A	9.06
Fe IV	525.68	1000		Se III	533.07	100	
Kr III	525.69	80		Ar II	533.0794 st	30	
Sc	525.79	150		Ni IV	533.155	200	
O III	525.795	900	8	Si III	533.226 P		6.05
Sc	526.28	200		Sc VII	533.43		
Fe IV	526.28	750		N II	533.511	350	
Mn IV	526.293	20		Zn III	533.517	10	
F V	526.297	400		Si III	533.530 P		6.05
Se III	526.40	400		Ti XI	533.55		
K IV	526.448	200b		N II	533.581	400	5
K VII	526.453	100		Si III	533.592 P		6.05
Ar VIII	526.46	250		Zn III	533.646	4	
Ar II	526.4969 st	210		N II	533.650	350	5
Fe IV	526.60	600		N II	533.729	500	5
Mn IV	526.858	0		N II	533.815	350	5
Ar VIII	526.87	50		C II?	533.935	100d	
Sc	526.99	200		K	534.059	100	
K IV	527.064	100		Si III	534.189 P		6.05
Mn IV	527.402	0		Ar III	534.26	50	
K	527.565	0		Si III	534.276 P		6.05
K IV	527.617	150		Si III	534.339 P		6.05
Ar V	527.69	300	3	Mn IV	534.396	0	
Sc	527.89	200		Ni IV	534.408	210	
B III	528.245	10		Sc VII	534.50		
Ca	528.286	400		Mn IV	534.504	90	
K	528.519	100		Cl IV	534.73	800	
Sc	528.58	350		Mn IV	534.780	60	
Ar II	528.6511 st	30		K V?	534.873	100	
Na VI?	528.730	10		Mn IV	534.876	40	
Ca VI	528.746	150		Cl IV	535.04	400	
Kr III	528.809	100		Ar II	535.0711 st	15	
K IV	528.879	50		S XII	535.1 P		
Sc	529.16	300		F VI	535.207	60	
O V	529.20	240w		C III	535.2885	850	11.32
N II	529.355	250	6	Mn IV	535.352	150	
N II	529.413	250	6	Cl V	535.46	200	
N II	529.491	250	6	N VII	535.51 P		
N II	529.637	250	6	Mn IV	535.562	20	
N II	529.722	250	6	Ar III	535.58	350	
K III	529.796	400	2	Cl IV	535.67	700	
Ge IV	529.83	20		Kr	535.71	60	
N II	529.867	400	6	Cl V	535.92	200	
Ar III	529.90	450		Ca VI?	536.008	20	
N III	530.037	200		Kr	536.14	80	
N III	530.268	250		Cl IV	536.15	600	
C II	530.274 P	300	6.06	K V?	536.216	100	
As IV	530.3	100		Ni IV	536.302	630	
Ca VI	530.303	500		Mn IV	536.324	70	
Kr III	530.308	200		Cl V	536.53	300	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni IV	536.556	570		He I	540.9354	f	
Ca IV?	536.790	85		Mn IV	541.117	100	
Ni IV	536.849	490		Ne IV	541.127	400	
Sc IX	536.901			Cl V	541.28	300	I
Ne IV	536.97	5		Ar II	541.3019 st	60	
Cl V	537.01	400		Sc	541.31	350	
Zn III	537.019	8		Ni IV	541.434	280	
He I	537.0296	400	3	Mn IV	541.667	350	
Ni IV	537.073	460		Ni IV	541.709	390	
As IV?	537.1	150		Mn IV	541.814	100	
Ar II	537.1396 st	150		Mn IV	541.858	400	
Cu IV	537.311	17		Ne IV	542.073	500	I
He I	537.3309	f		Ni IV	542.099	210	
Se III	537.38	50		Mn IV	542.101	300	
Ar II	537.4193 st	30		Cu IV	542.103	13	
Cl V	537.46	300		Sc	542.11	150	
Ar III	537.46	300		Cl V	542.23	800	
Cl IV	537.61	900		Ca IX	542.26		
Sc IX?	537.612	300		Cl V	542.30	600	
Ge IV	537.78	20		Ni IV	542.33	210	
O II	537.830	450	7	Cl V	542.40	300	
Ni IV	537.976	690		Mn IV	542.454	400	
Cl V	538.03	500		Ni IV	542.53	560	
C III	538.0801	900	5	P V	542.57	500	
Cl IV	538.12	600		Ge III	542.57	40	
C III	538.1487	950	5	Mn IV	542.653	300	
Br IV	538.25	200		Sc	542.68	300	
O II	538.256	500	7	Zn	542.762	10	
C III	538.3120	1000	5	Cu IV	542.810	14	
O II	538.318	350	7	O IV	542.859	2	
Ar IV	538.41	40		Cl V	542.87	400	
Ni IV	538.520	200		Ar II	542.9123 st	300	
Se III	538.53	200		S III	543.03	200	
Kr III	538.54	160		O IV	543.118	5	
Cl IV	538.60	400		Ni IV	543.20	430	
Cl V	538.68	400		Ar II	543.2032 st	450	
Ar III	538.79	300		Ti XI	543.23		
He I	538.8956			C II	543.257	200d	6.05
Cl V	538.98	300		Kr III	543.417	250	
Ni IV	539.027	220		C II	543.444	300d	6.05
Zn III	539.072	2		Ar II	543.508	20	
O II	539.086	400	2	K IV?	543.640	100	
Se III	539.31	50		Ar II	543.7305 st	270	
Ca VII	539.395	50		Ni IV	543.807	100	
Si X	539.44			Cl V	543.82	100	
Cl V	539.44	10		Ne IV	543.891	750	I
O II	539.547	400	2	K IV?	543.973	50	
Kr	539.59	120		Ni IV	544.01	110	
Ni IV	539.607	610		Mn IV	544.016	300	
Ni IV	539.72	150		Se III	544.03	200	
Ne IV	539.73	15		Kr VI	544.03	600	
K III	539.731	150		Sc	544.06	300	
Ar	539.79	50		Ca VII	544.118	50	
O II	539.853	350	2	Ca VII	544.174	50	
F V	539.91			Zn	544.195	15	
C VI	539.95 P			Ca VII	544.269	50	
Li III	540.00 P			Kr III	544.410	200	
Mn IV	540.103	50		Mn IV	544.533	350	
Kr	540.35	200		K V?	544.537	50	
Cu IV	540.647	24		K V?	544.627	50	
Kr III	540.79	100		Ar VI	544.73	160	
Ar II	540.8066 st	30		Mn IV	544.752	350	
Ni IV	540.807	450		K IX	544.855	50	
Kr III	540.860	300		P V	544.91	550	
Mn IV	540.892	300		Se III	545.00	100	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni IV	545.08	130		Cl IV	551.12	200	
Cl V	545.11	1000		S IV	551.17	200	5
Cu IV	545.110	12		Si X	551.20		
K IX	545.232	100		Kr II	551.328	40	
Cu IV	545.416	11		Ar VI	551.37	320	
Br IV	545.43	500		Ca VII	551.460	250	
Mg VII	545.98			Kr	551.48	300	
K III	546.123	150		Cl IV	551.64	100	
Ar II	546.1768 st	240		Kr III	551.685	200	
Cu IV	546.319	20		C II	551.874	10	6.03
Cl V	546.33	600		Cl VI	551.99	500	
Kr III	546.549	250		Cl IV	552.02	700	
Kr III	546.687	150		Cl VI	552.05	100	
Sr	546.75	150		F V	552.06		
Ni IV	546.75	110		Ca III	552.411	10	
Zn III	546.892	0		Ni IV	552.44	130	
F II	546.852	600		Cl III	552.91	200b	
C II	547.140 P		-A 9.05	Ar II	553.1263 st	60	
C II	547.153	10	-A 9.05	Cu IV	553.144	17	
Ar II	547.1650 st	270		Cl IV	553.30	600	
C II	547.277	5	-A 9.05	O IV	553.330	900	3
C II	547.291	5	-A 9.05	Ar III	553.47	450	4
Cu IV	547.294	24		Cu IV	553.645	12	
Kr	547.37	60		O IV	554.075	950	3
Cu IV	547.451	23		K VI	554.136		
Ar II	547.4605 st	360		Cl IV	554.21	100	
Cl V	547.63	1000		O III	554.275	10	
N II	547.818 P	10		Br IV	554.48	800	
F II	547.874	450	2	Ar V	554.50	120	
Ca VI?	547.898	150		O IV	554.514	1000	3
Br V	547.94	1000		Kr VI	554.52	500	
Ar II	547.9960 st	120		Cl IV	554.62	700	
Kr V	548.04	60		C III	554.63	200	11.16
F II	548.322	300	2	Se III	554.73	100	
P XII	548.38			Kr III	554.796	250	
Sc	548.45	200		Mg VII	554.89		
F II	548.516	200		Ni IV	554.90	100	
Mg VII	548.54			Ca VI	554.990	50	
Cu IV	548.650	28		O II	555.056	250	6
Kr III	548.654	150		O II	555.121	250	6
Ar II	548.7808 st	210		O IV	555.261	900	3
Ar VI	548.91	200		Cl IV	555.49	100b	
Ca V?	549.070	150		Cl VI	555.49	1000b	
Ni IV	549.10	140		Cl VI	555.58	150	
Cl IV	549.22	500		Zn III	555.627	0	
P XV	549.3 P			Ar VI	555.64	160	
C II	549.3195 ST	300	6.04	Ar II	555.7659 st	90	
Ni IV	549.33	140		Cu IV	555.858	17	
C II	549.3785 ST	400	6.04	Zn III	555.979	0	
Zn III	549.491	4		Cl III	556.23	600	3
C II	549.5110 ST	500	6.04	Cl III	556.61	700	3
C II	549.5700 ST	300	6.04	Zn III	556.763	6	
Br IV	549.75	900		Ar II	556.8169 st	360	
Br V	549.81	600		Ar III	556.89	300	4
As IV	550.0	50		K VIII	557.029	50	
Al XI	550.01			Cl III	557.12	700	3
Cl IV	550.02	400		Ca X	557.740	100	
Ca VII	550.194	200		Br IV	557.94	600	
K III	550.323	50		Sc III	557.995	10	
Cl VI	550.36	250		Sc VII	558.023	200	
Se III	550.40	50		Cl II	558.14	100	
Ar II	550.4810 st	120		Mg VII	558.22		
Cl IV	550.71	300		Se III	558.26	100	
Ar II	550.9045 st	30		Ar III	558.32	250	4
Cu IV	550.915	32		Cl III	558.39	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar V	558.48	250	7	Ca VI	563.066		
Mn IV	558.495	300		Sc VII?	563.401	200	
Ne VI	558.59	50		Kr	563.53	400	
Ca V	558.602	500		Cl II	563.58	10	
Sc III	558.608	10		Se VII?	563.7	50	
Ne VII	558.61	400b		Zn III	563.759	1	
Mn IV	558.624	0		Br IV	563.79	900	
Zn III	558.641	0		Br IV	563.92	800	
Kr III	558.642	250		Cl III	564.29	400	
Mn IV	559.231	350		Zn	564.305	10	
Zn III	559.239	6		K VIII	564.462	300	
Kr II	559.315	120		Cl III	564.51	200	
Si IV	559.533	2	5	Ne VII	564.529	200	
Mn IV	559.544	0		C II	564.565	40	-A 9.03
Zn III	559.628	2		C II	564.562	40	-A 9.03
Br IV	559.74	900		C II	564.608	100	-A 9.03
N II	559.762 P	10		C R	564.635	50	-A 9.03
Ne VII	559.947	300		C II	564.663	200	-A 9.03
Cr XIII	560.11			C II	564.698	40	-A 9.03
Mn IV	560.181	300		Se III	565.04	50	
Ar II	560.2232 st	270		K VIII	565.112	150	
C II	560.2394 ST	400	6.02	Kr III	565.128	200	
F V	560.24			Cl III	565.27	300	
Al III	560.3173	500	3	Si III	565.289	20	6.04
Al III	560.4331	200	3	Ca IV	565.463	150	
C II	560.4367 ST	500	6.02	Cl III	565.48	400b	
C II	560.4386 ST	40	6.02	Cl VI	565.48	400b	
Zn III	560.513	8		C III	565.5280	700	11.31
Cl III	560.64	100		Kr III	565.645	300	
Kr II	560.792	40		Si III	565.698	40	6.04
Si IV	560.980	5	5	Cl II	565.75	10	
Kr III	560.984	200		Kr III	565.88	80	
Ar IV	561.06	20		O V	566.232	80	
Sc VI	561.176	300		Se III	566.24	20	
Ca VI	561.300			C III	566.48	400	11.30
Se VII?	561.3	50		Si III	566.546 P		6.04
Ne VII	561.378	200		Si III	566.613	160	3
Cl III	561.53	700	5	Cl VI	566.63	200	
K VIII	561.593	150		Mn IV	566.757	30	
Mn IV	561.598	90		Cl II	566.77	10	
Cl III	561.68	700	5	Sc VI	566.790	100	
Ne VII	561.728	400		Sc	567.23	350	
Cl III	561.74	700	5	Mn IV	567.295	80	
Kr II	561.732	40		Br IV	567.40	500	
O V	561.959	80		Cl VI	567.48	100	
Ca III	561.969	25		F III	567.636	150	
O V	562.080	120		F III	567.686	400	
Ca VI?	562.250	150		F III	567.752	300	
Cl II	562.28	300		F III	567.801	150	
Mn IV	562.288	80		Si III	567.878 P		19
C II	562.338	150	-A 9.04	P III	568.09	10	
C II	562.367	150	-A 9.04	Zn III	568.099	25	
C II	562.473	150	-A 9.04	Al XI	568.12		
C II	562.497	150	-A 9.04	Sc VII?	568.329	100	
Cl II	562.54	10		Ne V	568.42	400	1
Sc VII	562.547	300		Ti XI	568.44 ?		
C II	562.562	300	-A 9.04	Mn IV	568.774	30	
Ca III	562.607	10		Ca	569.122	50	
Kr III	562.69	100		Br IV	569.13	1000	
Ne VI	562.71	10		Kr VI	569.13	800	
Sc VIII	562.75			Kr III	569.160	300	
Kr II	562.792	40		Br IV	569.27	600	
Ne VI	562.80	150		K VIII	569.479	100	
Mn IV	562.806	50		Mn IV	569.614	200	
Ne VII	562.992	200		K VIII	569.696	20	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ne V	569.76	250	1	Si III	573.961 P		6.03
Mn IV	569.781	300		Ca X	574.007	50	
Ne V	569.83	500	1	Zn III	574.037	12	
P III	569.90	200h		O III	574.065	1	
K VIII	569.915	20		F IX	574.1 P		
Zn III	569.987	25		Sc	574.11	150	
Kr II	570.013	240		Zn III	574.161	2	
Cl VI	570.03	400		C III	574.2809	1000	11
Sc VI	570.307	300		Cu IV	574.284	14	
Cl VI	570.53	200		Cl II	574.37	300	
Ar V	570.61	80		F III	574.384	10	
F IV	570.640	800		Cl III	574.41	300	2
Mn IV	570.675	50		Sc	574.48	150	
Kr III	570.735	50		N II	574.650	500	11
Cl VI	570.88	10		Si III	574.799 P		6.03
Sc VII	571.256	400		Si III	574.814 P		6.03
F IV	571.304	800		Si III	574.824 P		6.03
Sc VIII	571.34			Kr III	574.952	100	
Mn IV	571.352	250		Zn	574.967	20	
Cl VI	571.38	100		Cr IV	575.11	250	
F IV	571.391	900		Cl II	575.30	10	
Cl VI	571.44	10		Cl III	575.58	300	2
K VI	571.643	20		Sc VI	575.580	300	
Mn IV	571.696	350		F IV	575.643	10	
Mn IV	571.774	350		Kr III	575.72	100	
Mn IV	571.923	20		Ni IV	575.816	410	
Zn III	571.927	15		Cr IV	575.88	50	
Sc VI	571.937	300		Kr II	575.907	80	
Cl II	571.95	100		Ne I	576.0052 st		
Kr III	571.98	300		Kr III	576.08	80	
Se VII?	572.0	100		F IV	576.265	15	
Ar II	572.0136 st	270	11	Cr IV	576.30	150	
Mn IV	572.021	30		F IV	576.359	10	
N II	572.069 P			Ni IV	576.378	440	
Ne V	572.11	250	1	Cl VI	576.42	200	
Zn III	572.151	10		Br IV	576.57	1000	
Mn IV	572.203	40		Kr II	576.653	40	
Br IV	572.26	300		Cu IV	576.660	14	
Ne V	572.34	800	1	Ca	576.662	50	
Mn IV	572.433	400		Cr IV	576.68	150	
F IV	572.663	1000		Ar II	576.7364 st	300	11
Mn IV	572.671	350		Sc X	576.79		
Cl III	572.69	400	2	Ne I	576.8650 st		
Zn III	572.788	20		C II	576.8748	100	6.01
K VIII	572.790	125		Kr II	576.998	20	
Mn IV	572.992	40		Zn III	577.031	25	
Ni IV	573.06	90		C II	577.0839	200	6.01
Zn III	573.187	12		Ne I	577.1040 st		
Kr III	573.231	250		Ar III	577.15	150	
Zn III	573.338	8		Ne I	577.1692 st		
Mn IV	573.352	80		Ni IV	577.203	250	
Sc V	573.356	1000		Cl VI	577.44	100	
Ar II	573.3619 st	360	11	Ne I	577.4886 st		
Se III	573.44	50		Zn III	577.590	15	
Ar III	573.47	200		Ne I	577.6047 st		
Si III	573.538 P		6.03	F IV	577.734	35	
Br IV	573.59	800		Ni IV	577.788	200	
Kr	573.65	300		V XII	577.93 ?		
Mn IV	573.677	500		Ne I	577.9749 st		
Zn III	573.695	8		Ne I	578.0715 st		
Mn IV	573.706	200		Kr III	578.09	10	
Cr IV	573.82	100		Ar II	578.1071 st	270	11
F III	573.886	20		Ne I	578.1270 st		
F III	573.935	1		Kr III	578.212	150	
Si III	573.951 P		6.03	Ar III	578.39	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Kr	578.47	60		Mn IV	582.993	500	
Ne I	578.5129 st			Ne I	583.1261 st		
Zn III	578.559	12		Ca III	583.350	10	
Ar II	578.6043 st	270	10	Mn IV	583.390	450	
Ne I	578.6056 st			Ar II	583.4371 st	300	10
Ne I	578.6185 st			Mn IV	583.480	350	
Ca VI?	578.732	200		Mn IV	583.618	40	
Ne I	578.8224 st			Ne I	583.6893 st		
Ni tV	579.008	690		Mn IV	583.824	150	
Kr II	579.101	20		Mn IV	583.945	100	
Mn IV	579.155	450		O VIII	584.05 P		
Ni IV	579.172	460		Mn IV	584.063	150	
Ar III	579.21	150		Cl II	584.10	100	
Kr II	579.414	40		Mn IV	584.124	100	
Ne I	579.4722 st			Mn IV	584.296	150	
Ne I	579.4888 st			He I	584.3340	1000	2
Ne I	579.7711 st			Mn IV	584.443	550	
Ca VI?	579.775	100		Cu IV	584.444	12	
Mn IV	579.787	600		Mn IV	584.835	500	
Kr III	579.831	300		Br IV	585.08	900	
Ni IV	579.833	450		Zn III	585.100	2	
Ne I	579.8411 st			Kr III	585.141	300	
P III	579.98	1h		Mn IV	585.208	600	
Mn IV	580.026	500		Ne I	585.2472 st		
Ca III	580.058	10		K VIII	585.25		
Sc	580.10	350		C III	585.261	600	11.15
Ar II	580.2631 st	360	10	Ne I	585.3042 st		
Mn IV	580.298	30		Kr VII	585.37	1000	
K V	580.319	750		C III	585.417	800	11.15
Kr II	580.345	20		C III	585.496	500	11.15
Mn IV	580.383	350		K V	585.510	250	
O II	580.400	300	15	Mn IV	585.586	500	
Cl VI	580.44	200		C III	585.608	600	11.15
Ne I	580.5119 st			C III	585.666	600	11.15
Kr III	580.580	250		Kr II	585.688	80	
Kr VI	580.63	600		Mn IV	585.736	450	
Ne I	580.6893 st			Ar VII	585.75	750	
Ne I	580.7137 st			Kr III	585.955	300	
O II	580.967	350	15	Zn III	586.087	8	
Cu IV	580.970	13		Mn IV	586.245	350	
Mn IV	581.099	300		Cl II	586.25	10	
Ne I	581.1219 st			Kr II	586.269	40	
Kr II	581.219	40		Sc	586.29	150	
Sc VI	581.404	400		Ne I	586.3140 st		
Mn IV	581.442	600		K V	586.322	500	
Ca VI?	581.466	150		Ca III	586.547	10	
Kr II	581.500	120		Mn IV	586.590	30	
Mn IV	581.650	600		Br IV	586.69	1000	
P III	581.90	1h		Cl III	586.87	400	
Mn IV	581.914	40		Mn IV	586.873	450	
Mn IV	582.089	80		Sc X	586.96		
Sc III	582.114	20		Ar VI	587.01	40	
Zn III	582.123	10		C III	587.08	300	
N II	582.156	400	10	Mn IV	587.157	350	
Br IV	582.22	600		Zn III	587.194	4	
Mn IV	582.400	30		Ne I	587.2128 st	35	
Kr	582.42	80		Mn IV	587.232	350	
Ne I	582.4691 st			Cl III	587.30	400	
Ne I	582.5064 st			Ca III	587.354	50	
Ne I	582.5982 st			Kr III	587.378	50	
Sc III	582.785	30		Kr III	587.536	50	
Mn IV	582.785	450		Mn IV	587.574	200	
Ca VIII	582.834	150		Ca VI?	587.604	100	
Zn	582.852	20		Ca VI?	587.872	50	
Si XI	582.9 ?			Sc V	587.935	600	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Se VI	588.0	400		Mn IV	595.223	60	
Zn III	588.048	10		Ni IV	595.248	160	
F III	588.060	3		Mn IV	595.392	0	
Kr	588.08	800		K. III	595.53	140	
F III	588.208	6		Kr II	595.539	320	
Cl II	588.77	10		Mn IV	595.684	550	
F I	588.84	P	-A	Ne I	595.9200	st	100
Ar VI	588.92	200		Sc X	595.98		
Ca III	589.013	25		Ci III	595.99	300	
Zn III	589.146	6		Se V	596.0	500	
Ne I	589.1792	st	35	Ni IV	596.050	400	
Kr II	589.265	200		Mn IV	596.174	450	
Ar VI	589.78	80		Cl III	596.24	400	
Cl II	589.82	10		Kr III	596.412	300	
Sc	589.83	400		Be IV	596.44	P	
Ne I	589.9113	st	35	Kr III	596.584	200	
Ne I	590.0105	st		Ca III	596.675	50	
F I	590.25	P	-A	Ar VI	596.69	160	
Ca VI?	590.396	150		Ca VIII	596.940	150	
Ca III	590.987	25		Kr II	596.956	160	
Cl III	591.12	300	6	Sc	597.10	50	
K IV?	591.237	50		Mn IV	597.107	400	
Se VII?	591.3	50		Kr III	597.19	120	
K IV?	591.311	50		Ca II	597.291	100	
Sc	591.37	300		Mn IV	597.298	450	
He I	591.4117	40	1	Fe IV	597.54	P	
Cl III	591.43	400	6	Mn IV	597.577	500	
Ca III	591.584	150		Mn IV	597.644	450	
Cl III	591.65	400	6	Ar II	597.7000	st	360
Mn IV	591.707	150		O III	597.818	750	9 13
Zn III	591.710	2		Mn IV	597.820	150	
Sc	591.75	300		Ca VIII	597.832		
Ne I	591.8303	st	70	Cl VII	598.21	600	
Cl III	591.96	200	6	Mn IV	598.525	500	
Br IV	592.03	900		Kr II	598.643	40	
Mn IV	592.230	0		Zn III	598.665	2	
Mn IV	592.599	120		Sc VII	598.67	100	
Zn III	592.677	0		Ne I	598.7056	st	75
Ni IV	593.156	120		Kr II	598.805	200	
Mn IV	593.279	100		Fe IV	598.82	P	
Mn IV	593.329	80		Ne I	598.8908	st	35
Ca V?	593.404	50		Kr II	598.978	160	
Ca V?	593.472	50		Cl II	599.19	10	
Kr III	593.703	300		Sc	599.57	250	
Ni IV	593.848	100		C III	599.598	900	7
Kr III	594.098	300		Br IV	599.60	800	
Ar VI	594.10	100		Cl IV	599.73	200	
Mn IV	594.106	120		Mn IV	599.848	40	
Ca V?	594.239	50		Se VII?	599.9	200	
Mn IV	594.260	120		Kr II	599.954	200	
Kr II	594.286	40		Ne I	600.0365	st	70
Ni IV	594.291	130		Br IV	600.08	800	
Cl II	594.49	10		F III	600.104	10	
Mn IV	594.503	350		Kr III	600.172	400	
Cl III	594.64	400		C II	600.251	100	-A 9.02
Ni IV	594.702	300		Mn IV	600.257	350	
C II	594.8000	ST	6	C II	600.337	P	100 -A 9.02
Kr	594.84	300		C II	600.353	300	-A 9.02
Mn III	594.872	0h		F III	600.390	6	
Mn IV	594.959	500		C II	600.503	100	-A 9.02
Ca III	594.978	50w		C II	600.518	100	-A 9.02
C II	595.0210	ST	6	G II	600.585	300	14
C II	595.0245	ST	6	Zn III	600.599	2	
Sc	595.06	50		Mn IV	600.614	100	
Cr IV	595.09	150		As V	600.7	150	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
K I	600.765	300	2	Cl III	606.35	500	4
Ca III	600.852	25		Kr III	606.466	350	
Ca VI	600.917	300		Ne IV	606.53	25	
Mn IV	600.917	40		Mn IV	606.648	80	
Se V	601.0	400		Ca III	606.756	10	
Mn III	601.035	5h		Kr	606.79	120	
Kr III	601.142	250		F II	606.904	1000	1
Mn IV	601.153	300		Cu IV	606.917	12	
Br IV	601.26	1000		F II	606.922	600	1
C VI	601.31	P		Br IV	607.02	600	
He I	601.4041	f		Cl IV	607.09	300	
N III	601.468	100		Se VII?	607.2	50	
Mn IV	601.499	70		Zn III	607.364	10	
Cl IV	601.50	500		F IV	607.37		
Ca VI	601.700	250		F II	607.472	700	1
Se V	601.7	400		Mn IV	607.478	200	
Mn IV	601.788	10		Fe IV	607.54	P	
N III	601.878	10		K II	607.931	250	3
Mn IV	602.115	80		F II	608.063	850	1
Al IX	602.18			Kr II	608.134	240	
K V	602.269	250		O IV	608.398	800	2
Ca VI	602.389	20		Se VI	608.4	300	
Ni IV	602.50	140		Br IV	608.56	800	
Mn IV	602.535	300		Mn IV	608.577	50	
Ne I	602.7263	st		Fe IV	608.81	P	
Mn IV	602.798	40		Cl IV	608.90	400	
Ar II	602.8584	st	9	C III	609.04	400	11 48
Ne IV	603.00	10		Ne IV	609.17	5	
Mn IV	603.129	0		Mn IV	609.188	0	
K V	603.429	400		V XII	609.24		
Ca	603.622	150		C III	609.275	600	11.29
Br IV	603.65	500		Cl III	609.57	400	4
Kr III	603.667	300		O III	609.705	300	16
Mn IV	603.788	10		Mg X	609.76		
As III	603.8	90		O IV	609.829	850	2
Kr III	603.856	200		Cl III	609.90	10	4
Mn IV	603.863	100		O III	610.043	350	16
Zn III	604.082	1		Ca III	610.225	10	
Si XI	604.14			Fe IV	610.39	P	
Ar III?	604.15	500		Mn IV	610.509	10	
Mn IV	604.177	40		Br IV	610.55	200	
Kr III	604.365	150		O III	610.746	400	16
O V	604.416	280		O III	610.850	300	16
Cl IV	604.59	500		Kr	610.89	80	
Cl VII	604.79	1000		Mn IV	610.967	450	
Kr	604.89	60		Se VII?	611.1	300	
Cl VII	605.05	50		Kr III	611.115	500	
K IV?	605.316	50		Ca	611.186	50	
Kr II	605.331	200		Kr III	611.19	160	
Mn IV	605.377	50		Mn IV	611.461	450	
Kr II	605.547	200		K VI	611.862	150	
Ne IV	605.60	10		Fe IV	612.02	P	
K VIII	605.61			Cl IV	612.07	400	
F II	605.670	850	1	K VI?	612.272	50	
Br IV	605.74	500		Mn IV	612.292	500	
Kr II	605.782	120		Ar II	612.3715	st	300
Cl III	605.86	100		Kr II?	612.488	150	
Kr III	605.863	500		K II	612.621	300	1
Si III	605.873	P	18	Cr IV	612.70	250	
Cu IV	605.874	11		Cl II	612.73	10	
Se VI	605.9	400		Zn III	612.787	0	
K IV?	605.908	50		V III	612.85	10h	
Cl III	606.10	200	4	V	612.99	10h	
Zn III	606.164	8		Se V	613.0	500	
F II	606.286	700	1	Al IX	613.10		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn IV	613.162	10		V III	618.89	0	
Kr II	613.374	200		Cl III	619.03	100	
Se VII?	613.6	300		Ne I	619.1023 st	120	5
Cr IV	613.76	200		Cr IV	619.12	200	4
Ca VI?	614.015	150		Mn IV	619.173	10	
Cr IV	614.09	200		V III	619.29	5	
Mn IV	614.153	400		Kr II	619.385	240	
Se V	614.3	400		Kr II	619.548	200	
As III	614.4	90		Mn IV	619.580	90	
Cr IV	614.51	20		N VII	619.84 P		
V III	614.63	0		Br IV	619.86	700	
As III	614.7	15		Cl II	619.95	10	
Kr VII?	614.86	200		Ga III	619.96 P	100	
V III	614.94	0		V III	620.17	5	
Cr IV	614.95	200		Mn IV	620.275	200	
Se V	615.1	100		Cl II	620.28	100	
Kr II	615.138	200		Ca	620.566	50	
Ni III	615.164	0		Cr IV	620.65	500	3
Kr II	615.227	200		V III	620.69	0	
Cr IV	615.36	150		Fe IV	621.01 P		
V III	615.48	0		Cl III	621.03	300	
Ni III	615.554	5		Kr II	621.074	320	
Ne I	615.6283 st	170	7	Br V	621.11	1000	
Cr IV	615.68	150		Cl II	621.12	400	
V III	615.90	0		Mn IV	621.176	70	
Mn IV	615.947	40		Cl III	621.28	400	
Na XI	616.0 P			Cr IV	621.33	300	3
As V	616.0	200		K IX	621.422	225	
V III	616.09	25		Kr III	621.451	400	
Mn IV	616.111	300		Kr II	621.911	280	
K VI	616.140	150		Mn IV	621.964	80	
Mn IV	616.277	300		Ga III	622.04 P	100	
O II	616.291	350	5	Cr IV	622.07	200	3
Zn III	616.310	8		C III	622.13	200	11.47
O II	616.363	200	5	Se VII?	622.5	300	
Kr III	616.725	350		Kr III	622.795	450	
Cr IV	616.82	250		V III	622.92	0	
O IV	616.952	350		K VI	623.011	250	
O IV	617.005	150		V III	623.27	5	
O IV	617.036	275		Cr IV	623.59	150	
V III	617.05	10		V III	623.67	5	
Cr IV	617.05	100	4	Cl III	623.77	300	
O II	617.051	300	5	Ar IV	623.77	250	
Kr II	617.065	320		V III	624.08	0	
Cl II	617.27	10		Cl VI	624.11		
Kr	617.27	600		Kr III	624.27	60	
V III	617.34	0		Ca VII	624.380	50	
Ca VI?	617.517	200		V III	624.42	0	
Cl II	617.61	100		O IV	624.617	750	6
Kr II	617.758	240		Ca III	624.821	50	
O IV	617.786	10		Mg X	624.93		
Cr IV	617.94 P	20	3	Si III	624.997 P		17
Cl II	618.02	200		Kr III	625.016	500	
V III	618.02	0		Cr IV	625.08	200	
Kr II	618.048	240		O IV	625.130	800	6
O IV	618.107	15		Ca III	625.269	10	
Cr IV	618.22	200	4	Ni III	625.306	15	
Br IV	618.25	500		Cr IV	625.40	100	
V III	618.41	0		K VI	625.495	150	
Kr II	618.511	240		Br IV	625.50	400	
Ar	618.63	200		He I	625.6	f	
Kr VII	618.67	400		Ni III	625.682	100	
Ne I	618.6716 st	170	6	Kr III	625.760	300	
Mn IV	618.780	250		O IV	625.852	850	6
Kr I	618.882	240		Kr II	625.901	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni III	625.936	15		K VI?	630.940	50	
Cr IV	625.95	200		Se IV?	631.0	300	
Mn IV	625.961	90		Cl III	631.01	100	
Kr	626.06	150		Ca III	631.015	25	
Kr	626.49	300		Se IV?	631.1	300	
Se VII?	626.5	200		Cr IV	631.30 P	40	2
Ni III	626.548	10		Zn III	631.444	5	
Cr IV	626.58	50		Cr IV	631.55 P	40	2
Cl II	626.70	100		Kr III	631.559	200	
Ne I	626.8232 st	200	4	Si XIV	631.6 P		
Ni III	626.923	30		Ar	631.68	60	
Sc III	627.069	70		Cr IV	631.74 P	40	2
O V	627.225	80		P IV	631.79	400	4
O V	627.351	160		B II	631.8		
Mn IV	627.432	50		Ca III	632.017	50	
Ni III	627.541	15		Br V	632.30	900	
K VI?	627.560	100		Cr IV	632.60	150	1
O V	627.636	200		Fe IV	632.64 P		
Cr IV	627.70	50	2	Ø VIII	632.7 P		
Kr	627.75	300		Na VI	632.90	10	
Sc III	627.846	80		Kr III	632.090	350	
Be IV	627.90 P			Cl V	633.19	400	
V III	627.90	10		Ca III	633.325	25	
Sc X	628.111	40		V III	633.37	0	
Mn IV	628.380	30		Kr II	633.380	280	
Cr IV	628.46	100	2	Ca III	633.468	10	
Kr III	628.588	450		Ca III	633.588	250	
Ca III	628.663	150		Mn IV	633.607	10	
Zn III	628.682	4		Kr III	633.630	250	
N V	628.744	70	27	Ca VI	633.815	100	
V III	628.86	5		V III	633.94	50	
N V	628.874	50	27	Cr IV	634.13	100	1
P IV	629.02	120	4	V III	634.16	5	
N II	629.167 P	300		Ar VII	634.21	100	
Cr IV	629.26 P	500	2	Cl II	634.24	100	
Cr IV	629.32 P	80	2	Si III	634.255 P		16
Mn IV	629.341	0		Kr II	634.272	240	
Cl V	629.35	300		Fe IV	634.45 P		
N II	629.447 P	200		Se VI?	634.5	400	
Ca VI	629.594	100		Zn III	634.807	10	
N II	629.670 P			V III	634.81	25	
Mn IV	629.685	180		Zn III	634.979	1	
O V	629.730	1000	1	Ar V	635.12	150	
Cr IV	629.73	250	2	N II	635.197	400	13
Ne I	629.7388 st	200	3	V III	635.22	10	
P IV	629.92	160	4	Cl V	635.32	400	
Ca III	629.922	25		Ni III	635.406	1	
Kr III	630.040	500		V III	635.41	40	
Br IV	630.12	1000		Cr IV	635.45	50	1
F III	630.137	150		Ca III	635.481	25	
F III	630.198	200		Zn III	635.498	6	
Cr IV	630.28	400	2	Fe IV	635.56 P		
Ar VII	630.31	100		Se VII?	635.8	400	
F III	630.327	2		Cl II	635.87	200	
Mn IV	630.329	150		V III	635.97	0	
F III	630.345	1		C II	635.9945 ST	300	5.01
Cl III	630.38	100		Se IV	636.0	800	
Ca VII	630.517	100		Kr II	636.152	280	
Mn IV	630.695	100		V III	636.21	0	
Se IV?	630.7	400		C II	636.2511 ST	400	5.01
Ni III	630.711	500		K IX	636.300	125	
Cl III	630.75	100		Ca III	636.318	25	
Ca VII	630.766	50		Kr III	636.35	20	
Cr IV	630.77	100	2	Ca III	636.388	10	
Cr IV	630.92	50	1	Cr IV	636.44 P	1	1

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cl II	636.62	200		Zn III	641.821	1	
Kr II	636.630	280		Kr	641.85	50	
Ar III	636.82	150	3	Ni III	641.866	100	
Cr IV	636.92	100		Na VI	641.87		
Ar VII	637.05	200		Ca V?	641.883	100	
Ni III	637.057	15		C II	641.888	650	-A 9.01
Cl II	637.06	100		V III	641.91	0	
V III	637.08	0		Mn IV	642.195	40	
Ca III	637.111	25		Zr III	642.216	6	
K VI?	637.195	50		Br IV	642.22	1000	
Ar III	637.28	1000	3	Se V	642.3	200	
Cr IV	637.40	150		Mn IV	642.588	300	
Ar VII	637.47	50		Ni III	642.611	1	
V III	637.49	5		Se IV?	642.7	500	
Ni III	637.535	200		Zn III	642.702	8	
Cr IV	637.54	250	10	Ca	642.812	100	
V III	637.73	0		Kr III	642.84	20	
Ca III	637.788	10		Se VII?	643.0	200	
Kr V	637.87	120		Zn III	643.026	12	
Ca V	637.928	400		Ca V	643.118	300	
Cr IV	638.12	250	10	Sc III	643.133	20	
V III	638.13	10		F V	643.21		
Na VI	638.21	10		Zn III	643.259	0	
Kr II	638.215	280		Ar III	643.26	450	3
Cl II	638.23	200		Kr II	643.399	200	
Cr IV	638.61	150		Sc III	643.597	20	
K V	638.668	250		F VI	643.969	10	
Kr II	638.960	240		Mn IV	643.983	50	
Zn III	639.060	20		O II	644.148	600	13
Ca III	639.124	50		Mn IV	644.273	300	
F IV	639.13		A	Al III	644.3339		
Ca VII	639.212	200		Ar VII	644.39	100	
Cl V	639.23	300		Ni III	644.488	0	
Kr II	639.263	280		Kr III	644.52	20	
Ni III	639.338	10		N II	644.634	650	4
Cl II	639.42	200		Mn IV	644.679	80	
Zn III	639.597	2		Zn III	644.700	30	
Cl III	639.76	100		Se IV?	644.8	400	
Zn III	639.850	4		N II	644.857	750	4
K V	639.982	100		Ni III	644.948	20	
Kr III	639.983	500		K V	644.963	20	
Mn IV	640.069	80		F VI	644.999	10	
Zn III	640.263	20		N II	645.178	850	4
Ca III	640.280	100		Ni IV?	645.305	30	
Ca VII	640.404	20		Al III	645.3063		
S II	640.41	50		Br V	645.49	1000	
Se IV?	640.5	300		Ni III	645.632	2	
Kr II	640.871	280		Si IV	645.759	150	15
Se IV?	640.9	400		Kr	645.77	400	
Mn IV	640.909	30		Mn IV	645.832	250	
S II	640.93	50		Zn III	645.836	15	
Cl III	640.93	100		Mn IV	645.931	10	
Mn IV	641.021	20		F VI	646.092	5	
Mn IV	641.132	100		Mn IV	646.133	80	
Cl III	641.30	100		Br IV	646.15	100	
Ar VII	641.32	100		K IV	646.188	750	
Ar III	641.36	250	3	F VI	646.360	35	
B II	641.5			Zn III	646.377	4	
C II	641.593	250	-A 9.01	Kr III	646.412	600	
C II	641.627	250	-A 9.01	Ca V	646.570	400	
Ni III	641.689	5		Mn IV	646.794	500	
C II	641.771	300	-A 9.01	Zn III	646.802	2	
C II	641.800	300	-A 9.01	Ni III	646.890	1	
S II	641.81	100		Mn IV	647.102	40	
Ar III	641.81	600	3	Ca VII?	647.292	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
F VI	647.307	10		Cl II	653.80	100	
Ni III	647.319	0		Mn IV	653.811	180	
F V	647.666	150		F III	653.833	6	
Fe IV	647.68	P		S IV	653.98	200	8
F V	647.768	400		Mn IV	653.988	150	
F V	647.868	500		F V	654.029	700	
Ca V	647.876	250		Kr VIII	654.19	300	
Mn IV	647.921	450		Se IV	654.2	800	
Zn III	647.927	1		O V	654.207	80	
F V	647.967	150		Mn IV	654.222	90	
Ni III	648.271	3		S IV	654.37	100	8
F VI	648.496	10		Ni III	654.445	10	
P IV	648.51	80		P IV	654.54	40	
Ca III	648.618	25		Fe IV	654.52	P	
S VI	648.65	100		O V	654.712	120b	
Mn IV	648.692	450		Ni III	654.768	5	
Zn III	648.755	12		P IV	654.86	120	
Ni III	649.066	2		Mn IV	654.870	490	
Ar	649.03	50		Zn III	654.977	0	
Zn III	649.318	6		O V	655.039	200	
Co III	649.342	1		Cl II	655.09	100	
P IV	649.69	20		Se VII?	655.1	50	
Br IV	649.78	600		Ni III	655.120	6	
Fe IV	650.12	P		Mn IV	655.122	250	
S VI	650.43	100		Mn IV	655.156	200	
Ni III	650.701	2		K	655.188	50	
Cl II	650.88	100		Mn IV	655.424	80	
Ar V	651.04	10		S IV	655.55	400	8
F VI	651.082	5		Kr II	655.681	280	
Cl II	651.13	100		P IV	655.78	80	
Kr III	651.201	500		Mn III	655.804	0	
C II	651.211	150	9	S IV	655.89	200	8
C II	651.234	150	9	As IV	655.9	20	
Zn III	651.261	10		Ca IV	655.998	750	
C II	651.269	400	9	F III	656.121	400	
C II	651.304	P	9	Mn IV	656.148	400	
Ca IX	651.31	300	9	S IV	656.30	100	8
C II	651.345	800	9	Ni III	656.431	1	
C II	651.389	P	9	Zn III	656.486	2	
Ca V	651.550	250		P IV	656.55	80	
Kr VIII	651.57	400		Ni III	656.724	1	
F III	651.622	3		Ca V	656.763	300	
Si III	651.668	80	6.02	Cl III	656.77	200	
Zn III	651.975	0		F III	656.869	500	
B II	652.0			Mn IV	657.077	400	
Mn IV	652.195	250		Kr II	657.095	360	
Si III	652.223	120	6.02	Cl III	657.17	200	
S IV	652.52	300	8	F V	657.227	500	
Ni III	652.652	30		Ni III	657.304	1	
Se IV	652.7	900		F V	657.333	800	
P IV	652.79	80		S IV	657.34	500	4
Ni III	652.837	1		Zn III	657.372	6	
Kr	652.90	400		Br V	657.60	600	
S IV	653.00	300	5	Ni III	657.668	0	
Cl III	653.01	200		K VI?	657.931	150	
Cu IV	653.010	15		Ni III	657.998	0	
Mn IV	653.018	0		Zn III	658.115	6	
K I	653.31			S V	658.26	300	3
Zn III	653.321	1		Br IV	658.28	100	
Si III	653.332	160	6.02	F III	658.329	600	
Ni III	653.496	10		K VII	658.420	200	
P IV	653.51	80		Mn III	658.481	0	
S IV	653.56	400	8	O III	658.578	50	
Zn III	653.575	0		Kr II	658.649	320	
Cl IV	653.70	400		Ni III	658.810	0	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Pr Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca IX	659.48			Cr IV	666.55	500	
O III	659.538	10		Ni III	666.585	30	7
C ⁺	659.694	50		F IV	666.662	1	
Kr III	659.718	500		Mn IV	666.694	400	
S V	659.85	400	3	Fe IV	666.74		P
Ni III	660.079	30		Mn IV	667.004	120	
N II	660.286	750		Ti XI	667.12		
Mn IV	660.344	80	9	Ca	667.126	100	
Ge III	660.50	20		F V	667.218	35	
Ni III	660.620	10		Cr IV	667.31	375	7
S IV	660.94	300		F V	667.315	15	
Br VI	661.05	1000	7	Cl II	667.49	100	
Ni III	661.061	5		Mn IV	667.706	0	
Mn III?	661.385	0		Ni III	667.783	5h	
K VI?	661.402	150		Ni III	667.976	1	
S IV	661.42	600		F III	668.195	6	
Cl II	661.67	10	4	Ni III	668.195	10	
Mn V	661.726	300		O V	668.225	40	
Cl II	661.82	200		Cl VI	668.30		
Ar II	661.8689 st	540	8	Fe IV	668.31		P
Cl II	662.15	100		Mn IV	668.433	80	
Mn IV	662.234	0		Ca	668.462	50	
Zn III	662.309	0		Mn IV	668.498	120	
K I	662.329	20		Ni III	668.697	1	
Ni III	662.366	200		Mn IV	668.736	180	
Cl IV	662.45	300		Cl IV	668.77	200	
Zn III	662.776	20		Kr II	668.835	320	
O V	662.928	40h		K VI?	668.864	150	
Cl II	663.08	200		Cr IV	668.87	80	
Mn IV	663.085	80		Ge III	669.27	10	7
V III	663.15	0		V III	669.33	5	
S V	663.16	500		Ni III	669.45h	5	
Br IV	663.19	200	3	Mn IV	669.486	60	
Mn IV	663.429	19		O V	669.628	200	
Ni III	663.568	150		F III	669.648	10	
Cl II	663.67	200		Ca IV	669.696	500	
S IV	663.70	300		Ni III	669.755	5	
Ge III	663.71	40	7	Mn IV	669.792	150	
Br IV	663.80	1000		Cl III	669.95	200	
Mn IV	663.884	450		Al X	670.06		
V III	664.12	0		Al III	670.0676	100	
Ar II	664.5622 st	300		Se IV	670.1	1000	
Cl II	664.67	200	8	V III	670.25	5	
S IV	664.82	300		N II	670.296	220	P
Mn IV	664.838	400	7	Kr III	670.301	150	
Ni III	664.851	100		Cl III	670.38	300	
Kr III	664.855	300		Ni III	670.440	0	
Ar	664.93	50		N II	670.515	120	P
V III	665.00	0		Mn IV	670.607	10	
Cr IV	665.00	30	7	Ni III	670.640	2	
Mn IV	665.015	40		Kr III	670.820	150	
Cl II	665.21	100		Ge III	670.85	60	
Se VII?	665.4	100		N II	670.884	100	P
Br III	665.54	1000		Ar II	670.9455 st	600	
F III	665.809	10		N II	671.016	500	8 3
Kr II	665.879	280		Ge III	671.02	5	
Ar II	666.0108 st	450		Kr III	671.06	140	
Mn IV	666.035	350	7	Ni III	671.065	0	
Cl II	666.08	300		Al III	671.1184	200	
S IV	666.11	400	7	Kr III	671.182	150	
Cl II	666.17	200		Mn IV	671.355	80	
Mn IV	666.255	80		Cl VI	671.37	400	
F III	666.258	6		N II	671.386	500	3
Mn IV	666.332	100		N II	671.411	650	3
Ni III	666.477	50		K VII	671.535	250	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N II	671.630	500	3	Cr IV	677.54	200	5
Si III	671.718	40	6.01	Ca III	677.620	100	
N II	671.773	500	3	Zn III	677.642	60	
Ar II	671.8513 st	900	6	Br III	677.70	800	
Mn IV	671.891	10		S III	677.75	200	7
Se IV	671.9	800		Ar II	677.9518 st	300	
N II	672.001	500	3	O V	677.968	80	
C V	672.06		28	Zn III	677.971	60	
Ca	672.083	50		Si III	678.055	40	15
Si III	672.293	80	6.01	S V	678.08	200	
K VII	672.302	20		Br VI	678.14	500	
Ca VI?	672.315	20		Al III	678.1548		
Kr III	672.335	400		Al III	678.1564		
N VII	672.42 P			S III	678.46	200	7
Cl IV	672.43	10		O V	678.612	120	
Ca VI	672.651	50		V IV	678.740	60	
Cu III	672.659	50	10	Se VII?	678.9	300	
Ge III	672.70	20		Cr IV	678.91	100	5
Kr III	672.852	350		F IV	678.991	700	
Ar II	672.8562 st	240	6	S III	679.11	200	7
O II	672.948	400	12	Fe III	679.129	200	
Cl III	673.13	300		O V	679.136	160	
Mn IV	673.208	40		Cr IV	679.19	20	
Ca VI	673.367	50		F IV	679.214	1000	
Mn IV	673.449	0		Ar II	679.2183 st	300	
Si III	673.477	100	6.01	Cl V	679.26	300	
Zn III	673.499	2		Mn IV	679.374	150	
Cl III	673.60	100		Ar II	679.4005 st	450	6
O II	673.768	350	12	V IV	679.647	50	
Mn IV	673.804	0		Mg VIII	679.77		
Ca VII?	673.895	50		Ca III	679.845	10	
P V	673.89	650		Mn IV	679.939	200	
Ca VI?	674.046	50		Ca III	680.049	50	
Mn IV	674.236	50		Kr III	680.126	350	
Ca VI	674.278	100		Cr IV	680.15	100	5
Kr	674.29	250		Ge III	680.22	40	
Se III?	674.47	500		Mn IV	680.265	300	
Se V	674.6	800		S V	680.33	300	
Kr III	674.835	250		Mn IV	680.362	350	
Cr IV	675.14	150		Se VII?	680.5	50	
K	675.335	50		P IV	680.57	20	
Ca III	675.424	10		Cr IV	680.62	40	5
V IV	675.469	30		V IV	680.72	40	
Cr II	675.6020	2		S III	680.69	200	7
Mn IV	675.654	80		F I	680.93	2 -A	
Cu IV	675.879	16		Ca IV	680.698	13	
F IV	676.119	800		Fe III	680.700	150	
S V	676.21	100		S V	680.94	500b	
Ar II	676.2424 st	360		S III	680.95	200b	7
Cr IV	676.47	100		Kr II	681.133	280	
Ca VII?	676.563	150		V IV	681.145	40	
Cu III	676.564	300	10	Cr IV	681.20	100	5
Kr III	676.568	350		O V	681.27	480	
Mn IV	676.647	80		Ca VII?	681.363	150	
Cl V	676.79	300		S III	681.50	100b	6
Ni III	676.941	500		S V	681.68	300b	
B III	677.000	500		Na IX	681.72	10	
Al III	677.0819			Cr IV	681.88	150	
B III	677.143	600		Cl V	681.92	400	
F IV	677.149	700		Co III	682.084	5	
Br II	677.19	1000		Fe III	682.10	150	
F IV	677.219	900		Mn IV	682.120	80	
Br IV	677.24	500		Cu III	682.171	200	10
S V	677.34	100		V IV	682.455	40	
V IV	677.345	200		F I	682.577	2 -A	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca III	682.632	150		Cu III	687.987	100	9
Kr II	682.800	320		S V	688.04	50	
Cr IV	682.82	200		K V	688.085	150	
V IV	682.923	40		Si IV	688.194	i	14
Ni III	682.947	5		Si IV	688.200	P	14
S III	683.07	50	6	Ca VII?	688.223	50	
Co III	683.140	3		Ar IV	688.39	300	3
Cl V	683.17	400		Si IV	688.395	P	14
Ni III	683.186	10		Cr IV	688.47	250	6
Zn III	683.268	0		Fe III	688.53	20	
Ar IV	683.28	400	3	Ca III	688.543	25	
Be IV	683.42	P		Br III	688.80	300	
Ni III	683.455	10		Cu IV	688.918	22	
S III	683.47	100	6	Cl V	688.93	400	
Ni III	683.590	10		Ar IV	689.01	500	3
Kr III	683.683	350		Ni III	689.210	100	
Ni III	683.918	10		Ca VI?	689.539	150	
Ca III	684.018	100		Mg VIII	689.55		
Mn IV	684.183	50		Ca III	689.602	150	
Se VII?	684.2	100		Ca III	689.708	10	
Fe III	684.28	70		Zn III	689.790	1	
Cr IV	684.35	50		S V	689.84	100	
V IV	684.368	500		Se VII?	690.0	100	
Ca VII?	684.383	100		Ar III	690.17	400d	2
V IV	684.450	100		Cu III	690.250	75	8
Cl IV	684.49	10		Se VII?	690.4	200	
Se III	684.56	100		C III	690.526	700	10
Ca III	684.659	25		Kr II	690.572	200	
Mn IV	684.707	50		Si III	690.689	40	14
Ca VII?	684.743	250		Kr	690.86	120	
Ar	684.81	100		Se III	690.89	50	
Cl II	684.83	10		Ca III	690.963	100	
Fe III	684.858	70		Ar II	691.0373	st	150
N III	684.996	700	3	Ca III	691.136	150	
Cu II	685.1406	8		N III	691.187	100	
S III	685.35	50	6	Mn IV	691.252	50	
Cu II	685.3968	2		N III	691.388	50	
Ca III	685.408	250		V IV	691.530	100	
N III	685.513	750	3	Cu III	691.557	100	9
Cu IV	685.810	21		Kr	691.73	300	
N III	685.816	800	3	S V	691.74	100	
Kr II	685.820	240		Kr III	691.930	450	
V III	685.96	5		Ca III	692.148	25	
S V	686.15	100		Sc	692.48	100	
Ca	686.190	100		Zn III	692.619	0	
Kr III	686.254	450		Cr IV	692.70	P	60
N III	686.335	700	3	As IV	692.9	250	9
C II	686.416	120	-A 12.08	Zn III	692.983	0	
C II	686.488	80	-A 12.08	V IV	693.128	30	
Ar II	686.4883	st	180	Mn IV	693.163	40	
Se VII?	686.5	100		Sc	693.20	100	
Fe III	686.63	70		Ar II	693.3018	st	180
Cu III	686.903	15		Fe IV	693.36	P	
S V	686.93	100		Kr	693.48	300	
K V	686.978	50		Ca III	693.487	200	
C II	687.0526	ST 800	5	Cu III	693.510	50	8
Cr IV	687.13	200	6	S V	693.52	200	
C II	687.3453	ST 1000	5	Cl II	693.55	10	
C II	687.3521	ST 110	5	Zn III	693.571	1	
K V	687.495	300		Ca IX	693.824	100	
Cl II	687.55	100		Cr IV	693.93	500	9
Se VII?	687.6	200		B II	693.947	200	2
Br III	687.68	900		Ca III	694.154	10	
Ca VII?	687.985	100		Na IX	694.17		
Kr III	687.985	450		Ca III	694.370	25	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
F V	694.40			Ni III	701.778	100	
K V?	694.477	100		As II	701.915	0	
S II	694.71	50		V IV	702.035	1	
F II	694.801	10		Cu III	702.112	20	
Se II	694.83	100		O III	702.332	800	2
Ar IV	694.85	100		Zn III	702.594	0	
Ca III	694.898	100		S III	702.78	P	5
Zn III	694.970	0		S III	702.82	P	5
Ca III	694.994	100		O III	702.822	800	2
Se III	695.02	200		O III	702.899	850	2
K V?	695.042	150		Fe III	703.506	70	
Ca III	695.219	50		Cu III	703.622	15	8
Cr IV	695.22	250	9	O III	703.850	900	2
Mn IV	695.248	20		Zn III	704.108	1	
Ca III	695.382	10		Ar II	704.5237 st	270	5
Ar III	695.54	300	2	Ca III	704.772	50	
Kr III	695.610	500		Kr III	704.843	250	
Sc	695.72	250		Fe III	704.923	70	
Al III	695.8289	500	2	Se VII?	705.3	400	
Kr VIII	695.91	800		Ar V	705.35	150	2
Ca III	696.031	50		Ca III	705.426	150	
Cl II	696.11	10		S II	705.62	50	
Al III	696.2170	400	2	K IV?	705.641	150	
K	696.608	50		O III	705.762	100	
Br III	696.99	700		Mg IX	705.8	P	
Ca VII?	697.281	100		Kr VI	705.84	1000	
Ar II	697.4890 st	150	5	Fe III	705.892	150	
Ca III	697.551	250		Zn III	705.979	1	
Se II	697.65	300		Ni III	705.991	0	
Ar III	697.74	100	2	Cr IV	706.00	250	8
Ca VII?	697.809	100		O III	706.224	150	
Cu III	697.930	20	9	O III	706.298	100	
Ar II	697.9418 st	180		Mn IV	706.383	60	
Ca VII?	697.972	100		F V	706.43		
Kr III	698.052	300		As II	706.44	0	
Ar IV	698.08	20		S VI	706.48	600	3
Zn III	698.157	0		Zn III	706.667	1	
As IV	698.5	350		Br III	706.98	400	
Ca III	698.690	10		O III	707.315	200	
S III	698.73	200	5	Cl II	707.43	400	
Ar II	698.7745 st	270	5	Fe III	707.444	70	
Br VI	698.81	600		Zn III	707.671	1	
Ca III	699.085	250		Sc	707.72	150	
Ar IV	699.41	240		Ni III	707.754	0	
V IV	699.497	30		S II	707.86	50	
Zn III	699.680	1		Kr III	708.365	500	
Ar III	699.72	50		Co III	708.767	15	
Ca III	699.891	250		K III?	708.838	200	
Zn III	699.904	0		Kr V?	708.85	600	
Sc	700.08	350		Ni III	708.853	5	
S III	700.15	300	5	Ca VII?	709.001	100	
Ni III	700.168	200		Ni III	709.027	100	
Cu III	700.182	20		Cl II	709.16	200	
Cu III	700.271	150	8	Se III	709.16	700	
Ar IV	700.28	320		Ar V	709.20	250	2
S III	700.29	300	5	Mn IV	709.244	90	
Ar VIII	700.40	1000		Br VI	709.31	400	
Se III	700.51	20		Cu II	709.3129	10	12
Fe III	700.575	70		Se III	709.40	700	
Kr	700.58	80		Se II	709.57	700	6
Ar	701.11	150		Mn IV	709.586	10	
Ni III	701.361	1		Mn IV	709.627	40	
Ca III	701.390	300		Ca III	709.802	10	
Br VI	701.46	800		Co III	709.912	10	
Cu III	701.692	15		Ca VII?	709.932	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co III	709.996	15		Ni III	715.563	100	
Se II	710.47	50		Cl II	715.58	300	
Ge II	710.487	5h		Ar V	715.60	200	2
K VI	710.525	50		Ar V	715.65	150	2
Cl II	710.53	10		Mn IV	715.715	0	
Co III	710.592	0		As II	715.789	0	
Zn III	710.603	2		O V	715.955	120b	
Ca VII?	710.671	100		K VI	716.012	100	
Kr	710.72	200		Zn III	716.052	0	
K VI?	710.932	50		Co III	716.055	2	
Co III	711.002	0		O V	716.137	120	
Se III	711.04	600		Cl V	716.19	716.19	
As IV	711.1	460		K VI	716.276	20	
Si II	711.34	0h-A	6.09	Ar	716.42	10	
Se III	711.38	600		O V	716.553	200	
Ca VII?	711.390	100		Ni III	716.608	20	
Ni III	711.518	20		Se VII?	716.7	100	
Br II	711.68	300		Ni III	716.708	20	
Co III	711.741	5		Zn III	716.758	1	
Ni III	711.772	100		Zn III	717.143	0	
Si II	711.83	1h-A	6.09	Cl II	717.15	200	
Cu III	711.834	3		Ca III	717.283	50	
V IV	711.911	20		Co III	717.490	1	
Zn III	711.924	0		C V	717.58		31
Mn IV	711.978	30		Ca III	717.836	50	
Cu III	712.040	5		Mn IV	717.945	150	
Kr II	712.042	360		Br II	718.05	20	
Co III	712.193	0		Ar II	718.0898 st	450	4
Cu III	712.473	15		Cu II	718.1787	10	11
F III	712.524	1		Ni III	718.287	10	
F V	712.64			Ni III	718.480	500b	
Cl II	712.66	300		O II	718.484	850	4
S VI	712.68	400	3	Br IV	718.50	1000	
K VI?	712.728	50		O II	718.562	800	4
S VI	712.84	300	3	Ni III	718.674	100	
Co III	712.890	2		Mn IV	718.893	0	
Cr IV	712.91	150		Cl II	719.26	100	
Ni III	712.976	100		As II	719.303	10	
K V?	713.041	50		Ge II	719.487	5h	
Cu III	713.262	10		Cu III	719.506	150	6
Ni III	713.332	300		As II	719.574	1	
Ni III	713.385	300		Zn III	719.765	!	
N V	713.518	85	30	Kr III	719.843	100	
Br II	713.65	50		Se III	719.97	600	
Ca VII?	713.793	150		Ni III	720.337	15	
N V	713.860	120	30	Se III	720.38	600	
As II	713.888	0		K V	720.432	300	
Zn III	713.904	10		As II	720.59	5	
Ar VIII	713.99	500		Se III	720.65	700	
Kr III	714.003	500		Ar	720.94	10	
Cl II	714.03	200		Se VII?	721.0	300	
Se VII?	714.1	100		Ni III	721.259	200	
Ca VII?	714.176	135		K VIII	721.4		
Ge II	714.206	2h		As II	721.409	0	
Ni III	714.254	100		Ni III	721.418	100	
Ca III	714.628	25		Ca VII?	721.514	50	
Kr III	714.77	40		Mg III	721.592	4	
Co III	714.836	0		Se II	721.88	20	
Sc	714.87	300		F IV	722.028	500	
C III	714.879	100	11.46	Kr III	722.04	1000b	
Ni III	714.965	1		Ni III	722.094	300	12
Co III	715.125	0		Zn III	722.182	0	
As V	715.5	350		Fe III	722.419	250	
Cu III	715.530	200	7	Ca VI?	722.456	100	
Cl V	715.55			Se IV	722.8	700	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V IV	722.912	40		Zn III	728.921	1	
V IV	723.045	40		C VI	728.93	P	
Ar II	723.366 ⁵ st	900	4	Cl II	728.94	300	
V IV	723.537	40		Li III	728.98	P	
V IV	723.652	40		As II	729.05	0	
Cu III	723.958	20		Ni III	729.249	100	12
V IV	724.068	40		Kr III	729.25	40	
Cl VI	724.13	150		Fe III	729.349	200	8
Se III	724.27	900		Cl II	729.39	300	
K VI	724.278	200		Ti IV	729.39	10	
S III	724.29	300	4	Kr II	729.404	480	8
K V	724.420	400 ^b		Cl II	729.52	200	
Ni III	724.471	20		S III	729.53	400	12
Cu II	724.488 ⁷	15	10	O VIII	729.61	P	
Ca III	724.762	10		Ni III	729.820	500	
V IV	724.809	5		K VIII	729.9		
Ca V	725.088	50		Fe III	729.996	300	8
Ar V	725.11	100		Br II	730.00	100	
Ni III	725.196	250	12	Ni III	730.014	50	
Cl II	725.27	300		Zn III	730.064	1	
K VI	725.331	20		Ni III	730.109	250	11
Mg III	725.347	7		Se III	730.25	200	
Zn III	725.533	0		Ca V?	730.257	250	
Ar II	725.548 ⁵ st	540	4	Kr III	730.267	100	
Cl II	725.64	200		Cl VI	730.31	200	
Al III	725.6826	200		Zn III	730.310	1	
Zn III	725.694	0		Cu III	730.365	150	7
Be II	725.71	100		Ca III	730.474	25	
K IV?	725.848	50		Sc III	730.600	100	2
S III	725.86	3	4	S III	730.78	300	3
Ca III	725.956	50		Mn IV	730.873	0	
Br VI	726.16	600		Cl II	730.92	300	
Cu III	726.295	10		Ar II	730.929 ⁷ st	360	4
Zn III	726.394	0		Zn III	730.946	0	
Se II	726.41	50	5	Fe III	730.96	150	8
Se III	726.42	800		Fe III	731.130	70	8
As II	726.51	25		Zn III	731.197	0	
O VIII	726.6	P		Ca III	731.215	100	
As II	726.661	0		B II	731.357	100	
Br II	726.71	100		Al XIII	731.4	P	
B V	726.73	P		B II	731.442	100	
Al III	726.915 ²	300		Fe III	731.443	70	
Zn III	727.002	0		Ni III	731.481	150	
Ni II	727.100	2		Se III	731.54	300	
Ca VII?	727.185	50		Fe III	731.612	150	8
As II	727.272	1		Sc III	731.655	150	2
As II	727.311	20		Ni III	731.696	400	
Ni III	727.313	15		Fe III	731.846	150	8
Zn III	727.332	0		K V	731.858	600	
Se III	727.51	100		Fe II	731.90	70	8
Cl VI	727.54	150		Fe III	732.004	200	8
Ca III	727.656	250		Cu III	732.026	100	5
Fe III	727.681	200	8	Ni III	732.158	300	
Br II	727.94	100		Ca III	732.244	100	
Ca III	728.004	50		Kr III	732.257	250	
As II	728.042	25		S III	732.38	500	3
Zn III	728.252	0		Fe III	732.425	150	8
Mg III	728.337	20		Zn II	732.605	1	
Fe III	728.52	70		Mg III	732.625	20	
Zn III	728.646	0		Cu III	732.688	5	5
S III	728.69	300	4	Ca III	732.894	250	
O V	728.733	320		F I	732.960	1	
Fe III	728.810	400	8	S III	732.98	50	
Se VII?	728.9	100		Ca III	733.096	10	
Cu III	728.906	2		Fe III	733.13	70	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Kr	733.17	50		Ni II	738.548	1	
Mn III	733.298	20		Fe III	738.742	70	
S III	733.34	50		Ca III	738.845	100	
As II	733.721	0		Kr	738.90	400	
Ni III	733.807	20		K VI?	739.177	50	
Cl VI	733.89	150		Fe III	739.264	300	
F III	734.047	6		Mg III	739.276	40	
S III	734.05	100		Se III	739.31	300	
Mn III	734.066	10		Fe III	739.594	150	
Ni III	734.100	5	12	Se I.I	739.64	500	
Zn III	734.185	0		Al III	739.6707		
Fe III	734.296	250		Fe III	739.724	250	
V IV	734.344	20		O V	739.84	40h	
Mn III	734.407	0		F III	739.851	20	
Mg III	734.441	60		O II	739.949	100	
Mn III	734.519	0		As II	739.990	25	
Se IV	734.6	800		Ni III	740.235	100	11
F I	734.542	1		Ar II	740.2691 st	450	3
F III	734.767	3		Sc X	740.32		
F I	734.795	1		Ca III	740.330	100	
As V	734.8	400		Ca III	740.553	400	
Zn III	734.828	1		Ni III	740.620	30	
Br VI	734.91	600		Br II	740.78	200	
As II	735.09	25		O II	740.838	10	
F I	735.154	1		Al III	740.9514		
As II	735.17	5		Al III	740.9550		
Cu III	735.224	100	6	Co III	741.032	1	
S III	735.25	400	3	O II	741.293	1	
Fe III	735.338	70		As IV	741.9	400	
F I	735.469	1		Mg III	741.932	20	
Cu II	735.5203	20	9	Se III	741.94	700	
Br IV	735.66	1000		K IV	741.950	500	
Co III	735.720	0		F III	741.955	35	
Cr III	735.89	200		Ni III	742.391	3	11
Ne I	735.8962 st	1000	2	Ca III	742.541	200	
Cu II	736.0319	25	8	As II	742.556	1	
Br VII	736.09	1000		Ca III	742.672	150	
Ca III	736.239	50		F III	742.699	60	
S III	736.25	200	11	Zn II	742.720	3	
Br III	736.33	800		Kr II	742.825	280	8
Fe III	736.47	20		Kr VI	742.83	1000	
Mg III	736.563	30		Zn III	742.964	1	
Ca III	736.693	200		As II	743.037	25	
As II	736.759	1		As II	743.101	1	
Cl VI	736.76	150		Kr II	743.125	280	7
Ca III	736.823	25		As II	743.161	1	
F I	736.987	2		Ni III	743.275	2	11
K IV	737.144	500		K V?	743.292	100	
K VIII	737.2			Cu III	743.303	20	5
As V	737.2	250		Br II	743.58	300	
Se III	737.23	700		Br II	743.7	10	
Ni II	737.300	5		Ne I	743.7195 st	400	1
Se II	737.30	50	5	Kr III	743.901	200	
Br II	737.37	150		Ni III	743.955	100	
Ni III	737.419	50h	11	Cu III	743.970	30	5
Ar II	737.4537 st	60	3	Kr	744.28	150	
Fe III	737.708	300		Ca III	744.293	50	
K	737.761	50		Mg III	744.342	40	
V IV	737.854	400		Ni III	744.400	5	
Co III	738.066	2		Ni II	744.636	2	
K	738.075	50		Ni III	744.784	100	
Se III	738.18	300		F III	744.818	20	
Ni II	738.201	2		Ni II	744.967	5	
Ni III	738.258	200	11	As II	744.869	2	
S III	738.47	400	11	S IV	744.92	500	3

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar II	744.9247 st	450	3	Ni III	749.677	200	8
F V	744.95			B V	749.74 P		
Ni III	745.058	40		Si IV	749.941	300	13
V IV	745.165	20		K IV	749.993	300	
Cl IV	745.21	400		Ni III	750.053	300	
K IV	745.264	500		V IV	750.110	150	
Ar II	745.3222 st	360	3	S IV	750.23	500	3
Ne X	745.4 P			K V?	750.230	150	
Br III	745.42	400		Kr	750.25	80	
Ni II	745.640	1		K V?	750.381	50	
Co III	745.762	0		F I	750.418	1	
Kr III	745.765	150		F I	750.610	3	
F I	745.767	2		As II	750.64	25	
N II	745.841	500	12	Mg III	750.745	12	
As II	745.855	0		As II	750.77	75	
Co III	745.959	0		V IV	750.809	40	
Se II	746.02	50	5	F I	750.885	1	
Ca III	746.060	50		As II	750.937	15	
Ni II	746.241	5		Ni III	750.983	150	4
Fe III	746.247	200		Kr III	750.99	80	
Ca III	746.248	300		Mg III	751.121	40	
Ni III	746.319	50h		Mg III	751.207	40	
K IV	746.350	400		Ni III	751.333	150	6
F I	746.400	1		Fe III	751.427	150	
Se IV	746.4	1000		Ni III	751.573	150	9
Ni II	746.525	0		Fe III	751.648	150	
F I	746.627	3		Se III	751.84	600	
Kr III	746.700	300		F I	751.861	4	
Kr III	746.83	100		V IV	751.908	50	
Cl II?	746.86	100		O V	752.019	40b	
N II	746.984	650	8	Ni III	752.023	200	9
Ni III	747.015	30		V IV	752.038	30	
Ni III	747.213	20		Kr II	752.045	400	
Zn II	747.358	5		Kr II	752.078	200	7
Cl III	747.42	100		O IV	752.150	5	
Cl III	747.55	100		Ni II	752.403	0	
As IV	747.6	450		Co III	752.485	0	
K	747.677	150		V IV	752.568	20	
Ni III	747.697	3		Ni III	752.603	100	4
K VI?	747.848	100		Ni II	752.626	4	
Ca III	747.978	250		As II	752.680	50	
Ni III	747.989	300	9	Co III	752.759	3	
F I	747.999	2		O III	752.762	200	
Co III	748.019	1		Cu II	752.80	0	
F I	748.134	1		F I	752.884	4	
N V	748.195	120	39	Mg III	753.247	12	
Ar II	748.1982 st	210	3	Ni III	753.252	30	
N V	748.291	150	39	F I	753.303	4	
As IV	748.3	400		Ar II	753.3654 st	15	2
F I	748.338	2		Ni III	753.378	10h	
Cr III	748.35	80		Cl II	753.66	10	
N II	748.369 P			S IV	753.76	500	3
O I	748.4	-A		K VI?	753.877	150	
S IV	748.40	500	3	F I	754.148	2	
C V	748.43		35	As II	754.176	0	
F I	748.580	4		K IV	754.194	150	
Kr VI	748.68 ?	150		Ar IV	754.21	160	
F I	748.709	2		As II	754.270	0	
K	748.783	50		F V	754.359	35	
F I	748.946	3		Fe III	754.478	150	
O I	749.3	-A		F V	754.490	60	
Ca III	749.479	150		Sc	754.49	250	
Mg IX	749.55			Cl II	754.55	10	
V IV	749.641	40		K IV	754.673	400	
C V	749.66		36	Co III	754.795	2h	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar II	754.8239 st	210	2	As IV	760.8	500	
Ar VI	754.93	100		Co III	760.825	30	7
Ar IV	755.21	120		Mg III	760.981	7	
Co III	755.253	5		O V	761.128	800	3
Si II	755.362	2 -A	6 08	As II	761.148	30	
Co III	755.512	0		Kr II	761.175	600	
Cl VI	755.55			Co III	761.202	1	
F I	753.603	2		As II	761.239	170	
Cr III	755.69	10		Ar IV	761.47	200	
O I	755.8	-A		Sc	761.50	400	
Co III	755.972	1		Ar II	761.5791 st	60	2
Co III	756.064	1		O V	762.003	840	3
Co III	756.338	5		Co III	762.038	1	
Cl VI	756.37			Ar II	762.2000 st	180	2
Se VI?	756.5	50		Co III	762.529	3	
P IV	756.51	246		Co III	762.694	0	
Cl IV	756.56	100		Mg III	762.756	12	
Cr III	756.59	10		Co III	762.775	50	6
Ni III	756.687	100	5	As IV	762.8	200	
O I	756.7	-A		N VII	762.88 P		
Mg III	756.808	7		Ni III	762.951	5	
C V	756.87		30	Co III	763.013	0	
As II	756.92	50		C V	763.07		34
F V	757.037	100		Co III	763.131	25	7
K V?	757.112	200		Cu II	763.29	0	
F V	757.158	35		N III	763.340	700	2
Fe III	757.167	150		Si XIII	763.35 P		
K VI?	757.199	200		Kr II	763.977	480	
Ni III	757.201	50	9	Ni III	764.014	100	
Fe III	757.279	150		As II	764.209	25	
Ni III	757.397	5		Co III	764.229	0	
Sc	757.56	300		Ni III	764.354	50	6
Cl VI	757.68			N III	764.357	750	2
Ni III	757.795	300	4	Co III	764.363	2	
Ni III	758.039	150		Co III	764.418	2	
As II	758.047	50		Ca III	764.699	100	
Co III	758.212	20	7	Co III	764.866	10	6
Ne IV	758.32	15d		Co III	764.959	20	7
Ca VI?	758.465	50		Co III	765.104	3h	
B III	758.476	100		N IV	765.148	850	1
K V?	758.559	50		P IV	765.28	10	
B III	758.668	200		K III?	765.314	200	
O V	758.678	840	3	Co III	765.561	3	
Ni III	758.733	250	4	K III	765.644	300	
Ni III	758.773	250	4	Mg III	765.655	20	
Se IV	759.0	300		N III	765.726	50	
Ni III	759.098	100	6	Ni III	766.000	5	6
As II	759.186	50		Kr II	766.205	480	5
As II	759.366	150		As II	766.41	0	
O V	759.441	800	3	Ca VI?	766.522	50	
Se III	759.54	200		Co III	766.667	10h	6
Co III	759.592	3		Ni III	766.693	100	
Co III	759.644	3		As II	766.97	1	
Se VII	759.8	200		Zn II	767.050	5	
Br III	759.87	300		Ar VI	767.06	200	
Co III	759.970	0		Cr III	767.30	10	
Ni III	760.024	15	6	Ni III	767.400	5	
C V	760.18		37	Cr III	767.61	10	
Co III	760.211	1		Co III	767.703	20	6
O V	760.228	700	3	Ar VI	767.71	100	
Ar IV	760.44	120		Co III	767.770	15	
O V	760.445	880	3	Cr III	767.83	20	
Ni III	760.452	10		Ni II	767.898	1	
Ni III	760.684	5	6	As II	768.091	150	
As II	760.766	125		Kr III	768.132	50	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	768.21	20		Ca V?	774.354	150	
Co III	768.458	20	6	Se II	774.43	200	
Cu II	768.48	0		O V	774.518	720	8
Cr III	768.51	30		K VIII	774.738	150	
Sc	768.62	150		Cl II	774.76	10	
As II	768.697	25		Al VIII	774.8	?	
Sc III	769.019	10		Se II	775.09	50	
Co III	769.128	10	6	As II	775.198	50	
Ar III	769.15	600	5	Sc III	775.31	50	
Cr III	769.20	40		Be II	775.362	400	
O I	769.3528		-A	Ni III	775.364	5	
K V?	769.402	100		Co III	775.446	2	
O I	769.4083		-A	Ca IV?	775.526	150	
Co III	769.459	3		As II	775.759	0	
Sc III	769.524	10		N II	775.965	1000	7
As II	769.60	10		Co III	775.992	10	
Ca	769.602	50		Ni II	776.000	3	
Br III	769.63	500		Ni II	776.078	5	
Cr III	769.66	30		Fe III	776.097	150	
Se III	769.74	100		P IV	776.37	120	
Sc	769.80	400		Cu II	776.48	0	
K VI?	770.022	50		Se IV	776.5	800	
Co III	770.192	1		Co III	776.688	20	5
Ni III	770.216	400		Co III	776.794	5	
O I	770.2600		-A	Kr	776.81	150	
K V	770.287	150		Ti IV	776.82	200	1
O I	770.2907		-A	Ni III	776.884	5	
Ca III	770.321	10		Cl IV	776.91	10	
O I	770.3464		-A	As II	776.91	75	
C IV	770.379	25d	11.17	F I	776.926	4	
Ne VIII	770.409	1000		K VI?	776.957	200	
O I	770.6986		-A	F I	777.010	5	
Co III	770.723	2		As II	777.06	15	
As II	770.76	25		Cu III	777.125	200	3
B II	770.8		-A	Ni III	777.181	100	
Sc III	770.89	600		Se III	777.31	800	
Ca VI?	770.928	50		Cr III	777.38	30	
Co III	770.967	0		Ca VI?	777.508	50	
Mn III	770.997	0		F I	777.531	4	
Cl II	771.00	10		Cl II	777.55	300	
Kr II	771.027	600	5	B V	777.57	P	
K VI?	771.103	250		As II	777.57	150	
K V?	771.376	150		As II	777.71	15	
K V	771.456	150		N V	777.712	35	30
N III	771.544	500	8	Cu II	777.7435	0	
As II	771.561	25		Na VII	777.83		
Ni II	771.626	1		Cr III	777.86	10	
Co III	771.638	10		Cr III	777.97	10	
Co III	771.868	30	5	F I	778.059	6	
N III	771.901	550	8	Zn II	778.112	5	
Ni III	772.040	200		Cr III	778.12	10	
Kr II	772.112	240	7	N V	778.172	40	30
N III	772.385	600	8	Se VII	778.2	400	
Ar IV	772.49	10		Cr III	778.29	10	
Ca III	772.498	100		Cr III	778.40	10	
Ca	772.641	100		V IV	778.433	0	
N III	772.891	450	13	K III	778.528	350	1
N III	772.975	400	13	Cu III	778.603	50	4
Co III	773.125	1		Ca VI?	778.718	50	
Ni III	773.464	100		Ni III	778.806	500	
Kr II	773.688	480	8	Ti IV	779.14	400	1
Cl VI	773.89			Zn II	779.163	10	
Ca V?	774.068	250		F I	779.192	2	
Br III	774.18	300		Cu II	779.2949	8	
K	774.192	50		F I	779.365	6	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	779.43	10		O V	784.795	80	
Co III	779.436	3		P II	784.81	5	
Br VII	779.58	800		Cu II	784.9125	0	
Ca III	779.608	250		Ni III	785.020	200d	
Co III	779.683	25	5	Ca III	785.120	150	
O IV	779.734	200	8	Co III	785.207	10	
O IV	779.821	400	8	Sc	785.21	450	
Ca III	779.902	10		P III	785.39	100	
F I	779.910	5		Co III	785.426	1	
O IV	779.912	500	8	Co III	785.677	1	
F I	779.972	2		Fe III	785.76	70	
O IV	779.997	200	8	As II	785.799	0	
Ca	780.116	50		Se V	785.8	500	
F I	780.134	1		Co III	785.883	15	4
Ne IV	780.25	15d		Kr III	785.968	600	
Ne VIII	780.324	500		Ne IV	786.14	5	
F I	780.390	15		Li III	786.145	20	
As II	780.46	25		Co III	786.159	50	
F I	780.519	10		P II	786.18	5	
Ni III	780.572	30		P III	786.24	100	
Sc III	780.597	60		Na VII	786.36		
F I	780.713	5		Cl VI	786.44		
Sc III	780.729	80		K V?	786.464	100	
Cr III	780.87	50		S V	786.48	800	1
Co III	781.130	20		Se II	786.49	400	
Co III	781.250	3		P II	786.52	5	
K	781.338	50		Co III	786.958	8	
Cr III	781.42	40		Cl II	787.15	100	
Ni III	781.486	50		As II	787.224	50	
Kr	781.64	150		As II	787.37	15	
F I	781.654	3		Co III	787.406	5	
P III	781.72	100		Co III	787.562	8	4
Ti IV	781.78	50	1	Cl II	787.62	300	
Cr III	781.88	30		O IV	787.711	850	1
Co III	781.983	15	5	Ni III	788.039	300	
Fe III	782.035	200		Cr III	788.05	20	
Se II	782.09	20		Co III	788.057	8	
Kr II	782.096	600	6	Cu III	788.072	400	4
Cr III	782.26	20		Ni III	788.298	200	
F I	782.378	10		Cu III	788.462	300	3
Cr III	782.45	10		O V	788.577	40h	
F I	782.575	2		Co III	788.693	2	
P II	782.59	5		Cl II	788.75	400	5
Se II	782.66	50		Se III	788.77	600	
F II	782.72	1		Cr III	788.90	30	
Se IV?	782.8	500		S III	788.98	400	10
P II	782.90	1		Cl II	789.01	700	5
Se III	782.96	200		Sc	789.21	450	
F I	782.976	5		As II	789.288	15	
P III	782.98	100		Co III	789.447	30	4
Fe III	783.069	200		Cr III	789.59	10	
Ar	783.14	250		Na VIII	789.6	P	
Co III	783.179	10		Co III	789.662	2	
Ni III	783.419	30		Cr III	789.81	10	
As II	783.542	15		Cu III	789.840	200	3
Ar	783.65	120		As II	789.841	50	
Se III	783.66	300		Ni III	790.000	20	
P II	783.71	5		F I	790.006	?	
Kr II	783.724	480	7	C IV	790.109	750	1
P III	783.75	100		Co III	790.197	50	4
Se II	783.84	100		O IV	790.199	900	1
As II	784.26	50		Co III	790.268	?	
C III	784.393	300	11.45	Ni III	790.450	20	
P II	784.46	1		Cr III	790.65	10	
K V?	784.713	100		Co III	790.688	25	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Se III	790.80	700		Se VII?	798.5	20	
Ca III	791.051	25		Ni II	798.518	30	
Se III	791.29	50		Ni III	798.572	2	
Cu III	791.371	300	4	Br III	798.76	400	
Co III	791.440	3		Se II	798.79	20	
O I	791.5136	80	-A	S II	798.92	50	
F I	791.875	12		Co III	798.034	0	
O I	791.9732	200	-A	Kr II	799.087	360	5
Cl II	792.19	200		S II	799.14	50	
O I	792.2330	60	-A	Ni II	799.145	2	
O I	792.5063	40	-A	Mg IV	799.166	10	
F I	792.536	10		Co III	799.237	2	
Fe III	792.559	200		Co III	799.361	0	
Se III	792.58	500		Ca III	799.529	50	
Co III	792.661	5		C II	799.660	500	-A 12.06
As II	792.720	60		As II	799.74	25	
Co III	792.833	5		Se III	799.76	400	
O I	792.9381	60	-A	Co III	799.919	100	
O I	792.9671	80	-A	C I	799.928	25	-A 12.06
Cu III	793.065	100	2	C II	799.944	350	-A 12.06
F I	793.237	1		Sc	799.97	250	
Cl II	793.34	300	5	S II	800.04	50	
Kr VII	793.44	600		Si III	800.066	100	13
Cl II	793.47	300	5	Se IV	800.1	500	
Co III	793.600	2		Ca III	800.301	250	
Kr II	793.617	280		Ni III	800.332	100	
Sc	793.93	250		Zn III	800.422	3	
Fe III	794.01	70		Co III	800.445	2	
Kr	794.11	150		S IV	800.47	400	6
Fe III	794.19	150		Se II	800.54	100	
F I	794.417	10		Ca III	800.550	200	
Zn III	794.474	0		Ar IV	800.57	200	2
Co III	794.493	1		Cl VII	800.70	150	
C II	794.964	10	-A	C VIII	800.8		P
C II	795.134	100	-A	Be IV	800.88		P
Cu III	795.258	2	1	Ca III	800.886	10	
Cl II	795.36	200	5	Cr III	801.04	30	
Co III	795.475	5		Ar IV	801.09	400	2
Ni II	795.506	10		Ni III	801.145	20	
Fe III	795.550	150		Cu III	801.154	200	4
F I	795.774	2		Mn IV	801.194	0	
As II	795.94	1		Fe III	801.32	70	
Cr III	796.03	10		P II	801.35	1	
As II	796.528	0		Mn IV	801.355	30	
O II	796.661	500	11	Ar IV	801.41	400	2
Kr II	796.668	240		Ce III	801.493	30	3
S III	796.69	400	9	Se II	801.59	300	
Se IV	796.8	400		Ni III	801.591	100	
F I	796.982	3		Ar IV	801.91	200	2
Fe III	797.055	150		K V?	802.122	100	
Ni II	797.074	200		O IV	802.200	200	
Ni II	797.088	150		P II	802.20	1	
Ni III	797.092	30		O IV	802.255	150	
Fe III	797.16	150		Ni II	802.292	100	
Co III	797.166	2		Co III	802.434	1h	
Co III	797.312	2		As II	802.83	170	
Cu II	797.4552	10		Cu III	802.841	150	1
Cu III	797.566	100	1	Co III	802.943	3	
Mn IV	797.657	40		Se III	803.01	600	
Se II	797.69	300		Ni II	803.064	15	
Cl II	797.81	10		Mg IV	803.07	2	
Se IV?	798.1	600		Si II	803.234	3h	6.07
Mn IV	798.121	40		Ca III	803.396	200	
S IV	798.28	200	6	Mn III	803.447	0	
Cr III	798.31	10		Ni III	803.490	20	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca III	803.553	10		Fe III	809.675	200	
Ni III	803.612	3		C II	809.677	400	-A 12.05
Se IV	803.8	800		S IV	809.69	400	2
K V?	803.826	100		C II	809.693	30	-A 12.05
Co III	803.942	5		Co III	809.706	15	3
S IV	803.99	400	6	As II	809.720	1	
Mn IV	804.052	10		C II	809.747	30	-A 12.05
Zn III	804.077	5		C II	809.764	300	-A 12.05
Se V	804.3	500		Ni II	809.772	0	
Co III	804.495	1h		Co III	809.844	2	
Ar	804.59	60		Ar I	809.93	80	
Ni III	805.007	200		Ca III	809.930	250	
Si II	805.101	10h	6.07	Mg IV	809.99	5	
Ni II	805.168	150		P II	810.00	30	
Ni III	805.263	20		Cu III	810.124	0	
Co III	805.345	20	3	Kr	810.20	600	
Zn III	805.351	0		K V?	810.215	50	
Co II?	805.379	3		P II	810.24	100	
Kr II	805.507	240	7	Ni II	810.292	20	
As II	805.576	110		Ca III	810.434	150	
Mn III?	805.578	2		Co III	810.502	15	12
Kr IV	805.76	140		Cu II	810.535	1	
As II	806.016	0		O I	810.6650		-A
Zn III	806.108	5		Ca III	810.687	200	
Ni II	806.188	30		Co III	810.716	10	
C II	806.384	500	8	K V?	810.893	50	
C II	806.533	200	8	Fe III	810.940	450	7
Cu II	806.5472	3		Cu II	810.9984	15	5
C II	806.568	500	8	O I	811.0512		-A
C II	806.676	250	8	P II	811.10	20	
C II	806.686	150	8	Fe III	811.246	250	
C II	806.830	300	8	Mg IV	811.26	20	
C II	806.860	300	8	Fe III	811.284	550	7
Ar I	806.88	80		Cu II	811.29	1	
Co III	806.962	3h		O I	811.4968		-A
F I	806.970	150	2	Ni III	811.568	500	
Se III	807.04	500		O I	811.7064		-A
Ni III	807.055	100		P II	811.85	30	
Co III	807.156	1		Co III	811.951	10	
Ni III	807.213	30		O I	812.0936		-A
Ar I	807.22	80		O I	812.1594		-A
Ni II	807.391	0		Ni II	812.388	100	
Fe III	807.547	600	19	K	812.493	50	
As II	807.58	60		Mn IV	812.499	40	
Kr III	807.583	100		Co III	812.869	10	13
As II	807.68	5		Fe III	812.931	300	
Ar I	807.70	80		Cl VII	813.00	100	
Fe III	807.855	550	19	P II	813.10	40	
Co III	807.910	15	3	Fe III	813.288	250	7
Co III	808.033	3		Fe III	813.382	650	6
Fe III	808.079	300	7	Br V	813.40	600	
P II	808.25	50		Ni III	813.426	10	
Cu III	808.583	20	1	Zn III	813.485	3	
Zn III	808.606	3		P II	813.768	5	
Co III	808.612	5	13	Fe III	813.862	300	
B II	808.7			Cu II	813.8834	20	6
Se V	808.7	700		Se III	814.04	600	
Ni III	808.711	10		Ni II	814.050	5	
Fe III	808.840	550	19	Co III	814.066	1	
Ni II	808.933	5		Zn II	814.120	1	
Co III	809.221	15		Fe III	814.148	70	
Br III	809.52	300		Fe III	814.242	400	7
F I	809.607	125	2	Fe III	814.565	300	
Co III	809.609	10		Co III	814.649	2h	
Ca III	809.642	190		Cr III	814.71	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Se V	814.8	600		Cu IV	818.988	12	
As II	814.83	10		Se VII	819.0	100	
Se II	814.86	20		Fe III	819.066	250	
Mg IV	814.88	8		Ni II	819.090	5	
Cr III	814.90	10		Ni III	819.237	10	
Si IV	815.049	500	4	Si II	819.49	0h -A	8.08
Fe III	815.363	200		Ni III	819.665	5	
Cr III	815.40	10		Fe III	819.742	70	
Br II	815.48	250		Fe III	819.898	200	
Fe III	815.52	70		Co III	820.066	3	
Co III	815.555	25	12	Ar I	820.13	10	
Ni II	815.570	5		Ca III	820.131	150	
Fe III	815.612	200		Fe III	820.271	200	
F IV	815.529	10		Fe III	820.409	200	
Ni III	815.718	5h		Cu IV	820.437	13	
S IV	815.97	500	2	Si II	820.516	20h	6.06
Cr III	815.99	10		Si II	820.63	3h -A	8.08
Ni II	816.024	8		As II	820.651	10	
Ni II	816.150	30		Zn III	820.661	0	
Ni II	816.156	150		Se II	820.68	300	
Fe III	816.163	400	6	Cl VII	820.7		
Ar I	816.23	160		Se V	820.7	700	
Fe III	816.273	400	6	Zn III	820.735	0	
Cu III	816.313	0		Ni III	820.851	50	
Ar I	816.47	160		V V	820.866	15	
Cr III	816.57	10		As II	820.868	20	
As II	816.607	80		Cr III	820.88	10	
Co III	816.617	10		Fe III	820.915	200	
Zn III	816.670	1		Si II	820.9210 st	3h	6.05
As II	816.755	100		Ar	820.98	50	
Ca VI?	816.805	100		Zn III	821.070	2	
Kr IV	816.82	360		Kr II	821.154	360	4
Co III	816.864	1		Mg III	821.369	4	
Cr IV	816.92	10		Ni III	821.373	15	
Se II	816.99	300		Si II	821.450	2h -A	8.07
Fe III	817.038	450	6	Ca III	821.572	300	
Ca III	817.056	250		Ni II	821.612	1	
Fe III	817.166	200		Ni II	821.634	20	
Ca III	817.223	50		F IV	821.694	1	
Cr III	817.25	10		Fe III	821.723	200	
Fe III	817.348	200		Cr III	821.74	20	
Ca III	817.480	100		Si III	822.004 P		29
Se VII	817.5	200		Ar V	822.161	200	1
Ni II	817.544	5		Fe III	822.314	200	
Se III	817.60	400		Ca III	822.432	150	
Br III	817.79	500		Zn III	822.498	0	
Ni III	817.833	20		Cu II	822.500	1	
Cr III	817.87	10		Kr	822.53	100	
Ni II	817.884	1		Br II	822.67	50	
Co III	817.937	1		Si II	822.8613 st	5h	6.05
C III	817.950 P		11.14	Ge II	822.968	0	
Si IV	818.129	550	4	K V?	823.047	150	
Kr II	818.149	480	6	P IV	823.18	800	3
C III	818.181 P		11.14	Fe III	823.257	400	5
Ca III	818.321	200		N IV	823.273	100	3.01
Fe III	818.383	200		Ni II	823.277	3	
Ni III	818.389	1		K V?	823.358	150	
Mn IV	818.468	0		Si III	823.408	180	12
As II	818.571	100		Cu IV	823.416	11	
Si II	818.590	2h	6.06	As II	823.417	30	
Fe III	818.598	250	6	Cu II	823.768	2	43
Co III	818.600	20	11	Mg III	823.788	7	
Se VI?	818.6	200		Cu II	823.8378	2	
Zn III	818.682	0		Se III	823.91	600	
Fe III	818.981	70		Cr III	823.93	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
As II	823.998	80		K V?	830.785	50	
As II	824.055	50		Zn III	830.901	0	
Ni III	824.292	20		O IV	831.070	15	
Cu II	824.635	2		Ca III	831.077	200	
P II	824.66	30		Ni III	831.229	100	
Zn III	824.711	0		Zn III	831.380	0	
P IV	824.73	800	3	Cl IV	831.43	400	
As II	824.763	80		Fe III	831.464	300	5
Fe III	824.800	200	5	Ni II	831.475	2	
Ni II	824.856	2		Ni III	831.487	5	
S III	824.88	400	14	F II	832.035	10	
Ni III	825.300	10h		Co III	832.050	5	
Zn	825.330	10		Ni III	832.284	5	
Ar I	825.346	40		Fe III	832.328	300	18
As II	825.349	30		Zn III	832.426	0	
Co III	825.403	15	11	Se II	832.74	900	13
K V?	825.559	50		O II	832.762	700	1
Ca III	825.380	200		Zn III	832.868	0	
Zn III	825.955	2		O III	832.927	700	1
As II	826.100	60		Se III?	833.14	500	
Ca III	826.108	200		Ca III	833.141	150	
Ni III	826.138	500		O II	833.332	750	1
Ar I	826.364	80		Fe III	833.532	150	
K V?	826.395	50		Zn I'	833.600	1b	
N VII	826.4	P		Zr III	833.600	1b	
Si II	826.42	1h-A	8.06	O III	833.742	800	1
Kr II	826.434	400	3	Ni III	834.058	20	
Ni III	826.501	200		Ni II	834.059	100	
F VII	826.54			Fe III	834.067	250	5
As II	826.733	80		Zn II	834.11	6	
Zn III	826.909	0		Ar I	834.392	240	
Cu II	826.9961	30	4	O II	834.462	750	1
Ar V	827.052	250	1	Cl IV	834.66	300	
Ar V	827.35	150	1	Cl II	834.67	1000	4
Cl II	827.75	100		Cl IV	834.84	500	
Fe III	827.777	400	5	Ar V	834.88	200	1
P IV	827.93	1000	3	F III	834.944	400	43
Ni III	828.109	100		Cu IV	834.957	40	
Ni II	828.152	10		Cl IV	834.97	500	
Ca IX	828.451	100		Ar I	835.00	240	
Se III?	828.47	600		Ge II	835.083	2	
Se II	828.48	800	13	O III	835.096	700	1
Ni III	828.491	3		O III	835.292	800	1
As II	828.594	125		As II	835.349	150	
Co III	828.603	1		Fe III	835.627	150	
Ge II	828.67	1		Mn IV	835.657	0	
Ni II	828.786	1		Sc	835.70	300	
Ca III	828.920	150		Ni II	835.739	0	
Co III	829.072	10		Ar V	835.79	50	1
Cu III	829.343	5		Ca III	835.861	50	
As II	829.360	50		Fe III	835.917	150	
Fe III	829.375	250	5	Mn III	835.971	40	
Ca I'	829.445	50		Ni II	835.983	75	
V V	829.483	20		Ca III	836.024	100	
Ga II	829.60	100	3	Cu II	836.0278	0	
Mn III	829.635	2		Se III?	836.06	500	
Zn III	829.866	0		Ar V	836.13	100	1
Ge II	829.91	3		N II	836.187	P	
Se V	830.3	600		N II	836.279	P	
Kr II	830.375	480	4	N II	836.289	P	
Fe III	830.500	70		S III	836.31	400	13
O IV	830.506	10		S IV	836.34	400	
Ni III	830.666	10		Fe III	836.521	450	18
Ni II	830.677	2		N I'	836.616	P	
Ca III	830.777	50		N II	836.627	P	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe III	836.628	200	33	Ni II	841.056	10	
Ca III	836.769	200		Fe III	841.088	300	25
N II	836.837 P			Cu II	841.1346	2	47
Br II	836.90	150		Ni II	841.205	0	
Ni II	836.954	1		P II	841.21	20	
Mn III	836.994	20		Ni III	841.256	20	
Ni III	837.025	20		Cl II	841.41	400	4
Zn III	837.054	0		Mn IV	841.536	0	
Nb III	837.266	50		As II	841.625	10	
Ce III	837.330	1		Zn III	841.664	0	
Fe III	837.439	450	17	Fe III	841.688	150	
S IV	837.48	400		Ni III	841.825	2	
Ge II	837.60	0h		Fe III	842.020	400	32
Zn III	837.613	0		Be II	842.025	500	2
Ni II	837.624	50		Be II	842.031	250	2
Kr III	837.662	500		Kr IV	842.04	440	
Sc	837.76	300d		Mg IV	842.09	6	
Fe III	837.803	200		Fe III	842.09	300	
Mn III	837.854	0		Ni III	842.142	500	3
Ca III	837.91 ^a	50		Cu II	842.4964	3	
Ge II	837.947	20h		Ni III	842.546	50	
Fe III	838.048	550	17	Fe III	842.686	300	
Mn III	838.049	0		Ar I	842.81	80	
Co III	838.133	25	10	Ca V?	842.950	150	
Ni II	838.224	10		Se III	843.01	900	
Ca III	838.237	200		As II	843.215	10	
Zn III	838.313	0		K	843.317	50	
Se II	838.43	50		Cr III	843.37	10	
Fe III	838.498	150		Ge II	843.7165 st	5h	
Ca III	838.501	25		Si II	843.7192 st	20h	6.04
Ni II	838.524	1		C VI	843.72 P		
Zn III	838.658	0		Ar IV	843.77	800	1
Sc	838.70	300d		S II	843.82	200	
Ni II	838.834	50		P IV	843.98	40	
Fe III	838.869	150	18	Se II	844.00	400	
Ge II	838.91	2h		P II	844.01	20	
Fe III	838.936	300	17	Kr II	844.064	480	3
Fe III	838.997	250		Co III	844.097	20	18
Fe III	839.092	150	33	Se VI	844.2	500	
Fe III	839.195	150	17	Fe III	844.284	650	4
Co III	839.284	30	19	Co III	844.310	8	19
Cl II	839.30	200	4	Co III	844.411	1	
Fe III	839.319	300	17	Br II	844.47	20	
K V?	839.439	50		Cu II	844.6128	3	48
Cu II	839.47	1		P III	844.64	100	5
Ni III	839.478	5		Ni VI?	844.69	200	
Se V	839.5	400		Ni II	844.748	2	
Mn IV	839.514	0		Ni III	844.787	50	
Cl II	839.63	200	4	Fe III	844.838	250	
Fe III	839.981	200		Ni III	844.859	100	
Ar IV	840.03	600	1	Co III	844.866	10	10
P II	840.04	1		Cu II	844.9122	5	
Fe III	840.141	250	18	Fe III	844.954	150	32
As II	840.23 ^b	80		P III	845.05	100	5
Ca III	840.31 ^c	25		Sc	845.07	700	
Mg IV	840.37	4		Zn III	845.238	0	
Fe III	840.381	300	25	Ni III	845.242	400	3
Se VII?	840.4	50		Fe III	845.408	600	4
Fe III	840.518	250	33	P III	845.66	100	5
Ca III	840.558	300		Ar	845.68	150	
Fe III	840.629	200		Fe III	845.686	70	
Fe III	840.741	150	33	Si II	845.7684 st	40h	6.04
Cl IV	840.81	400		As II	845.789	80	
Ni II	840.878	5		Se V	845.8	900	
Cl IV	840.93	600		Cr III	845.90	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe III	845.925	450	16	Kr II	850.319	400	2
P IV	845.99	80		P IV	850.39	120	
Fe III	846.035	200		Co III	850.424	3	
Fe III	846.089	150		V III	850.49	0	
P III	846.12	100b	5	Ge II	850.495	15h	
P IV	846.12	80b		Ar IV	850.50	1000	1
Mn III	846.475	0		F III	850.707	3	
P III	846.49	10b	5	O I	850.74	P	-A
P IV	846.49	40b		Cu II	850.7480	2	
Fe III	846.534	400	4	Br V	850.79	800	
Ca	846.611	150		Ca	850.966	150	
Mn III	846.667	0		P IV	851.09	10	
Cu IV	846.723	12		Fe III	851.150	450	31
Sc	846.90	600		Cu II	851.3027	25	47
P IV	847.00	200		Fe III	851.332	450	16
Br II	847.35	50		V III	851.36	0	
Al XII	847.4	P		Ni III	851.521	15	
Fe II	847.425	550		Zn III	851.539	0	
Ni III	847.433	300	3	Ni VI?	851.66	200	
Zn III	847.525	0		F III	851.700	6	
Fe III	847.578	450	4	Cl II	851.70	700	
P III	847.66	300b	5	As IV	851.7	500	
P IV	847.66	240b		Cu II	851.7714	2	47
Mn III	847.691	0		Ni III	851.788	15	
Fe III	847.700	400	32	Fe III	851.842	400	31
Ca III	847.757	50		Fe III	851.992	400	31
Ge IV	847.80	60		Kr VII	852.00	100	
As II	847.809	25		Se III	852.10	300	
Zn III	847.879	0		S V	852.18	500	2
Fe III	847.924	400	4	Zn III	852.306	0	
F III	847.962	10		Fe III	852.644	150	16
Fe III	847.984	300		P III	852.68	500	
P III	848.02	200d	5	Mn III	852.691	0	
Si II	848.0700 st	5	6.03	Zn III	852.707	0	
Fe III	848.07	70	32	S IV	852.76	300	
Co III	848.088	30	18	Ni III	852.867	10h	
P III	848.44	100	5	Cu II	852.9061	3	48
Cu IV	848.546	12		Fe III	853.045	70	16
Fe III	848.601	250	4	S IV	853.10	300	
P III	848.64	300d		Zn III	853.220	0	
As II	848.692	80		P III	853.35	10	
Fe III	848.729	250		Ni III	853.398	5	
Cu II	848.8075	15	48	Fe III	853.456	70	31
F III	848.915	3		Cu II	853.5644	1	
Fe III	848.977	200	4	Fe III	854.073	300	3
Zn III	849.117	0		Fe III	854.205	70	2
V III	849.15	15		P III	854.22	100	
Mn III	849.175	0		Fe III	854.367	400	16
Co III	849.210	0		Se VII?	854.4	600	
S V	849.24	600	2	Mg IV	854.409	20	
As II	849.294	60		K V?	854.416	100	
V III	849.32	0		Se II	854.46	50	
Cu II	849.3594	3	47	Fe III	854.532	150	
Zn III	849.386	0		As II	854.727	150	
Ni II	849.398	5		Kr III	854.73	500	
Co III	849.485	5		K V?	854.771	50	
Br II	849.52	100		S V	854.80	700	2
Fe III	849.524	300	32	P III	854.86	100	
Fe III	849.569	250		Ca VI?	854.923	150	
Se II	849.60	400		Al III	855.0340	400	
P IV	849.76	160		Ni II	855.282	5	
Ni III	849.810	5		Fe III	855.336	70	
As III	849.9	450		Fe III	855.441	200	
Co III	850.067	3		Cu II	855.4762	5	48
Si II	850.1409 st	10	6.03	P III	855.62	500	4

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca III	855.660	100		V III	860.06	0	
Cu II	855.7002	10	48	Zn III	860.062	0	
Ni III	855.719	2		N I	860.15	4	
Br V	855.79	100		N II	860.205	P	
Se II	855.81	100		Ni III	860.238	150	
K IV?	855.815	100		Zn III	860.286	0	
Fe III	855.879	150		Fe III	860.315	300	2
Ni III	855.922	100d		P IV	860.45	86	
Fe III	855.935	156		S V	860.46	500	?
Ca III	855.978	25		V III	860.55	0	
Fe III	856.039	150		Si IV	860.551	20	12
Fe III	856.244	70		Si IV	860.560	P	12
Br II	856.29	350		Fe III	860.565	150	
Fe III	856.325	300		Se VII?	860.6	300	
Fe III	856.480	70		Ni III	860.642	300	2
Ge II	856.4880 st	10h		Cu II	860.7217	1	43
Ni III	856.506	50	2	Zn III	860.898	0	
Ca	856.635	200		Ca VI?	860.827	100	
Ni III	856.684	50		N I	860.85	4	
Al III	856.7457	500		Fe III	860.889	150	
Ca	856.791	200		Ni III	860.905	10	
P III	856.96	200		Ca	860.983	50	
As II	857.032	25		Fe III	861.087	150	
Ni III	857.087	200	1	Si IV	861.118	5	12
Mg IV	857.292	150		N I	861.15	1	
Fe III	857.392	300	2	Fe III	861.284	250	11
Ni III	857.550	50h		As II	861.467	2	
Fe III	857.690	300		P IV	861.55	40	
N I	857.77	2		P II	861.61	10	
S V	857.87	500	2	O I	861.63	P	A
C II	858.0918 ST	500	4	Zn III	861.667	0	
P III	858.14	100		Ge II	861.68	10f	
Zn III	858.152	0		Fe III	861.761	550	2
Ni III	858.198	20		V III	861.81	40h	
As II	858.280	125		Fe III	861.832	650	2
N II	858.376	100		Cu II	861.9936	40	42
Mg XII	858.4	P		V III	862.02	15	
Cu II	858.4869	25	47	Fe III	862.028	300	2
C II	858.5590 ST	900	4	Cu IV	862.12	14	
Fe III	858.565	250	3	N I	862.14	5	
Cu II	858.5667	25		Fe III	862.191	150	3
Fe III	858.602	460	2	Ge II	862.2339 st	50h	9
Co III	858.663	1		Fe III	862.326	150	
N I	858.80	2		Fe III	862.468	200	
Ni III	858.861	20h		Kr III	862.582	600	
Co III	858.975	15	17	Fe III	862.735	300	2
Kr II	859.037	400	4	Cu II	862.8226	2	
Fe III	859.086	200		Ni III	862.882	300	2
Cu II	859.1509	0		N I	862.91	5	
V III	859.24	15		V III	862.92	25	
Mg IV	859.26	2		Fe III	863.004	70	
N I	859.35	3		N I	863.15	3	
Ni III	859.387	20		Ni III	863.217	390	2
P III	859.41	10		V III	863.22	10	
As II	859.472	60		Fe III	863.232	250	
V III	859.57	5		Fe III	863.302	250	
Fe III	859.626	400	2	P IV	863.32	120	
P III	859.68	800	4	Mg IV	863.79	1	
As II	859.682	125		Fe III	863.736	70	11
Fe III	859.721	550	2	Zn III	863.850	1	
N I	859.76	2		V III	863.89	25	
Zn III	859.760	0		Fe III	863.94	400	3
Fe III	859.838	400	11	Ca III	864.035	150	
Ni III	859.854	50		B I	864.08	10	
Zn III	859.895	0		Cu II	864.1536	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu II	864.2138	10		Ni III	869.702	200	
V III	864.27	100		Ar I	869.75	100	2
Fe III	864.375	150		Ni III	869.926	10	
Fe III	864.425	250	3	K V?	869.965	150	
Ca III	864.470	50		N I	870.00	3	
V III	864.47	40		Co III	870.007	15	16
Sc II	864.59	20		Fe III	870.041	200	
Cl II	864.67	500	3	Ca III	870.152	25	
V III	864.68	50		Mn III	870.169	20	
Kr II	864.821	480	4	Fe III	870.235	150	
Mn IV	864.850	100		Fe III	870.274	150	
N I	864.92	5		N I	870.40	3	
P IV	865.04	120		Cu II	870.5389	8	42
Fe III	865.267	70		Mn III	870.596	10	
Mn III	865.276	0		Fe III	870.621	300	
Cl IV	865.3			As II	870.747	150	
Cu II	865.3902	40		Cr III	870.842	400	
P II	865.44	100		Ni III	870.845	200	2
P V	865.44	1000		Zn III	870.890	3	
Co III	865.567	0		N I	871.01	1	
N I	865.62	5		Se II	871.02	200	
Ca III	865.629	100		Cu II	871.0676	8	
Mg IV	865.724	8		Ar III	871.10	500	1
S II	865.87	50		As III	871.1	500	
Fe II?	865.896	250	3	P V	871.40	1900d	
Co III	865.898	0		As II	871.410	10	
Se II	865.90	50	17	Fe I	871.552	150	
B V	865.93			As III	871.7	750	
N I	865.93	3		Mg III	871.720	40	
Mg III	865.935	4		As II	871.823	125	
Cr III	865.19	10		Se II	871.83	400	
S II	866.23	100		N III	871.850	10	
As III	866.3	300		Mn III	871.851	0	
Cu II	866.4427	5		Fe III	871.968	250	
Mn III	866.471	0		Fe III	872.027	250	
Mg IV	866.741	30		Cl II	872.20	10	3
Ar I	866.80	200		Mn III	872.261	20	
P IV	866.84	20		Se II	872.27	50	
Fe III	866.905	70		Ge II	872.3075 st	10	
Sc	867.01	200	3	K III	872.313	200	
Ni III	867.023	50		Zn III	872.633	0	
S II	867.15	100	1	P II	872.84	5	
Ni III	867.194	100	1	Fe III	873.080	200	
Cu IV	867.440	18		Fe III	873.130	150	
S II	867.50	100		Zn III	873.207	0	
Ni III	867.508	300	1	Cu II	873.2629	15	43
Ca III	867.545	200		Fe III	873.462	550	38
Fe III	867.639	300		Mg III	873.580	20	
Cu II	867.7336	8	11	K III?	873.865	100	
Se II	867.83	300		Fe III	873.988	70	
K V?	867.921	50		Ca III	874.009	25	
As II	868.027	10		K III?	874.045	150	
K V?	868.140	50		Fe III	874.129	150	
Ge IV	868.30	50		Sc	874.18	300d	
Sc	868.32	600		Co III	874.294	10	16
Fe III	868.450	250		Zn III	874.542	0	
K V?	868.55	50		Fe III	874.560	70	
Cu IV	868.649	13		K V?	874.883	50	
N I	868.78	5		As II	874.893	150	
Fe III	868.836	300		K V?	874.985	50	
Kr II	868.871	480		Ge II	874.99	10f	
Cu II	869.0641	10	2	Cr III	875.05	20	
Sc	869.13	200		Fe III	875.090	150	
Cu II	869.3360	25	43	N I	875.092	5	
N I	869.66	5		P IV	875.13	440	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N I	875.20	5		Ar I	879.95	120	
Ca III	875.301	25		As II	879.989	80	
Fe III	875.423	300		Fe III	880.008	300	
Ge II	875.4927 st	100h	9	Ni III	880.028	20	
Ar III	875.53	450	1	V III	880.08	50	
Ge II	875.5766 st	10	9	Mg III	880.107	7	
Mn III	875.627	0		Cu II	880.3230	5	43
Ni III	875.641	150		Fe III	880.447	400	24
N I	875.79	5		Mn III	880.648	0	
Fe III	876.021	300		Fe III	880.949	400	24
Ar I	876.06	200	4	Co III	880.950	10	9
N I	876.07	4		Zn II	881.060	15	
Mg III	876.312	7		Fe III	881.088	450	30
Fe III	876.483	200		K V?	881.405	150	
Fe III	876.564	200		Fe III	881.477	200	
Co III	876.594	5		Mn III	881.553	0	
N I	876.64	2		As II	881.557	125	
Kr III	876.676	500		Zn III	881.565	0	
Fe III	876.679	200		Cu IV	881.589	11	
Cu II	876.7227	20		Ni II	881.608	2	
Cr III	876.79	10		As II	881.805	20	
Ni II	876.829	0		Co III	882.025	0	
Zn II	876.84	4		Se III?	882.13	500	
N I	876.99	2		F III	882.136	3	
Cu II	877.0121	25		Fe III	882.147	250	24
P IV	877.49	440		K VI?	882.184	100	
Mg IV	877.495	5		Mn III	882.227	0	
Cu II	877.5548	20	42	Fe III	882.295	70	
Mn III	877.561	30		B II	882.543	300	
As III	877.7	350		Se II	882.61	600	
Mn III	877.777	0		Ni III	882.642	20	
O I	877.7983	80	-A	B II	882.681	300	
Cr III	877.81	100		O I	882.8895 P	-A	
Cu II	877.8471	15		Cr III	883.00	50	
Ni III	877.852	P		Kr	883.00	60	
O I	877.8787	200	-A	Fe III	883.090	200	
Ni III	878.078	30		F VII	883.110	10	
Co III	878.080	0		Cl V	883.13	400	
Cr III	878.20	100		Cu III	883.154	5	
O I	878.2007 P	-A		Ar VII	883.17 ?		
Fe III	878.287	250		Ar III	883.18	450	1
Cr III	878.39	100		Cu II	883.2800	5	
Co III	878.543	10	9	Co III	883.345	1	
Cu II	878.6986	50	42	Si III	883.398	100	27
Ar III	878.73	600	1	S V	883.59	200	
Mg III	878.847	7		Fe III	883.688	400	30
Co III	878.963	5		Co III	883.703	2	
O I	878.9720	60	-A	Se II	883.77	50	
O I	879.0194	40	-A	Cu II	883.8390	5	
O I	879.1001	80	-A	Ni III	883.849	50	
Se III	879.15	700		As II	883.921	125	
Si III	879.233	10	28	Co III	883.960	0	
P IV	879.31	80		Cu II	884.1332	10	44
Zn III	879.380	0		Kr II	884.141	600	3
Mn III	879.466	10		V IV	884.146	30	
Ni III	879.471	50		Cr III	884.18	20	
Fe III	879.505	250		Co III	884.192	2	
O I	879.5507	60	-A	Fe III	884.263	250	
As II	879.563	125		Mn III	884.301	0	
F III	879.59	5		Mn III	884.341	200	
Ar III	879.62	400	1	V III	884.42	0	
Mn III	879.642	0		Cu II	884.4346	8	75
Mn III	879.693	150		S V	884.46	200	
V III	879.76	0		C III	884.516	800	11.28
Cu II	879.8912	2		Fe III	884.600	300	30

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mg II	884.6967 P			Mg IV	891.01	1	
Mn III	884.697	0		Fe III	891.172	650	15
Mg II	884.7189 P			Fe III	891.442	550	15
Cu II	884.8262	5		Si III	891.479 P		26
Mn III	884.978	0		As II	891.587	125	
Co III	885.011	0		Co III	891.902	5	
Ni III	885.103	3		Si II	892.0007 st	200	6.02
N I	885.387	5		Al III	892.0242	400	
Ni III	885.455	2		Ni III	892.041	3	
Br II	885.48	100		Cr III	892.09	10	
N I	885.682	15		Mg IV	892.22	1	
S V	885.77	100		Mn III	892.393	20	
Cu II	885.8472	25	42	Cu II	892.4144	50	1
Ge II	885.9663 st	20		Fe III	892.417	400	41
N I	885.973	6		K IV?	892.621	100	
Fe III	886.138	70		Ca IV?	892.671	150	
Mg III	886.158	7		As IV	892.7	500	
N I	886.226	9		Zn II	892.914	10	
Kr II	886.300	809		Co III	893.045	15	15
N I	886.332	8	2	Co III	893.095	8	15
Co III	886.378	5		Ar	893.50	50	
N I	886.423	8		Ni III	893.533	50	
Cu II	886.5111	10	42	Cr II	893.56	300	2
Se VI	886.8	500		Cu II	893.6777	60	40
N I	886.829	6		Co III	893.713	8	
Cr III	886.84	10		Mn III	893.786	10	
Ni III	886.924	10		Al III	893.8874	50	1
As II	886.941	40		Al III	893.8969	450	
Cu II	886.9434	60		Ni II	894.004	2	
N I	887.016	4	41	Fe III	894.008	250	
Fe III	887.372	200		V III	894.13	0	
Ar III	887.40	500		Cu II	894.2274	40	41
Se III?	887.45	300	1	Ar I	894.31	200	3
N I	887.457	11		C V	894.34	400	
Se II	887.48	500		Mr III	894.586	350	
Cr III	887.57	10		V I	894.59	0	
Mn III	887.681	0		Mn II	894.644	8	
Co III	887.777	0		Mg III	894.744	7	1
Co III	887.988	0		Cr III	894.86	10	
N I	888.022	10		Cl V	894.91	100	
Se II	888.06	200		Se II	894.99	50	
Cl II	888.07	400		Ni II	895.093	1	
Cr III	888.25	10	2	Ne VII	895.18 P		
N I	888.372	8		Cr III	895.19	10	
Cr III	888.54	10		Si IV	895.228 P		17
As II	888.584	80		Mg III	895.324	12	
Zn II	888.620	6		Ni II	895.458	15	
Fe III	888.777	150		Si IV	895.458 P		17
Ni II	888.818	5	15	V III	895.88	5	
As III	889.0	600		Cl II	895.95	300	2
Br II	889.27	1000		Fe III	896.372	70	
Cr III	889.35	80		Ni II	896.168	5	
Mn III	889.608	20		Fe III	896.380	70	
Br II	889.7	20		Fe II	896.504	20	31
Si II	889.7228 st	100	6.02	Mg III	896.640	4	
Mg III	889.888	20		Br II	896.64	500	
Fe III	890.008	150		Cu II	896.7588	60	40
Ni III	890.131	5	15	Mr III	896.781	40	
Cu II	890.5669	60	41	Cr III	896.82	50	
Se II	890.59	600		Mn III	896.975	120	
Se III	890.68	300		Cu II	896.9762	40	40
Fe III	890.755	600		Fe III	897.580	70	
F VII	890.786	5	15	Co III	897.686	1	
Ca	890.892	100		Mn III	897.714	100	
Kr II	891.006	720	2	Fe III	897.747	150	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu II	897.7932	15	74	C II	904.4801 ST	600	3
Kr III	897.806	750		F III	904.657	3	
Ca	897.972	50		Ar	904.89	80	
Mn III	898.103	0		Ge II	904.90	2f	
Mg III	898.207	12		Ni II	904.986	1	
Kr	898.39	200		F III	905.048	6	
Ni II	898.716	2		F IV	905.14		
As II	898.768	125		N I	905.223	6	
Fe II	898.776	10	31	F IV	905.224	60	
Fe III	898.805	70		As II	905.240	100	
Ni I	898.821	5		Sc	905.28	200	
O III	898.957	400	17	Fe III	905.338	450	14
Co III	899.025	1		C III	905.35	50	
Fe III	899.052	70		N I	905.40	2	
V III	899.18	5		Ni II	905.634	100	
Si II	899.4063 st	10	6.01	Cr III	905.66	100	
Fe III	899.417	550	37	Ni II	905.696	3	
Ge II	899.649	5		Si I	905.71	0 -A	8.05
Cu II	899.7888	50	41	N I	905.787	11	
Cu II	899.7922	50	41	N I	905.839	12	
Ni III	900.008	100		N I	905.916	11	
Mn III	900.286	120		S V	905.92	200	
Ar IV	900.36	200		Cr III	905.92	10	
Fe II	900.360	100	31	Fe III	905.964	70	
Fe III	900.432	150		Ge II	905.9771 st	200h	8
Ni II	900.510	0		Br II	906.00	500	
Mn III	900.594	80		Cu II	906.1134	40	40
Ge II	900.618	10		Ni II	906.123	15	
Se III	900.79	100		Si II	906.126	0 -A	8.05
As III	900.9	300		N I	906.206	11	
S V	900.93	200		Ni II	906.237	2	
Fe III	900.940	200		Cr III	906.29	10	
Ni II	901.007	10		N I	906.433	13	
Fe III	901.034	300	14	F III	906.577	3	
Cu II	901.0731	60	40	Si II	906.586	1 -A	8.05
Ar IV	901.17	400		Cr III	906.59	80	
Si II	901.7359 st	20	6.01	Cl II	906.60	10	
Ni II	901.737	2		N I	906.617	12	
Ar IV	901.80	80		Se II	906.63	800	4
Ni II	901.999	50		N I	906.730	12	
F III	902.239	3		S II	906.87	300	2
Mn III	902.316	80		P II?	906.89	5	
F III	902.425	3		Cr III	906.90	150	
Mn III	902.502	150		Ni II	906.906	1	
Ni II	902.687	1		Sc	906.95	700	
Mg IV	902.80	1		P II	906.987	10	
S V	902.80	100		Si II	907.033	0 -A	8.05
Mn III	902.832	60		Fe III	907.041	70	
Fe III	902.869	200		N I	907.07	4	
Mg III	902.923	7		N I	907.28	4	
Ni II	902.996	75		N I	907.337	7	
Sc	903.19	500		Mg I?	907.3752 P		
Zn	903.194	15		Mg II	907.4115 P		
As II	903.521	150		P II	907.55	40	
Cu II	903.5290	1	41	P IV	907.59	80	
C II	903.6235 ST	600	3	Ni II	907.630	50	
F IV	903.64	35		Ni II	907.692	10	
Co III	903.730	5		Si II	907.762	0 -A	8.05
Mn III	903.901	80		Se II	907.81	200	
F III	903.96	3		Fe III	907.891	250	
C II	903.9616 ST	800	3	P IV	908.05	160	
C II	904.1416 ST	1000	3	Fe III	908.131	300	
Ni II	904.205	2		Sc	908.18	700	
Ni III	904.294	50		Sc	908.23	700	
Fe III	904.320	200		N I	908.2332	3	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni II	908.258	40		Co III	912.817	2	
P II	908.38	1		Cr III	912.83	10	
Si II	908.461	1 -A	8.05	Se II	912.89	900	12
Co III	908.491	5		Si II	913.012	10 -A	8.04
Ge II	908.50	10h		Fe III	913.132	70	
Ni II	908.584	20		Cr III	913.18	10	
Mn III	908.607	10		Ni II	913.187	2	
Sc	908.73	900		Co III	913.239	2	
N I	908.7958	1		Si II	913.264	3 -A	8.04
Fe III	908.800	70		Ni II	913.279	3	
Mn III	908.826	0		F I'	913.303	3	
F IV	908.837	100		Fe III	913.324	70	
Fe III	908.885	150		Cu II	913.5018	0	
F IV	908.958	150		P II	913.59	10	
Ge II	909.050	5		Ni II	913.678	75	
Fe III	909.178	250		As II	913.727	125	
Si II	909.209	3 -A	8.05	Cr III	913.75	30	
Fe III	909.279	150		Si II	913.853	20 -A	8.04
Mg IV	909.37	10		Ni II	913.909	15	
Ge II	909.432	3		Fe III	913.919	150	
Mn III	909.628	0		P III	913.99	500	3
Ni II	909.683	10		Cr III	914.08	80	
N I	909.6975 ST	9		Mn III	914.199	0	
Mg III	909.730	7		Cu II	914.2133	80	38
P III	909.85	100		Ni II	914.343	50	
Cl II	910.25	10		Ge II	914.444	2	
N I	910.2785 ST	6		Si II	914.476	2 -A	8.04
F III	910.334	6		Cl V	914.5		
Co III	910.415	0		H I	914.576 P	2	17
S II	910.49	300	2	Cr III	914.67	10	
Cu II	910.5185	15	40	Ni II	914.743	40	
Fe III	910.639	200		As II	914.746	80	
F III	910.645	6		F III	914.836	3	
N I	910.6456 ST	5		Cl II	914.90	100	
Fe III	910.693	250		H I	914.919 P	2	16
Co III	910.721	0		Ge IV	915.00	160	
Br II	910.75	200		Cr III	915.02	20	
Cr III	910.75	50		Mn III	915.206	0	
P II	910.88	5		Br II	915.26	200	
Fe III	910.961	400		C VI	915.30 P		
F III	911.164	20		H I	915.329 P	2	15
Cr III	911.17	50		Fe III	915.455	200	
Ni II	911.187	15		Ni II	915.471	1	
Fe III	911.205	70		N II	915.612	700	2
Ge II	911.258	15h		H I	915.824 P	3	14
Fe III	911.265	150		Sc	915.85	200	
Kr II	911.394	600	2	Ni II	915.877	75	
Sc	911.50	200		Ni II	915.920	30	
Cu II	911.5301	1		N II	915.962	700	2
Cu II	911.6793	1		N II	916.012	800	2
Br II	911.72	250		N II	916.020	600	2
S III	911.77	20		Cr III	916.21	20	
Cu II	912.0248	0		Mn III	916.428	4	
F III	912.090	6		H I	916.429 P	3	13
Sc	912.15	200		Ni II	916.449	1	
Fe I	912.197	150		Mn III	916.649	90	
Cr III	912.26	10		N II	916.701	1000	2
Cl II	912.34	10		N II	916.710	800	2
Si II	912.375	5 -A	8.04	Ca	916.917	100	
Cu II	912.4162	3		Ni II	917.017	10	
Si II	912.459	5 -A	8.04	P III	917.13	400	3
Cr III	912.57	100		As II	917.131	100	
Fe III	912.683	300		Mn III	917.175	2	
S II	912.74	300	2	H I	917.181 P	4	12
Fe III	912.794	200		Mn III	917.275	4	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca	917.278	115		Cu II	922.4161	20	73
Cu II	917.3058	20	38	Cr III	922.47	100	4
Mn III	917.534	1		N IV	922.519	800	3
Cr III	917.40	10		Br II	922.56	300	
Kr II	917.427	1000	1	O VIII	922.6	P	
K V?	917.498	50		Se II	922.90	50	
As II	917.513	150		N IV	923.057	700	3
Fe III	917.684	150		Co III	923.075	10	14
Cr III	917.75	20		H I	923.150	P	8
Mn III	917.797	8		Fe III	923.215	70	
Fe III	917.932	250		N IV	923.220	1000	3
Se II	917.94	200		O IV	923.367	200	
Ni II	917.962	15		O IV	923.433	120	
Ni II	918.022	3		Cr III	923.55	200	4
As II	918.115	150		N IV	923.675	800	3
Fe II	918.118	20		Kr I	923.713		
H I	918.129	P	5	Cr III	923.81	100	4
Cr III	918.18	10	11	Fe II	923.884	200	28
Mn III	918.201	0		Zn II	923.969	0	
Co III	918.233	1		Cr III	924.07	200	4
Kr	918.34	400		Cu II	924.2386	50	38
Mn III	918.43	1		N IV	924.283	850	3
Cr III	918.50	10		Cr III	924.32	200	4
K VI?	918.581	100		Ni II	924.710	1	
Cu IV	918.652	11		F III	924.716	6	
Mn III	918.678	3		Ni II	924.783	10	
As II	918.706	10		Ni II	924.912	20	
P III	918.71	500	3	Fe II	924.970	100	30
Mn III	918.771	0		As IV	925.0	50	
Fe III	918.800	70		Cr III	925.03	200	4
S II	918.82	300		Co III	925.045	8	14
Se II	918.84	400		Cu II	925.0992	30	38
Mn III	918.849	3		Ni II	925.100	2	
Ni II	918.994	150		Cu II	925.1098	30	
Mg IV	919.03	50		Cu I	925.1263	30	38
Mn III	919.078	0		Bz II	925.20	100	
Fe II	919.095	10		Co III	925.230	0	
Kr III	919.146	150		Cr III	925.35	150	4
As II	919.152	150		Cr III	925.49	150	27
Cr III	919.19	30		Ni II	925.578	1	
S II	919.24	100		D I	925.974	P	7
Mn III	919.288	0		Mn III	925.974	50	
H I	919.351	P	7	Zn	926.083	10	
Ge II	919.57	15f		Mn III	926.183	80	
Ar II	919.7810	st	1000	Fe II	926.220	400	25
F IX	920.3	P		H I	926.226	P	7
Co III	920.371	2		Sc II	926.38	100	
Ni II	920.451	10		Ge II	926.4736	st	20
Ge II	920.5537	st	400h	Cr III	926.52	150	27
Ge II	920.7195	st		Co III	926.591	0	
Cr III	920.73	30	4	Fe II	926.618	60	30
H I	920.963	P	9	Zn	926.892	10	
Se II	921.12	500		Fe II	926.900	160	24
Br II	921.16	250		Ge II	926.93	2	
O IV	921.296	120		Cl II	926.96	10	
Ni II	921.299	1		Cr III	927.16	200	27
O IV	921.366	150		Fe II	927.176	40	28
Ni II	921.730	75		Co III	927.224	5	
P III	921.86	500	3	Kr	927.37	120	
N IV	921.992	850	3	Sc	927.54	400	
O I	922.0081	P	-A	As III	927.6	600	
Cu II	922.0190	60	37	Fe II	927.632	60	30
O I	922.0727	P		P II	927.771	10	
Cr III	922.19	50	4	Ni II	927.820	5	
Ni II	922.331	15		F IV	927.837	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe III	928.004	250		Ni II	933.866	1	
Fe II	928.107	200		Al II	933.95	0	
Si II	928.297	5 -A	26	Mn III	934.594	10	
Fe II	928.470	14c ^b	8.03	Fe III	934.703	450	10
Fe III	928.474	30a ^b	29	Ca III	934.875	50	
P II	928.550	10		Cr III	934.91	10	
Mn III	928.672	150		Mn III	934.950	20	
Kr I	928.711			Co III	935.003	3	
Mn III	928.886	250		Cu II	935.0577	60	38
As II	928.941	100		Ni II	935.085	2	
Ni II	928.953	3		Cu II	935.0855	60	
Fe III	929.163	300		O I	935.1930 P	-A	
Si II	929.206	1 -A	8.03	Ni II	935.200	1	
K VI?	929.374	50		Cu II	935.2325	40	33
O I	929.5168 P			Al II	935.29	1	
Fe II	929.538	200	25	Cu II	935.3434	20	37
Ni II	929.586	1		Mn III	935.36	1	
Fe II	929.612	20 ^a	28	Mn III	935.563	0	
P II	929.642	10		Fe II	935.783	10	22
Ni II	929.681	3		Cu II	935.8977	60	35
Cu II	929.7020	2		Si III	936.056	25	44
Mg IV	929.784	30		Si III	936.058	2	44
Si II	929.810	20 -A	8.03	Si III	936.060	1	44
Ni II	929.831	5		Si III	936.077	18	44
Cu II	929.8930	5	57	Si III	936.079	2	44
Cu II	929.973	5		Si III	936.100	12	44
Fe II	930.030	200	27	Ni II	936.188	1	
Fe II	930.165	200	29	Cl III	936.28	100	
Fe II	930.219	200	24	Mg IV	936.30	2	
Si II	930.242	0 -A	8.03	Fe II	936.484	60	23
O I	930.2566 P			O I	936.6295 P		
K VI?	930.318	50		Co III	936.639	30	2
D I	930.495 P		6	Ge IV	936.70	160	
Fe II	930.558	200	26	Sc	936.77	600	
Sc	930.67	500		Cr III	937.06	40 ^b	
Ni II	930.707	3		As III	937.2	600	
H I	930.748 P	30	6	Sc	937.30	700 ^d	
Cr III	930.78	10		Co III	937.310	20	2
As IV	930.8	400		S II	937.41	300	6
O I	930.8862 P			D I	937.548 P	40	5
Cl III	930.94	100		S II	937.69	300	6
Fe III	931.086	250		H I	937.803 P	40	5
Fe III	931.124	70		Cu II	937.8175	5	35
Fe II	931.142	160	29	O I	937.8405 P		
Ni II	931.191	1		O I	938.0200 P		
Si II	931.200	5 -A	8.03	Co III	938.077	10	2
Ge II	931.32	3		S ⁺ III	938.16	600	
Kr	931.47	250		K VIII	938.287	100	
O I	931.4820 P			Ca III	938.497	25	
Ni II	931.501	2		F III	938.538	1	
O I	931.6282 P			Br II	938.6	500	
Si II	931.667	5 -A	8.03	O I	938.6249 P		
Fe II	931.709	60	27	Co III	938.647	5	2
Ar II	932.0537 st	1000	1	Ca	938.699	50	
O I	932.2249 P			Zn II	938.719	1	
Fe II	932.244	200	26	Ge IV	938.55	80	
Sc	932.40	300		Fe II	938.967	70	58
Sc	932.58	300 ^d		Co III	939.060	30	1
Fe II	932.687	200	27	Si III	939.093	140	25
Co III	932.733	3		Fe II	939.159	140	22
Cu II	932.9387	60	33	O I	939.2346 P		
Ni II	933.339	2		Ni II	939.276	30	
S VI	933.38	400	1	Cl III	939.31	10	
Al II	933.43	0		Mn III	939.396	40	
Mn III	933.555	20		Cu II	939.5232	10	35

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn III	939.543	70		Cu II	945.8769	40	33
Br VI	939.57	800		Cu II	945.9648	50	35
Mn III	939.618	50		Ni II	945.965	75	
O I	939.8412 P			C II	945.977	100 -A	13.04
Cr III	939.93	10		Mn III	946.050	3	
Ge I	940.04	1		Fe II	946.051	100	
Cr I	940.39	40		Fe III	946.056	400b	10
Mn III	940.690	0		C II	946.198	200 -A	13.04
Br II	940.79	150		As IV	946.4	450	
K	940.839	50		Co III	946.526	10	
Ni II	940.886	20		Kr I	946.535	50	9
Mn III	940.922	0		Co II	946.594	20	1
Fe II	941.660	80	22	Ni II	946.657	15	
Co III	941.756	0		Mg II	946.7032 P	80	
Ge II	941.8962 st	50		Ni II	946.769	3	
As IV	941.9	250		Mg II	946.7694 P	90	
Ni II	941.972	10		Mn III	946.802	120	
Ni II	941.996	4		Cl III	946.97	100	
Fe III	942.363	150		Br II	947.1	20	
Co III	942.388	20	1	Mn III	947.136	30	
As II	942.585	100		Ni II	947.195	2	
Ni II	942.587	5		Fe II	947.564	20	
Fe II	942.589	40	56	Cu II	947.7003	2	35
Co III	942.696	1		Co III	947.838	10	
Ge V	942.7	100		C IV	948.098	50	11.12
Mn III	942.704	50		N IV	948.155	100	18.79
Cr VI	942.75			C IV	948.214	25	11.12
Ge II	942.845	8		N IV	948.244	200	18.79
Cr III	942.86	10		Fe III	948.322	300	
Mn III	942.903	50		Co III	948.501	5	
Mn III	943.052	150		N IV	948.540	250	18.79
C III	943.218 P		11.56	O I	948.6855	200	
Cl III	943.22	100		Cl III	948.72	100	
Fe II	943.267	80	55	V III	948.84	75	
Cu II	943.3348	60	33	Kr III	948.843	50	
Mn III	943.347	6		Fe III	948.918	250	
Be II	943.481	30		Br II	948.97	1000	
Be II	943.540	70		Ni II	949.024	0	
Mn III	943.565	3		Zn	949.063	12	
Se II	943.61	200		N VII	949.1 P		
Ge II	943.75	1		Ni II	949.137	1	
Mn III	943.796	2		Cl VII	949.2		
Cl VII	943.8			Mn III	949.235	2	
Fe II	943.910	100	58	He II	949.301 P	9	19
Co III	944.084	1		He II	949.354 P	17	19
Kr	944.28	60		Zn II	949.455	10	
Ni II	944.343	1		D I	949.485 P	70	4
S VI	944.52	500	1	Mn III	949.741	0	
Mn III	944.573	80		H I	949.743 P	70	4
Ni II	944.634	30		Be II	949.75	100	
Li II	944.73	5		Se II	950.02	200	
Mn III	944.746	50		O I	950.1121	120	
Co III	944.768	20	1	Mn III	950.114	20	
Ni II	944.842	10		Fe III	950.334	650	36
Mn III	944.862	0		Mg XI	950.6 P		
Mn III	944.906	1		P IV	950.66	1000	1
Fe II	945.095	160	57	Fe III	950.722	200	10
Mn III	945.124	0		O I	950.7327	40	
C I	945.191	20 -A	31	O I	950.8846	100	
Co III	945.198	0		Kr I	951.056	20	7
C I	945.338	50 -A	31	N I	951.0791	5	
Kr I	945.441	50	10	Mn II	951.140	5	
Cu II	945.5249	60	37	Se II	951.26	300	
C I	945.579	75 -A	31	Co III	951.284	0	
Mn III	945.632	200		N I	951.2947	3	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V	951.35	50		Mn III	956.061	3	
Cu II	951.4779	5		Cu II	956.2903	25	
Mn III	951.630	3		Mn III	956.316	0	
F I	951.871	500	1	Fe III	956.355	70	
Ni II	952.027	1		As IV	956.9	450	
Ni II	952.266	8		Mn III	956.906	80	
Co III	952.279	2		Ni II	956.912	3	
N I	952.3037 ST	18		Cu IV	956.939	10	
O I	952.3178	60		Cr VI	957.01		
Ni II	952.340	1		Mn II	957.20	0	
N I	952.4151 ST	14		Mn III	957.488	20	
Fe II	952.470	60	53	Mn III	957.748	180	
Ge II	952.500	20		S II	957.88	100	
N I	952.5231 ST	10		Cu II	958.1542	40	33
Al II	952.65	0		Mn III	958.387	0	
Ge III	952.79	40		Ge V	958.4	150	
Co III	952.812	2		F I	958.524	500	1
O I	952.9413	20		He II	958.670 P	13	18
N VII	952.99 P			Ga II	958.67	100	
Ni II	953.033	10		He II	958.724 P	22	18
Mn II	953.04	1		Mn III	958.794	0	
Al II	953.18	0		Mn III	959.021	2	
As IV	953.2	400		Fe III	959.070	70	
Mn III	953.309	0		Fe III	959.329	70	
Fe III	953.383	240		Mn III	959.468	0	
Cl III	953.40	200		N I	959.4936	5	
Kr I	953.404	50	5	Fe III	959.552	250	
N I	953.4150	25		Se IV	959.6	900	
As III	953.6	600		Cu IV	959.725	10	
N I	953.6548	27		Mn III	959.866	10	
V	953.70	25		Ni II	959.931	5	
Se III	953.74	800		N I	960.2017 P		
Se II	953.88	400		Ni II	960.261	5	
Ni II	953.937	2		Cu II	960.4135	20	35
Cr III	953.94	100		Fe III	960.454	70	
N I	953.9698	30		Ga II	960.57	20	
Co III	953.977	2		Mn III	960.611	10	
Cr III	954.07	100		P II	961.04	1	
N I	954.1040	30		Sc III	961.052	10	
Ca VII?	954.270	150		Mn III	961.209	0	
Al II	954.35	1		Sc	961.32	600	
Cu II	954.3830	20		As II	961.443	0	
Se III	954.44	700		Cl II	961.49	500	
Fe II	954.496	20		Ni II	961.516	1	
Se III	954.74	700		Fe III	961.709	150	
Kr III	954.775	250		Se II	961.77	200	
Fe II	954.786	40		Fe III	961.901	450	45
F I	954.825	1000	1	Fe III	962.108	70	
Al II	954.87	0		P II	962.13	5	
Ni II	954.911	1		Ni II	962.526	1	
Fe III	955.141	150		Ge II	962.537	5	
V	955.20	5		P II	962.57	5	
N I	955.2647 ST	4		F II	962.580	6	
Cu II	955.3297	5		Fe III	962.655	300	44
N IV	955.335	1000	8	Mn III	962.71	0	
N I	955.4376 ST	4		Ni II	962.750	1	
Mn II	955.48	0		Ca V?	962.896	100	
N I	955.5292	3		Fe III	963.197	150	
F I	955.545	750	1	F III	963.322	3	
Fe III	955.572	300	46	Cr III	963.34	200	
Ni II	955.601	10		Mn III	963.353	1	
N I	955.8814	5		Kr I	963.374	50	8
Ge II	955.96	0		P II	963.59	1	
As II	955.976	125		As III	963.8	600	
Al II	955.99	1		P II	963.81	5	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni II	963.855	15		Cr III	971.78	10	
Fe III	963.880	200		Mn III	971.903	60	
P III	963.99	103b		Fe III	971.929	200	
P IV	963.99	100b		He II	972.083 P	12	17
N I	963.9904 ST	25	3	He II	972.138 P	52	17
P II	964.09	10		P II	972.24	5	
Mn III	964.208	0		Cu II	972.2674	2	
P III	964.25	100		D I	972.272 P	140	3
Sc	964.46	1000		F I	972.401	20	
N I	964.6258 ST	23	3	H I	972.537 P	130	3
Cr III	964.80	60		Mn II	972.55	10	
P II	964.95	10		P II	972.807	30	
Kr II	964.971	1000	1	P III	972.81	300	
N I	965.0415 ST	23	3	Ni II	973.121	1	
Ge V	965.4	100		Cl IV	973.21	500	
P II	965.43	20		Be II	973.213	150	
Sc III	965.448	20		O I	973.2342	180	
Ni II	965.470	20		Be II	973.276	350	
Ge II	965.48	3h		Sc III	973.295	40	
Fe III	965.717	70		Mn III	973.386	0	
Ca III	966.186	25		Ca V?	973.437	315	
Cu II	966.2287	3	69	Cu I?	973.4995	2	
Cr III	966.28	80	11	Fe III	973.505	250	
Sc III	966.293	15		Ni III	973.786	300	13
Mn III	966.361	0		O I	973.8852	60	
Ca V?	966.466	300		F I	973.895	350	
P II	966.52	10		Se III	974.11	600	
Fe III	967.197	400	23	P II	974.36	5	
Cr III	967.59	100	11	As IV	974.6	450	
V III	967.81	0		Sc	974.65	300	
Cu II	967.8729	0		As II	974.712	190	
Si III	967.946	180	24	Cu II	974.7589	20	
Cu II	968.0343	25		P III	974.78	300	
Cr III	968.06	5	11	Sc	974.81	600	
Ni III	968.100	20	13	Se III	974.84	900	
P II	968.17	1		Se II	974.94	300	
Ca V?	968.236	150		Cr III	974.96	40	
S I	968.37	50		Sc III	974.965	30	
V III	968.41	0		Sc	975.04	200	
K VI?	968.518	250		Ca VI?	975.055	150	
Ni II	968.784	20		Mn II	975.19	8	
Fe III	968.955	250	23	Mn III	975.184	0	
Mn III	968.961	0		Zn	975.438	10	
Cr III	969.26	200	11	Mn III	975.565	80	
Ga II	969.29	100		Ca V?	975.825	200	
P II	969.38	5		Mn III	975.994	30	
Fe III	969.423	150		Cu IV	976.078	10	
Mn III	969.478	10		F I	976.217	100	
Ca VI?	969.652	300		O I	976.4481	200	
Mn III	969.661	120		Cl I	976.452	1	
Cr III	969.70	20		F I	976.505	40	
V III	969.77	0		Cu II	976.5532	10	
Cl I	969.917	10		Cu II	976.7176	10	
Fe III	969.954	200	23	Mn II	976.96	7	
Fe III?	970.381	150		C III	977.020	1000	1
Fe III	970.435	150		P II	977.258	1	
Ni III	970.478	50	13	Ni II	977.276	10	
Sc III	970.638	20		Zn	977.536	12	
Ni III	970.790	20	13	Cl IV	977.56	600	
Cr III	970.86	10		Cu II	977.5674	25	67
Ca VII?	970.887	100		F I	977.745	100	
As IV	971.1	500		Fe III	977.790	150	
Ge V	971.2	300		Cr III	977.82	50	
Ni II	971.415	50		P III	977.89	400	
O I	971.7381	300		Cl IV	977.90	400	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
O I	977.9594	120		Cr III	984.95	10	
Ni II	978.108	25		Mn III	984.982	5	
Mn II	978.11	5		Mn III	984.988	750	
Cu IV	978.262	10		Cr III	985.12	10	
Cl I	978.2844	13		Sc	985.20	800	
O I	978.6170	40		As II	985.345	220	
Mn II	978.6170	0		Cu IV	985.702	10	
B II	978.6170	10		Cl IV	985.75	400	
Fe III	979.512	300		Fe III	985.824	550	13
Cu II	979.4209	5		As II	985.847	220	
Ni III	979.589	400	13	Ni II	985.918	10	
Mn III	979.636	40		Mn III	985.974	2	
Fe III	979.704	150		K	986.203	5	
N III	979.842	400	12	Mn III	986.239	5	
N III	979.919	450	12	Mn III	986.322	60	
Cl I	979.963	1		Fe III	986.514	250	
Mn III	979.963	500		Zn II	986.516	8	2
Fe III	980.416	70		Al II	986.55	0	
Cl I	980.5061	3		Fe III	986.637	300	
As IV	980.6	500		Se II	986.71	50	
Zn	980.623	10		K	986.763	50	
Cl I	980.9191	4		Zn IV	986.960	2h	
Fe III	981.084	70		Kr III	987.289	500	
Fe III	981.373	650	13	Ca	987.336	250	
Mn III	981.462	0		Ni II	987.339	4	
Ni II	981.768	50		Zn	987.445	10	
Cl I	981.879	2		Cr III	987.58	20	
K VI?	982.115	100		Cl I	987.599	1	
Zn	982.253	10		As II	987.624	125	
Cl I	982.285	2		Cu II	987.6570	10	
Cu IV	982.318	12		Ca V?	987.680	150	
Mn II	982.90	25	9	As V	987.7	500	
Ni II	983.004	3		Al II	987.80	0	
Cu IV	983.205	10		Ca VII?	987.867	150	
Mn II	983.24	20	9	Cl I	987.885	2	
Mn III	983.369	20		Ge V	987.9	250	
Mn II	983.40	15	9	Cl I	987.916	1	
Ni II	983.431	1		Mn III	987.994	0	
Ca VII?	983.432	200		Fe III	988.148	150	
Fe III	983.510	150		Ni II	988.338	10	
Ni II	983.592	2		Cl I	988.410	2	
Cu IV	983.667	15		O IV	988.523	25	
Fe III	983.877	650w	13	O IV	988.571	40	
F III	983.927	1		O I	988.5778	5	5
Se II	983.94	600	3	O IV	988.628	40	
Cu II	983.9802	1	32	O I	988.6549	80	5
Be II	983.984	50		Zn IV	988.667	5	
Be II	984.048	150		O IV	988.713	40	
Mn III	984.129	450		O I	988.7734	40j	5
Zn II	984.139	10	2	Ge III	988.94	24j	
Cl I	984.2864	7		Cl I	988.9436	5	
Cl I	984.3230	8		Co III	989.169	1	
Sc	984.49	300		Cu II	989.2365	8	31
Cu II	984.5336	10		Mn III	989.414	0	
Cr III	984.54	10		Fe III	989.467	250	
Mn III	984.572	0		Cl I	989.484	2	
B II	984.673	100		Cl I	989.6543	4	
Ge V	984.8	200		Al II	989.70	0	
Mn III	984.883	600		Cl I	989.713	1	
Mn III	984.904	6		N III	989.790	800	1
Ca III	984.919	25		Si II	989.8730 st	100	6
As II	984.919	200		Ca VII?	989.973	150	
Br II	984.93	500		Mn III	990.066	10	
Cl I	984.939	2		O I	990.1269	80	5
Cl IV	984.95	700		O I	990.2043	200	5

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe III	990.235	250	22	Sc	995.52	200	
Zn	990.443	15		Ge III	995.76	300	
Cl I	990.4591	5		As II	995.772	190	
Ge V	990.5	250		Fe II	995.829	60	77
Ni II	990.626	100		S II	996.00	200	5
Cl I	990.625	2		Sc	996.01	300	
Fe III	990.800	400	22	Cr III	996.09	100	
O I	990.8010	100	5	Ge III	996.46	200	
Al II	990.88	1		Cr IV	996.50	10	
As II	991.068	0		Mn III	996.510	80	
F III	991.102	3		Cl I	996.5402	3	
Fe III	991.232	600	22	Co III	996.558	8	
N III	991.514	600	1	Cl I	996.5591	3	
N III	991.579	900	1	F III	996.616	3	
Cl I	991.640	2		F IV	996.62		
Fe III	991.829	400	42	Se IV	996.7	1000	
Mn III	991.942	350		Se II	997.06	200	
Co III	992.145	5		Fe III	997.081	450	9
Ge V	992.2	200		Cl I	997.1064	4	
Ne II	992.253	30		Se II	997.14	100	
He II	992.334 P	27	16	Si III	997.389	320	6
Fe III	992.337	150	22	Ne VI	997.4 P		
He II	992.391 P	48	16	Cl I	997.5099	4	
Ni II	992.516	20		Cl I	997.5375	4	
C III	992.59	50		Ca IV?	997.579	350	
Cl I	992.679	1		Fe III	997.599	400	21
Si II	992.6826 st	200	6	P V	997.64	200	
Ca VII?	992.740	50		Fe III	997.794	70	21
Mn III	992.868	80		Ca III	997.804	50	
Cl I	992.9098	8		Ni II	997.974	1	
Cl I	992.9470	5		Mn III	997.995	70	
Cu II	992.9532	25	32	P III	998.00	800	2
Ne VI	993.0 P			Cl I	998.294	2	
Cl I	993.007	2		Cu II	998.3060	8	31
Fe III	993.080	450	29	Cl I	998.3723	9	
Ni II	993.128	15		Ca	998.397	150	
Mn III	993.212	120		Ar VI	998.43	30	
F III	993.281	6		Cl I	998.4319	9	
F IV	993.29	10		Zn	998.496	10	
Ni II	993.341	1		Ga II	998.52	100	
Si III	993.519	200	6	Mn III	998.818	700	
Mn III	993.789	150		F IV	998.86	15	
Ne II	993.884	60		Fe II	999.003	20	
Cr III	994.08	20		Cr III	999.08	150	
Cl I	994.1414	3		Ge II	999.1011 st	560	7
Fe III	994.257	200	9	Sc	999.12	200	
Cr III	994.31	40		F IV	999.14	60	
Ca IV?	994.311	200		As IV	999.2	450	
Sc	994.36	300		Mn III	999.236	600	
Mn III	994.470	400		Cl I	999.3638	8	
Fe III	994.724	400	29	Cr III	999.37	200	26
Si III	994.787	260	6	Fe III	999.376	300	21
Sc	994.86	400		As IV	999.4	100	
Ni II	994.867	10		Zn	999.413	10	
F III	994.899	6		As II	999.465	190	
Ca V?	994.946	150		Cl I	999.4929	5	
Cl I	994.9865	4		G I	999.4974	40 -A	7
F IV	995.12	1		Cr III	999.52	10	26
Mn III	995.122	50		Ne VI	999.6 P		
Ca III	995.135	10		F IV	999.79	15	
Fe III	995.150	400	21	Cu II	999.7940	5	
Fe III	995.223	150	21	Cr III	999.84	200	19
Ni II	995.256	30		Cu IV	1000.034	14	
Ni II	995.445	4		K VI?	1000.056	100	
Ni II	995.453	3		Mn III	1000.091	40	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cl I	1000.113	2		V III	1004.96	10	
Ar VI	1000.16	40		Ca III	1005.006	10	
Fe II	1000.183	40	..	Mn II	1005.02	20	8
Cl I	1000.278	2		Fe II	1005.082	20	
Cr III	1000.28	10	19	Ge V	1005.1	50	
Ca V?	1000.310	300		Fe III	1005.106	150	
P V	1000.36	200		Mn III	1005.244	10	
Se III?	1000.36	600		Cl III	1005.28	500	1
S II	1000.48	200	5	Si III	1005.349	60	43
As II	1000.538	220		Si III	1005.353	5	43
Cu IV	1000.612	14		Si III	1005.357	1	43
Fe II	1000.665	20		Si III	1005.374	40	43
S II	1000.75	65	5	Si III	1005.378	5	43
Cu IV	1000.821	15		Si III	1005.403	30	43
Cr III	1000.86	400	19	V III	1005.41	40	
Zn	1000.885	12		Mn III	1005.501	0	
F IV	1000.89	1		V III	1005.64	0	
Mn II	1000.96	25	8	Mn II	1005.70	22	17
Cu II	1001.0130	8	27	Ti III	1005.75	10	
Cr III	1001.04	400	26	Cl I	1005.956	1	
Kr I	1001.061	100	6	N III	1006.015	300	17
Zn IV	1001.156	2		Ne VI	1006.1	P	
Cr III	1001.28	100		S II	1006.15	270	
Ar II	1001.29	1		P IV	1006.22	40	
Cl I	1001.4491	3		Fe III	1006.341	150	
Cr III	1001.52	20	26	Zn	1006.347	10	
Ca V?	1001.544	150		Cl I	1006.3957	3	
Se IV	1001.6	400		Cu IV	1006.427	10	
Zn	1001.932	20		V III	1006.46	500	
Ar III	1002.10	150		Cl I	1006.495	1	
Ca III	1002.143	25		Mn II	1006.72	7	
As II	1002.261	250		S II	1006.95	35	
Mn III	1002.279	100		Cu II	1006.9841	1	30
F IV	1002.33	5		V III	1007.10	50	
Cl I	1002.3464	20		Fe III	1007.113	200	9
Ti III	1002.38	5		Ti III	1007.15	20	
Cr IV	1002.39	30		Cu IV	1007.159	10	
Ca VII?	1002.398	250		Cl I	1007.1647	8	
Mn III	1002.578	0		Cr III	1007.23	100	
Cl I	1002.6952	3		Cl I	1007.3626	3	
Ga II	1002.95	150		Mn II	1007.53	15	8
Cr III	1002.96	300	26	Mn II	1007.61	15	17
Cr III	1002.99	200		F IV	1007.64	10	
Sc	1003.00	700		Fe II	1007.657	140	76
Mn II	1003.00	22	17	F IV	1007.74	5	
Cl I	1003.191	2		F IV	1007.88	5	
Cr III	1003.37	90		Ge V	1007.9	25	
As IV	1003.4	400		Fe II	1007.975	160	75
V III	1003.42	25		Ti III	1008.08	10	
F IV	1003.45	10		Ni II	1008.218	10	
Zn	1003.523	12		V III	1008.26	40	
Kr I	1003.550	100	4	Cl I	1008.3859	5	
P III	1003.59	1000	2	Mn III	1008.437	10	
Ca VII?	1003.611	100		Cu II	1008.5688	30	29
Cl I	1003.8093	5		Cu II	1008.7284	30	30
Mn III	1003.940	30		Cl III	1008.78	600	1
V III	1004.02	50		Mn II	1008.85	12	17
Cu II	1004.3554	30	30	Co III	1008.997	2	
Ge V	1004.2	300		Zn	1009.049	12	
F IV	1004.59	5		V III	1009.10	100	
Zn	1004.598	12		Cl I	1009.1857	4	
Mn III	1004.605	0		F IV	1009.34	10	
Cl I	1004.6770	8		V III	1009.36	50	
Ti III	1004.68	40		As II	1009.427	220	
Zn IV	1004.931	2		Mn II	1009.45	10	17

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca III	1009.546	50		Sc	1015.50	900	
Mn II	1009.56	6		S III	1015.51	200	2
Ca V?	1009.638	150		Cl I	1015.5139	6	
Zn	1009.648	10		Fe II	1015.520	140	74
V III	1009.73	75		Br II	1015.54	1000	
C II	1009.858	400	7	Sc	1015.71	500	
Fe III	1010.005	250	9	S III	1015.76	100	2
C II	1010.083	600	7	Cr III	1015.77	20	9
Cu II	1010.2690	30	68	Zn	1016.017	10	
C II	1010.371	1000	7	Sc	1016.04	500	
Cu II	1010.4450	10	68	Cr III	1016.29	40	9
Ne VI	1010.6	P		Cl I	1016.3558	3	
Cu II	1010.6395	3	28	Cr III	1016.41	100	18
As II	1010.647	190		Mn III	1016.518	60	
Cr IV	1010.82	10		Ni II	1016.622	20	
Zn IV	1011.003	0		Ge II	1016.6377 st	500	7
Fe II	1011.037	150	74	Sc	1016.72	400	
Se II	1011.15	200		Ge II	1017.0600 st	300	7
Ge III	1011.22	300		Cr III	1017.14	500	9
Cu II	1011.4358	2		Fe III	1017.254	600	12
Mn II	1011.51	5		Cr III	1017.31	500	9
Zn IV	1011.605	7		K	1017.337	50	
Se II	1011.84	300		Zn	1017.431	12	
Cl I	1011.8492	10		Br II	1017.56	20	
Fe II	1012.088	140	76	Cr III	1017.57	500	9
Br II	1012.1	500		Mn III	1017.674	2	
Ca III	1012.125	10		Fe III	1017.745	550	12
Cl I	1012.1505	6		Li II	1017.88	5	
Zn IV	1012.192	5		Cu II	1017.9980	15	29
Ge III	1012.31	200		Se IV	1018.0	200	
Ga II	1012.32	250		Cu II	1018.0642	15	26
Mn III	1012.324	500		Zn	1018.107	10	
Fe III	1012.411	200	9	V III	1018.18	50	
Fe II	1012.417	160	75	Mn III	1018.239	300	
S III	1012.49	300	2	Fe III	1018.286	550	12
As II	1012.546	125		Ca III	1018.302	100	
Cu II	1012.5971	25	27	Zn	1018.456	10	
Ca V?	1012.613	150		Cu IV	1018.462	16	
Mn III	1012.662	100		Cr III	1018.58		9
Ar VI	1012.67	10		Ca III	1018.600	100	
Cu II	1012.6833	3	27	Mn III	1018.605	250	
Mn II	1012.71	4		Cu II	1018.7973	50	26
Mn III	1012.844	1		Cr III	1018.80	10	9
F IV	1012.90	5		Ga II	1019.10	150	7
Ge III	1013.04	40		Cl I	1019.3644	4	
Mn II	1013.35	0		Ca	1019.371	100	
Cu II	1013.3999	1		S II	1019.55	200	4
Se II	1013.40	900	2	Cr III	1019.60	10	
Cl I	1013.6635	30		Cu II	1019.6542	15	26
Ca III	1013.715	50		Fe III	1019.789	400	41
Se II	1014.01	900	11	Ca VII?	1019.799	150	
Cr III	1014.02	10		Cl I	1019.8400	9	
S II	1014.09	50	4	V III	1019.97	10	
Ca V?	1014.162	200		Fe III	1020.022	150	
Cr III	1014.20	100		Mn III	1020.049	350	
S II	1014.42	200	4	Ca III	1020.073	300	
Ge II	1014.66	100		Cu II	1020.1076	15	28
Mn III	1014.836	180		Cr III	1020.24	30	
Ca IV	1014.923	17		Mn III	1020.337	300	
Cl III	1015.02	700	1	As II	1020.379	200	
Cr III	1015.03	30		K	1020.566	20	
Fe II	1015.083	60	76	Si II	1020.6000 st	25	5.01
As II	1015.375	300		Cr III	1020.94	200	18
V III?	1015.40	5		Ni II	1021.060	5	
P II	1015.47	100		S III	1021.10	100	2

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca V?	1021.139	150		Mn III	1027.495	0	
S III	1021.32	200	2	Mn III	1027.791	20	
K V?	1021.332	100		Cu II	1027.8311	50	64
Ca VI?	1021.398	200		Mn II	1027.99	18	7
Fe III	1021.51	250	41	P IV	1028.09	40	2
Na XI	1021.6 P			O I	1028.1571	100	4
Cr III	1021.64	150	18	Cl I	1028.1739	6	
Cu IV	1021.800	11		Ni II	1028.208	20	
Cl VI	1021.94 ?			Mn III	1028.307	0	
As II	1021.965	350		Cu II	1028.3279	25	26
Cz VII?	1022.010	100		Cr III	1028.33	300	3
Cl I	1022.0478	3		Ca VII?	1028.356	100	
Cu II	1022.1021	5	27	Cl I	1028.4075	8	
Se II	1022.11	100		Ca	1028.560	200	
Cl I	1022.4143	15		Cl I	1028.6162	15	
Mn III	1022.536	150		N I	1028.68	2	
F III	1023.270	5		Mn III	1028.754	650	
Zn	1023.425	10		Cl I	1029.2023	3	
Cr III	1023.47	20		Cl I	1029.3432	7	
Mn III	1023.502	40		As V	1029.5	500	
Mn II	1023.55	20	7	N I	1029.51	1	
Si II	1023.7002 st	50	5.61	Fe III	1029.551	150	
Mn III	1023.797	0		Se II	1029.56	600	
Ga II	1023.80	250	7	Ca IV?	1029.566	150	
Ca III	1023.849	100		Cr III	1029.57	100	3
V III	1023.87	50		Mn III	1029.627	300	
Sc	1023.90	200		Cu II	1029.7508	10	24
Ni II	1023.961	3		Cr III	1029.78	50	
Ni II	1023.999	15		Mn III	1029.843	0	
Fe III	1024.108	200	41	Kr I	1030.023	100	3
Zn IV	1024.255	2		Cr III	1030.10	200	3
Ca IV?	1024.339	250		Cu II	1030.2633	20	25
Ge V	1024.5	25		Ca IV?	1030.273	200	
Mn III	1024.717	30		Co III	1030.289	0	
Ni II	1024.720	50		Sc	1030.32	800	
Mn III	1024.950	10		Cr III	1030.47	600	2
He II	1025.241 P	42	15	Sc	1030.50	200	
Cl I	1025.2821	7		P IV	1030.51	400	2
He II	1025.302 P	77	15	Se IV	1030.6	200	
D I	1025.443 P	320	2	Cr III	1030.74	20	3
Cl I	1025.5328	22		N I	1030.76	2	
P IV	1025.56	160	2	Fe III	1030.744	150	28
Cr III	1025.58	100		As II	1030.86	200	
H I	1025.722 P	300	2	S II	1030.87	100	9
O I	1025.7618	500	4	Mn II	1030.87	10	7
Cl I	1025.8444	8		Cl I	1030.8845	10	
Mg II	1025.9681 P	140		Cr III	1030.89	300	2
Mg II	1026.1133 P	120		Fe III	1030.924	400	28
Mn III	1026.130	150		Mn III	1030.973	30	
Cr IV	1026.38	100		Si III	1031.169	140	33
Mg IV	1026.411	30		Cr III	1031.23	50	
Cu IV	1026.414	4		Ni II	1031.306	1	
Ca III	1026.495	100		S II	1031.34	100	9
Fe III	1026.790	400	28	Cl I	1031.3436	20	
Be II	1026.890	200		Mn III	1031.404	700	
Be II	1026.959	400		Cr III	1031.46	80	
Mn III	1027.063	20		Cl I	1031.5070	15	
Ca VII?	1027.110	150		Cr III	1031.60	10	2
Zn IV	1027.118	6		N I	1031.62	2	
K V?	1027.174	100		Cl I	1031.6704	6	
Cl I	1027.1785	10		Ca	1031.760	200	
Ca IV?	1027.309	250		Cu II	1031.7662	8	26
Cl I	1027.3386	15		O VI	1031.912	850	1
O I	1027.4307	300	4	Cr III	1032.05	10	3
Cr III	1027.46	100	3	Fe III	1032.123	550	20

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N I	1032.18	1		Mn III	1036.081	20	
Mo III	1032.251	20		N IV	1036.16	400w	18.84
F VI	1032.34	P		Se II	1036.16	300	
Fe III	1032.342	250		Ni II	1036.182	2	
Cr III	1032.42	50	2	Be II	1036.299	550	1
Ge III	1032.60	160		Be II	1036.319	250	1
Ca VI?	1032.612	100		C II	1036.3367 ST	800	2
Mn II	1032.69	2		Cu II	1036.4695	60	58
Ni II	1032.749	2		Zn IV	1036.551	3	
K	1032.768	100		Cl I	1036.5734	5	
Si III	1032.851	100	33	Fe III	1036.659	150	20
Ca III	1032.862	200		Ca III	1036.766	150	
Fe III	1032.879	70	28	Zn IV	1036.773	2	
P IV	1032.910	320	2	C II	1037.0182 ST	1000	2
Fe III	1032.925	150	20	Si III	1037.053	140	33
Cr III	1033.23	500	2	As II	1037.169	160	
Fe II	1033.278	300	23	Co III	1037.174	0	
Ge V	1033.3	150		Mo III	1037.360	0	
Sc	1033.38	400		N I	1037.37	4	
P II	1033.41	100		Mg IV	1037.409	250	
N I	1033.42	3		Fe III	1037.462	70	20
Ni II	1033.443	10		Cl I	1037.5871	27	
Cr III	1033.45	500	2	O VI	1037.613	750	1
Cu II	1033.5677	10	63	Mn III	1037.695	200	
Se II	1033.60	1000	2	N I	1037.73	1	
Cr III	1033.69	1000b	1	Mn III	1037.746	750	
Ga II	1033.69	400	7	Cr III	1037.80	200	1
N I	1033.70	0		Ar IV	1037.93	40	
K	1033.875	100		Cr III	1038.06	5	
F III	1033.898	1		Ge V	1038.3	200	
Si III	1033.920	160	33	N I	1038.31	3	
Cr III	1033.99	200	2	Fe III	1038.355	400	20
Fe III	1034.054	150		Se II	1038.36	300	
Ni II	1034.155	15		Fe II	1038.370	20	
Cr III	1034.20	150		C VI	1038.42	P	
Ni II	1034.20	10		Mn III	1038.752	20	
Si III	1034.21	80	33	Cl I	1038.7779	25	
Ni XV	1034.22	5		Cr III	1038.80	50	
N I	1034.37	2		Ni II	1038.866	5	
Cr III	1034.44	150		N I	1038.90	1	
Mn II	1034.480	750		Cr III	1038.97	30	25
N I	1034.60	0		C I	1039.2304	400	3
Ca III	1034.650	250		Cu II	1039.3477	60	24
Fe III	1034.654	150	20	Cr III	1039.40	20	1
Mn III	1034.698	1		Cu II	1039.5821	60	24
Cr III	1034.86	200		Cu IV	1039.589	57	
Ni XIV	1034.9	f		Mn III	1039.850	250	
Mn III	1034.917	650		V III	1040.04	0h	
Si II	1034.967	0 -A	13.08	Cr III	1040.05	200	1
N I	1035.00	1		Cr III	1040.17	300	1
Cu II	1035.1628	8	62	Mn III	1040.323	80	
Cl I	1035.2148	30		Cl I	1040.3475	30	
Cr III	1035.29	250	2	V III	1040.37	0h	
Mn III	1035.392	0		Cr III	1040.41	250	24
P IV	1035.50	320	2	Cr III	1040.53	400	25
Cr III	1055.57	250	2	Mn II	1040.54	8	
K V	1055.60	?		Cr III	1040.70	50	1
Ca III	1055.607	50		Ca III	1040.705	100	
Si III	1055.657	60	33	C III	1040.715	P	11.60
Fe III	1055.768	400	20	Cr III	1040.79	50	
Cr III	1055.77	200	2	Ge III	1040.80	240	
Mn III	1055.895	700		O I	1040.9425	240	3
Cr III	1055.93	500	1	Cl I	1041.1480	15	
As II	1036.004	100		Mn III	1041.191	180	
Cr III	1036.03	1000	1	Cu IV	1041.202	15	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1041.34	150	1	S II	1047.56	35	
O I	1041.6876	80	3	Se II	1047.67	100	
Cl I	1041.7148	4		S II	1047.86	35	
Cr III	1042.02	10	1	Al II	1047.92	0	
Cr III	1042.56	20		Mn II	1047.95	4	
Ni II	1042.704	2		Be II	1048.147	200	
Cl I	1042.7793	8		N V	1048.20	40w	51
Cr III	1042.87	30		Be II	1048.220	400	
Mn II	1042.98	3		Ar I	1048.22	1000	2
Zn	1042.980	10		Ni II	1048.400	6	
N I	1043.02	5		S II	1048.43	35	
Co III	1043.243	15		Mn III	1048.586	10	
Cr III	1043.39	20		Al II	1048.59	1	
Mn II	1043.46	3		B II	1048.70	1	
N I	1043.58	2		Cu IV	1048.803	16	
Cl I	1043.9857	7		V III	1048.83	0	
Cu IV	1043.995	64		Co III	1048.879	3	
N I	1044.06	5		Sc	1048.89	300	
V III	1044.19	0h		F III	1048.898	3	
Ge II	1044.24	20h		Ni II	1048.936	1	
Co III	1044.281	20		Ni II	1048.982	3	
Ni II	1044.349	30		Br II	1049.00	1000	
Mg IV	1044.374	80		Ni II	1049.051	1	
Zn IV	1044.502	1		S II	1049.06	35	
Cs III	1044.518	10		Mn III	1049.105	0	
Cu II	1044.5188	80	24	Ni II	1049.137	8	
V III	1044.60	0		Cr IV	1049.14	10	
Mn III	1044.610	50		Cu II	1049.3640	20	24
N I	1044.65	4		Se II	1049.51	1000	
Cr III	1044.74	40		N V	1049.65	50w	54
Cu II	1044.7435	80	61	Se II	1049.65	1000	2
Cu IV	1044.748	30		Ca III	1049.673	150	
Mn III	1044.790	700		B V	1049.72	P	
Ni II	1044.871	2		Ni II	1049.755	100	
Cr III	1045.06	400	24	Cu II	1049.7554	50	61
Ni II	1045.073	15		Mn III	1049.816	650	
Cr III	1045.14	400	24	P III	1049.82	400	
F III	1045.236	3		Ge V	1049.9	250	
F IV	1045.24	5		Al II	1049.9220	6	
Mn III	1045.240	0		F IV	1049.96	1	
Cu IV	1045.288	22		Mn III	1050.122	80	
Se II	1045.31	400		Ca II	1050.1536	10	23
O IV	1045.384	15		Mn III	1050.354	200	
Si IV	1045.500	P	21	Cu II	1050.4028	10	23
Ge V	1045.5	350		Cr III	1050.50	70	
V III	1045.64	5h		P III	1050.52	100	
Cr III	1045.71	30		Se II	1050.57	200	
S II	1045.74	65		Ni II	1050.718	3	
Ni II	1045.813	5		Co III	1050.762	20	
Mn II	1045.89	4		Mn II	1050.78	2h	
Mn III	1045.984	30		P III	1050.82	400	
N VII	1045.984	P		Mn III	1050.889	650	
Ge II	1046.05	2h		Co III	1050.977	10	
Mn III	1046.167	700		As II	1051.005	150	
O IV	1046.316	25		Cl I	1051.3787	9	
Mn III	1046.473	80		Cu IV	1051.588	68	
Ni II	1046.537	8		As V	1051.6	200	
Co III	1046.760	3		N I	1051.90	2	
Zn	1046.867	10		Cr III	1051.92	50	
Ge II	1046.88	5h		Mn II	1052.04	5	
Cu IV	1047.003	40		N I	1052.07	3	
Cr III	1047.04	5		Se II	1052.09	300	
Si IV	1047.271	P	21	Cu II	1052.1747	20	24
Mn II	1047.40	1		N I	1052.18	3	
Co III	1047.471	2		Mn III	1052.193	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1052.36	30		Cr III	1059.13	600	
Mn III	1052.431	30		Mn II	1059.53	1	
Cl I	1052.4631	4		Fe II	1059.571	400	21
Cu IV	1052.528	43		F IV	1059.63	35	
Ni II	1052.534	10		F IV	1059.73	1	
Mn II	1052.60	5		O V	1059.930	80	
N I	1052.64	2		Mn II	1059.98	1	
Mn III	1052.718	450		Cr III	1060.13	600	8
Cr III	1052.89	20		Fe III	1060.258	250	
Ni II	1052.983	2		O V	1060.386	80	
Br II	1053.0	50		Li III	1060.41	P	
N I	1053.04	3		Mn III	1060.565	0	
S II	1053.21	35		Cu II	1060.6343	60	23
Co III	1053.257	10		Cr III	1060.68	30	
N I	1053.35	5		Fe III	1060.723	250	
Ni II	1053.729	15		Ca III	1060.751	50	
N I	1053.78	3		Mn III	1060.760	300	
Cr III	1054.10	70		Cr III	1061.04	600	8
Cr III	1054.32	100		Fe III	1061.127	250	
Ge V	1054.5	200		Fe III	1061.245	300	40
Cr III	1054.66	150		Mn III	1061.383	90	
Cu II	1054.6901	60	60	Cu IV	1061.581	61	
Ge II	1055.0261 st	100	6	Mn II	1061.64	1	
Ni II	1055.246	15		Fe III	1061.708	400	40
Fe II	1055.269	500	21	O IV	1061.780	25	
Al II	1055.28	1		Mn III	1061.825	150	
Mn III	1055.289	80		Fe III	1061.827	250	40
Ni II	1055.291	30		O IV	1061.952	25	
Cu IV	1055.408	21		O IV	1062.133	40	
Cr IV	1055.43	10		Zn IV	1062.240	1	
O V	1055.451	200		O IV	1062.271	40	
Mn III	1055.523	350		Fe III	1062.272	200	40
Mg IV	1055.757	60		O IV	1062.434	10	
V III	1055.79	50		Mn II	1062.51	30	16
Cu II	1055.7968	40	22	S IV	1062.67	600	1
Mn III	1055.839	0		Cr III	1062.68	500	8
Cr IV	1055.89	400		Fe II	1062.758	400	21
Cr III	1056.11	100		O IV	1062.840	10	
Mn III	1056.271	30		Ni II	1062.965	1	
Cu IV	1056.417	12		Fe II	1062.982	300	19
As V	1056.6	250		Cu II	1063.0052	60	23
Cu IV	1056.662	14		e III	1063.188	250	
Al II	1056.68	0		C II	1063.285	5	12.01
V III	1056.76	5		Fe III	1063.309	200	40
Br II	1056.77	250		C II	1063.313	5	12.01
Mn II	1056.80	4		Mn II	1063.43	1	
Si II	1056.899	2 -A	13.07	Cr III	1063.63	10	17
Cu II	1056.9546	60	59	Mn III	1063.745	20	
Cr III	1056.97	30		Cl II	1063.83	500	1
Si II	1057.050	30 -A	13.07	Fe III	1063.872	550	40
Cr III	1057.30	5	8	Cu IV	1064.014	58	
Se I	1057.41	900	10	Cr III	1064.32	300	17
Si II	1057.503	15 -A	13.07	Cr III	1064.43	300	17
Si II	1057.690	2 -A	13.07	P IV	1064.60	120	
Cr IV	1057.85	300		Fe III	1064.611	70	
F IV	1058.10	10		Br II	1064.66	450	
O V	1058.149	120		P II	1064.80	150	
Mn III	1058.270	120		Ca III	1064.899	50	
V III	1058.48	50		Cr III	1065.12	150	17
F IV	1058.50	10		F III	1065.268	60	
Cr III	1058.63	3	8	Cr III	1065.40	30	17
Cu II	1058.7988	40	23	V III	1065.51	10	
Ge III	1058.89	240		P IV	1065.55	120	
O V	1058.998	80		Mn II	1065.56	25	16
Cu II	1059.0960	60	58	Cu II	1065.7821	20	57

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu IV	1065.824	55		Cu IV	1070.291	18	
C II	1065.8913 ST	700	12	Cu II	1070.3112	15	22
C II	1065.9199 ST	100	12	Cr III	1070.55	30b	
C II	1066.1332 ST	500	12	Cr IV	1070.55	30b	
Cu II	1066.1343	20	22	Fe III	1070.556	200	26
Fe III	1066.143	350	27	Ni II	1070.590	10	
Fe III	1066.181	300	26	F III	1070.623	20	
Cr III	1066.23	500	17	Cl II	1071.05	1000	1
F III	1066.251	6		V IV	1071.054	20	
Mn III	1066.287	10		Fe II	1071.260	100	20
Cr IV	1066.36	50		Mn III	1071.331	700	
Cu IV	1066.365	20		Fe II	1071.596	600	19
Zn IV	1066.520	1		Al III	1071.730		
Cr III	1066.55	50		Cu IV	1071.730	14	
Si IV	1066.629	550	11	Fe III	1071.746	300	26
P IV	1066.64	80		Al III	1071.757		
Ar I	1066.66	750	1	Cl II	1071.76	500	1
Ne II	1066.764	30		Br II	1071.8	750	
N I	1066.992	10		Mn III	1071.803	700	
Mn III	1067.049	150		Cr III	1072.13	200	16
Cu IV	1067.056	14		Fe III	1072.217	250	
Cr III	1067.16	200		Mn III	1072.372	120	
Cr III	1067.25	200		Zn IV	1072.496	1	
N I	1067.308	8		Ge V	1072.5	300	
Mn III	1067.343	0		P IV	1072.53	120	
N I	1067.386	10		Mn III	1072.598	400	
Br I	1067.559	1		Mn III	1072.727	50	
N I	1067.616	15		S IV	1072.99	600	1
Mn II	1067.73	25	16	Mn III	1073.027	30	
Ca III	1067.781	25		Zn IV	1073.027		
Br I	1067.805	1		Ni VI?	1073.11	120	
O IV	1067.810	120		F IV	1073.22	5	
Cr III	1067.92	200		P IV	1073.37	100	
Cl II	1067.94	200	1	Ge IV	1073.38	20	
Fe III	1068.190	300	27	S IV	1073.52	400	1
Br I	1068.256	1		Cr III	1073.71	200	16
Fe III	1068.299	200		Cu II	1073.7454	30	23
Ge V	1068.3	250		Ne II	1073.781	50	
Fe II	1068.356	600	19	Mn III	1073.789	800	
Cr III	1068.41	800		Br I	1073.912	2	
N I	1068.477	13		Fe III	1074.061	70	26
N I	1068.627	12		F IV	1074.10	1	
Ne II	1068.649	70		Cu IV	1074.163	21	
N I	1068.670	11		Br I	1074.243	2	
Br I	1068.849	0		Ne II	1074.313	10	
Cu IV	1068.859	17		Mn III	1074.460	80	
Se III	1068.87	100		Ni VI?	1074.51	150	
Mn III	1068.980	450		Cr III	1074.56	50	16
Fe III	1069.019	300	27	Ca III	1074.667	10	
Fe II	1069.038	300	20	V III	1074.76	0	
Ge V	1069.1	250		Br I	1074.803	1	
N I	1069.110	8		Fe III	1075.024	250	26
Mn II	1069.11	20	16	F IV	1075.05	5	
Cu II	1069.1954	50	23	Ge II	1075.0720 st	300	6
N I	1069.206	9		Cl II	1075.24	350	1
N I	1069.374	7		Br I	1075.345	1	
Cr III	1069.45	20		Ni II	1075.551	3	
N I	1069.468	6		Ne II	1075.688	20	
F III	1069.636	6		Ni II	1076.006	2	
Se III	1069.72	100		Cr III	1076.15	200	16
V III	1069.74	50		Fe II	1076.556	40	52
Mn II	1069.77	10	16	Cr III	1076.71	200	32
N I	1069.990	11		F IV	1076.86	5	
Mn III	1070.311	450		Br I	1076.964	1	
Fe III	1070.284	250		Mn II	1077.02	3	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu IV	1077.090	22		N II	1084.562	150	1
S III	1077.13	800	8	N II	1084.580	750	1
Ni II	1077.163	4		Cl I	1084.6671	40	
Cr III	1077.29	10		Br I	1084.810	1	
Co III	1077.530	2		Cr III	1084.84	20	
Se II	1077.54	400		He II	1084.908 P	73	14
Br I	1077.873	1		He II	1084.975 P	132	14
Cu II	1077.8759	1		Br I	1085.050	1	
Mn III	1077.920	250		Cl I	1085.1709	40	
Ge IV	1078.02	40f		Cr III	1085.27	20	
Br I	1078.124	1		F III	1085.297	3	
Co III	1078.127	2		Cl I	1085.3035	45	
Br I	1078.242	2		Mn III	1085.423	600	
Mn III	1078.572	20		Ni II	1085.441	150	
N IV	1078.708	300	18.88	Ge II	1085.513	100	5
Cr III	1078.80	30	32	N II	1085.529 P		1
Cl II	1079.08	750	1	N II	1085.546	400	1
Co III	1079.092	2		Mn II	1085.62	2	
Br I	1079.320	2		N II	1085.701	1000	1
Cr III	1079.43	150	32	As II	1085.729	150	
As IV	1079.5	350		Mn III	1085.772	850	
Zn	1079.655	10		Se II	1085.88	500	
V III	1079.72	5		Br I	1085.896	0	
Se III	1079.76	800		Cr III	1085.96	20	
Cu IV	1079.804	46		N IV	1086.084	b	18.78
Cl I	1079.8821	30		Cu II	1086.1102	5	21
Cr III	1079.97	10		N IV	1086.269	50	18.78
Cr III	1080.21	20	32	V IV	1086.382	5	
Mn II	1080.29	5		Ge V	1086.5	250	
Mn III	1080.386	100		Ni II	1086.503	4	
Mn III	1080.445	100		V III	1086.53	0	
Cu IV	1080.830	12		Mn III	1086.533	90	
Br I	1080.682	2		Mn III	1086.688	400	
O IV	1080.965	60		N IV	1086.691	100	18.78
Ni II	1081.035	200		Fe III	1086.748	300	
As II	1081.090	190		Mn III	1086.751	400	
Mn III	1081.636	0		P IV	1086.94	80	
O IV	1081.645	10		Kr IV	1087.29 P		
Ni V??	1081.82	10		Mn III	1087.368	50	
B II	1081.875	300		Br I	1087.468	2	
V III	1081.98	0		Br I	1087.687	2	
B II	1082.073	300		Mn III	1087.699	40	
Cr III	1082.10	50		Cr III	1087.70	10	
Cu IV	1082.253	14		Ne II	1087.789	40	
Mn III	1082.300	800		Br I	1087.819	1	
F V	1082.313	100		F V	1087.820	35	
As II	1082.350	350		Mn III	1087.862	0	
Si II?	1082.400	2		Ni VI?	1087.97	500	
Mn III	1082.588	650		Cl I	1088.062	60	
Sc	1082.62	200		Mn III	1088.185	650	
Mn IV	1082.645	100		Fe III	1088.224	70	
Fe III	1082.838	250		Cr III	1088.28	10	
Fe III	1083.176	150		Ge V	1088.3	400	
Si III	1083.210	120	23	Mn III	1088.324	35.1	
Mn III	1083.276	1		F V	1088.387	150	
O IV	1083.382	10		Cu II	1088.3953	20	
O IV	1083.613	10		Ge III	1088.46	800	
Cr III	1083.72	20	32	Co III	1088.486	1	
Mn III	1083.795	300		P IV	1088.61	120	
N II	1083.990	400	1	Zn	1088.711	10	
Si II?	1084.144	3		Mn III	1088.724	550	
O IV	1084.189	40		Br I	1089.039	2	
Cr III	1084.26	20		Fe III	1089.061	200	
As II	1084.370	190		Br I	1089.203	1	
Mn III	1084.485	450		Cu II	1089.2447	3	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1089.30	10		Cr III	1094.38	200	
Mn III	1089.313	250		Cu II	1094.4025	30	21
Br I	1089.322	1		Zn IV	1094.429	8	
Zn IV	1089.334	0		Cr III	1094.53	5	
Ge V	1089.4	250		F III	1094.660	6	
Fe III	1089.416	250		Se V	1094.7	900	
Fe III	1089.671	250		Br I	1094.722	?	
Mn III	1089.715	50		Cl I	1094.7686	6	
Cr III	1089.76	40		Mn III	1094.773	70	
Co III	1089.899	1		F III	1095.095	10	
Mn II	1089.98	1		Cl I	1095.1483	55	
Cu IV	1090.090	20		Co III	1095.443	15	8
Mn III	1090.126	250		Fe III	1095.476	300	
Cr III	1090.27	20		Br I	1095.481	3	
Cl I	1090.2706	53		Ni VI?	1095.49	80	
Se II	1090.43	100		Cl I	1095.6619	55	
Cr III	1090.54	10		Cl I	1095.7971	60	
Co III	1090.554	0		N I	1095.942	13	
Br I	1090.623	3		Cr III	1095.96	50	31
Ne II	1090.628	50		Mn III	1096.033	750	
Cl I	1090.7386	40		N I	1096.325	11	
Cr IV	1090.97	30		V IV	1096.375	2	
Cl I	1090.9815	45		S II	1096.57	200	3
Mn III	1091.233	40		Fe III	1096.606	200	
Cu II	1091.2916	5	21	Fe II	1096.616	400b	18
F IV	1091.35	10		Cu IV	1096.680	11	
Ni II	1091.407	4		N I	1096.749	13	
P IV	1091.44	160		Br I	1096.788	3	
V III	1091.53	5		Fe II	1096.793	400	18
Cr III	1091.54	10		F I	1096.8	-A	
V III	1091.86	5		Cl I	1096.8098	45	
C II	1091.937	100	-A	Fe II	1096.886	600	18
Ge V	1092.0	250	14.05	Cr III	1096.90	30	
Mn III	1092.002	30		Cu II	1097.0529	25	21
Cu IV	1092.029	10		Mn III	1097.158	0	
Cl I	1092.1287	40		N I	1097.237	21	
Cr IV	1092.23	10		Cr III	1097.25	100	
C II	1092.232	10	-A	Cl I	1097.3692	50	
C II	1092.431	10	-A	Cr III	1097.45	30	
Cl I	1092.4366	45	14.05	Fe III	1097.649	70	
F IV	1092.45	5		Fe II	1097.782	40	51
Co III	1092.581	10	8	Se II	1097.82	800	9
Cr III	1092.65	30		Se III	1097.82	600	
C II	1092.726	200	-A	N I	1097.995	8	
Si III	1092.915	P	42	Cr IV	1098.06	10	
Si III	1092.940	P	42	Cl I	1098.0692	40	
Si III	1092.969	P	42	Ge II	1098.08	2h	
Ge II	1093.01	1h		N I	1098.097	17	
Co III	1093.066	5	8	Cu IV	1098.151	13	
Si III	1093.105	P	42	P IV	1098.18	80	
Si III	1093.133	P	42	Cr III	1098.21	100	
V III	1093.15	0		Fe III	1098.247	P	300
Cu IV	1093.165	10		Fe II	1098.26	0	
Cr III	1093.17	50h		N I	1098.261	17	
Mn II	1093.22	0		Cu IV	1098.409	13	
Si III	1093.293	P	42	Cr III	1098.61	100	
P IV	1093.32	80		N I	1098.625	12	
Fe III	1093.332	P	150	Ge II	1098.710	200	5
Ni VI?	1093.37	400		N I	1098.759	6	
P III	1093.63	200		Cr III	1098.86	100	23
Mn III	1093.844	70		Br I	1098.881	3	
Zn IV	1094.128			Cr III	1098.95	50	
As II	1094.183	225		N I	1098.952	9	
Mn III	1094.203	10		V III	1098.96	75	
F III	1094.277	3		N I	1099.042	8	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe III	1099.061 P	150		Sc	1107.13	200	
Se III	1099.10	900		V III	1107.36	100	
Fe II	1099.117	500h	18	Br I	1107.442	2	
N I	1099.150	13		As II	1107.476	300	
N I	1099.263	8		Br I	1107.512	2	
Cr III	1099.46	100		Mn III	1107.517	0	
Ni II	1099.471	1		Cl I	1107.5282	70	
Ca III	1099.495	50		C IV	1107.600	50	11.15
Cl I	1099.5230	40		V III	1107.76	25	
Cr III	1099.82	10		Sc	1107.77	200	
Mn III	1099.858	750		Mn III	1107.814	350	
Se II	1099.97	300		C IV	1107.933	100	11.15
Fe II	1100.026	400	18	Cr III	1108.11	100	
N I	1100.3593	50		Mn III	1108.164	20	2
N I	1100.4649	15		Si III	1108.368	280	5
Na III	1100.49	100		S IV	1108.48	200	
Fe II	1100.525	400	18	Mn III	1108.482	750	
Cr III	1100.61	300	23	V III	1108.71	5	
V III	1100.75	100		Ni II	1108.729	30	
V III	1100.87	5		Cl I	1108.8113	15	
Ge II	1100.98	10h		Mn III	1109.073	300	
Cr III	1101.26	50	31	F III	1109.262	3	
N I	1101.2910	45		Sc	1109.40	200	
Cl I	1101.3381	50		Br I	1109.422	1	
Br I	1101.347	2		V III	1109.49	5	
V III	1101.42	25		Kr IV	1109.62 P		
Cr III	1101.43	300	23	Cu I	1109.7445	1	
Br I	1101.456			Zn IV	1109.919	35	
Br II	1101.47	50		S III	1109.965	320	5
Br I	1101.498	5		Cl I	1110.2948	60	
Fe II	1101.538	400	18	V III	1110.45	25	
P IV	1101.65	40		Mn III	1110.508	150	
Cu II	1101.8362	1	21	Kr IV	1110.64 P		
Zn IV	1101.896	2h		V IV	1110.720	2	
Cr III	1101.91	150	31	Br I	1110.904	3	
Cl I	1101.9362	40		V III	1110.92	25	
Ni II	1101.956	5		Sc	1110.96	200	
V III	1102.19	5		S IV	1111.08	200	
Cu IV	1102.198	27		Mn III	1111.105	10	2
S II	1102.32	300	3	Fe II	1111.114	300	15
Fe II	1102.385	160	18	P IV	1111.13	40	
Cl I	1102.755	40		Cr IV	1111.17	10	
Fe II	1102.758	20	17	Br I	1111.579	2	
Cr III	1102.88	300	23	Br I	1111.751	2	
Cl I	1103.069	50	18	Cu II	1111.7577	0	20
Mn III	1103.190	650		F III	1111.782	3	
Cu IV	1103.489	14		Mn II	1111.903	10	31
Cr III	1103.57	10		Zn IV	1111.935	2	
Cr III	1103.68	30		V III	1112.03	100	
Br I	1103.924	2		C I	1112.058	10	30.01
Br I	1104.168	2		Fe II	1112.086	700	16
Cr III	1104.44	150	31	F II	1112.110	10	
Ni II	1104.602	1		Mn II	1112.19	0	31
Cr III	1104.69	30	23	V IV	1112.199	5	
Fe II	1104.978	20	18	Mn III	1112.284	750	
V III	1105.17	25		F II	1112.302	100	
Cu II	1105.1765	5	21	Cu II	1112.407	5	
Br I	1105.460	2		V IV	1112.436	5	
Cr III	1105.80	70		Cr V	1112.47	60	
Br I	1105.844	2		F III	1112.507	6	
Br I	1105.994	2		Cr III	1112.60	10	
Fe II	1106.215	300	17	Br I	1112.743	1	
Fe II	1106.362	100	15	Mn III	1113.18	5	2
Cu II	1106.4471	3		Mn III	1113.193	990	
Ge II	1106.737	200	5	Si III	1113.228	360	5

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1113.23	9	31	Ge II	1120.458	200	5
F III	1113.244	3		Mn III	1120.768	0	
Ct III	1113.26	100	30	V III	1121.16	15	3
Mn II	1113.39	0	31	Ni II	1121.162	125	
F III	1113.463	20		Cr III	1121.35	30	
Mn III	1113.677	20		Mn III	1121.413	1	
Ga II	1113.78	50		Br I	1121.473	3	
Co III	1114.405	1		Co XIV	1121.6	f	
Mn II	1114.44	8	31	Br I	1121.839	2	
C I	1114.457	50	30	Cr V	1121.98	5	
Mn II	1114.50	0	31	Fe II	1121.987	500	12
Mn III	1114.53	1h		C I	1122.098	20	28
Kr IV	1114.95	P		Mn III	1122.113	0	
Mn III	1115.147	90		V III	1122.13	75	
Br I	1115.448	2		C I	1122.260	50	27.01
Mn II	1115.53	6	31	Na III	1122.30	10	
Zn II	1115.657	8h		Sc	1122.32	200	
V III	1115.71	50		C I	1122.328	100	27
Zn IV	1115.801	3		Mn III	1122.397	450	
F II	1115.946	40		S III	1122.42	200	
Br I	1116.105	2		Cr III	1122.43	150	22
Mn III	1116.151	350		C I	1122.447	20	27
Li III	1116.33	P		Si IV	1122.486	550	3
Mn II	1116.37	6	31	Ge V	1122.5	50	
Cr III?	1116.46	10		Fe III	1122.526	500	1
Ni II	1116.557	40		Zn IV	1122.587	3	
Ge V	1116.8	300		V III	1122.62	5	3
P IV	1116.92	10		C I	1122.7.5	50	26.03
Cr III	1117.19	300	22	C I	1122.754	20	
Zn	1117.393	10		Fe II	1122.858	500	13
Cr V	1117.55	10		Cr IV	1122.87	30	
C I	1117.581	20		V III	1123.00	75	3
C I	1117.724	50	29	C I	1123.107	20	
V III	1117.78	5		Ni II	1123.113	2	
Cr III	1117.88	20	30	F III	1123.126	20	
As II	1117.903	200		Ni V	1123.20	0	
S VI	1117.91	100		Cu I	1123.2260	5	20
P V	1117.98	1000		Cr III	1123.37	30	
F II	1118.017	10		V III	1123.53	50	3
Mn III	1118.068	0		Cr III	1123.59	150	
Al III	1118.173			Cr V	1123.62	100	
Br I	1118.173	3		Sc	1123.96	200	
C I	1118.180	50		As II	1123.977	225	
Al III	1118.202			Zn III	1124.021	2	
F III	1118.320	10		Br I	1124.038	3	
Al III	1118.353			Ca III	1124.039	100	
Ni II	1118.404	20		Mn III	1124.109	400	
Ni II	1118.547	25		Fe II	1124.134	400	14
Cr III	1118.55	200	30	Mn III	1124.333	80	
P IV	1118.59	160		S II	1124.39	100	8
Mn III	1118.574	80		Cr III	1124.43	5	30
Al IV	1118.80	200d		V III	1124.76	5	
F III	1118.854	3		Fe III	1124.883	600	1
Ni II	1118.921	10		C VI	1124.9	P	
Se II	1119.04	100		P II	1124.945	10	
Br I	1119.140	2		S II	1125.00	100	8
Se III	1119.17	1000		Mn III	1125.065	0	
Ga II	1119.20	150		Cr III	1125.27	100	30
Mn III	1119.303	300		Ge V	1125.4	25	
Ni I?	1119.330	75		V III	1125.70	200	3
Cr III	1119.40	5	30	Br I	1125.728	4	
V III	1119.66	50	3	Cr III	1125.73	200	22
F III	1119.673	6		Cr III	1125.90	20	
Br I	1119.725	3		V III	1126.13	0	
Cu II	1119.9470	15	20	Se III	1126.28	300	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III?	1126.35	10		Ne II	1131.194	450	1
Fe II	1126.425	400	13	V II?	1131.255	20	
S III	1126.48	50		S II	1131.65	200	8
Fe II	1126.603	400	14	Ne II	1131.724	90	
Zn II	1126.611	2h		Ni V	1131.82	0	
Fe III	1126.728	P	1	Ne II	1131.848	100	
S III	1126.85	100		Li II	1131.884	15	
Fe II	1126.850	400	12	Cr III	1131.90	150	
Mn III	1127.093	150		Fe III	1131.914	200	1
Mn III	1127.314	650		Cr III	1132.75	300	
Si II	1127.442	20h-A	13.06	Br I	1132.822	3	
Ge II	1127.48	5h		Cl I	1132.8528	45	
Ni II	1127.486	5		Br I	1133.116	4	
Cr III	1127.71	150		N IV	1133.117	200	18.43
Cu IV	1127.820	10		Br I	1133.251	2	
V IV	1127.836	20		Fe II	1133.413	500	50
Si II	1127.907	40h-A	13.06	Sc	1133.53	200	
P V	1128.01	650		Mn III	1133.613	500	
Fe III	1128.050	P	1	Fe II	1133.678	500	11
Fe II	1128.074	500	14	F II	1133.714	100	
Fe II	1128.180	100	50	Ni II	1133.730	75	
C I	1128.252	50	26	Zn IV	1133.744	15	
Zn II	1128.300	2h		Se I	1133.89	100	
Si IV	1128.325	P	3	Cr III	1133.91	50	
Si IV	1128.340	650	3	Cl I	1133.9341	50	
Fe II	1128.530	200h	194	Ge II	1134.02	20h	
Mn III	1128.577	120		V III	1134.16	50	
V III	1128.58	75		N I	1134.1651	560	2
C I	1128.686	20	25.01	Co XIII	1134.3	f	
Fe III	1128.723	P	1	N I	1134.4147	550	2
C I	1128.752	100	26	Ni II	1134.533	150	
Cr III	1128.78	10		Br I	1134.588	5	
Sc	1128.79	400		F IV	1134.78	35	
C I	1128.817	P	25	Br I	1134.888	4	
Mn III	1128.825	120		Cu IV	1134.976	10	
Cr III	1128.88	30		N I	1134.9801	780	2
C I	1128.903	20	25.02	N IV	1135.244	150	18.43
Fe II	1128.909	400	13	Cl I	1135.3310	50	
C I	1129.030	100	25.01	V III	1135.92	0	
Cu IV	1129.076	12		F II	1135.938	10	
C I	1129.135	200	25	N IV	1136.241	100	18.42
C I	1129.161	P	25	Br I	1136.294	5	
Fe III	1129.190	P	1	Zn IV	1136.406	40	
C I	1129.196	P	25	V III	1136.54	0	
C I	1129.405	20	25	Cr III	1136.67	500	
C I	1129.624	50	24	Al IV	1136.80	150	
C I	1129.749	20	25	Mn III	1136.867	80	
F II	1129.758	200		Cr III	1136.91	10	
Fe II	1129.777	240	49	Ne V	1137.0	P	
Se II	1129.79	50		Zn III	1137.030	3	
C I	1129.924	50	24	Cr III	1137.08	10	
Br I	1129.979	2		Ni II	1137.091	100	
C I	1130.171	20	23.01	Ga IV	1137.1	50	
Fe III	1130.404	300	1	Zn IV	1137.243	3	
Fe II	1130.428	500w	12	Mn III	1137.518	0	
Se II	1130.48	100		Ge III	1137.95	200	
Ga II	1130.81	250		Fe II	1138.039	100	48
Fe II	1130.87	40	48	S IV	1138.12	100	
Cu II	1130.8953	1	20	Zn	1138.175	10	
Cu II	1130.8973	1		F III	1138.182	6	
P II	1130.925	10		V III	1138.32	15	
S II	1131.05	200	8	Se II	1138.36	50	
V III	1131.05	60		C I	1138.383	20	23
Cr V	1131.16	20		O III	1138.545	100	
Br I	1131.171	2		Ni II	1138.547	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
C I	1138.557	30	23	V III	1142.08	5	
C I	1138.595	20	23	Si III	1142.282	120	32
Fe II	1138.642	500	11	F III	1142.332	10	
Cr III	1138.76	20		Fe II	1142.334	500	10
Ge V	1138.9	25		V III	1142.34	10	
C II	1138.9358 ST	200 -A	14.04	Fe III	1142.464	250	39
C I	1138.946	50	23	Cu II	1142.6405	20	19
Ni II	1139.009	3		N I	1142.70	2	
C I	1139.093	100	23	V V	1142.741	40	
N I	1139.14	1		Cu IV	1142.743	16	
C I	1139.300	20	22.01	Zn	1142.865	10	
C II	1139.3317 ST	300 -A	14.04	P II	1142.88	20	
Br I	1139.350	3		Zn II	1142.904	2h	
As II	1139.395	500		Fe III	1142.955	500	39
C I	1139.426	50	22.02	Be II	1142.956	250	
C II	1139.4730 ST	10 -A	14.04	Al II	1142.97	5	
F VI	1139.496	100		Be II	1143.039	500	
C I	1139.514	20	22	V III	1143.19	15	
Sc	1139.53	200		Fe II	1143.235	500	10
V III	1139.54	15		Ge II	1143.25	40h	
Br I	1139.544	3		N I	1143.31	1	
Ni II	1139.624	75		F IV	1143.35	5	
C I	1139.650	20	22.01	F III	1143.354	1	
V III	1139.67	25		Ni II	1143.397	50	
C I	1139.766	70	21.01	Fe III	1143.545 P	70	39
C I	1139.792	70	22	Cr III	1143.63	150	
C I	1139.812	150	22	N I	1143.6458	15	
V III	1139.85	75		N I	1143.6508	30	
C I	1139.865	50	22	Fe II	1143.671 P	200	39
C I	1140.005	50	22	P II?	1143.71	1	
C I	1140.223	20	21.01	Fe II	1144.052	100	156
C I	1140.357	100	21	Cr III	1144.10	100	
Mn III	1140.396	200		N I	1144.16	2	
Ni II	1140.459	75		Cl I	1144.2900	60	
Si III	1140.545	120	32	Si III	1144.306	160	32
C I	1140.574	20	21.01	Cr IV	1144.31	70	
C I	1140.641	150	21	Ni VI?	1144.32	180	
V III	1140.66	10		Cu II	1144.8556	30	19
Br I	1140.732	1		Fe II	1144.946	700v	10
N I	1140.74	2		Si III	1144.959	120	32
Zn IV	1140.849	8		P II	1145.01	1	
Mn III	1140.856	0		Ca III	1145.062	100	
P II	1141.00	5		Si III	1145.122	150	41
Cr III	1141.17	5		Si III	1145.149	13	41
Mn III	1141.171	150		Si III	1145.16	1	41
N I	1141.19	1		Si III	1145.177	80	41
V III	1141.20	5		Si III	1145.19	10	41
Fe III	1141.272	200		Si III	1145.22	50	41
C I	1141.327	20	20	Br I	1145.268	2	
Ge II	1141.36	10h		N I	1145.27	2	
Br I	1141.564	2		Cu IV	1145.290	10	
Si III	1141.580	140	32	Mn IV	1145.361	120	
N I	1141.60	2		Cl I	1145.3941	30	
C II	1141.6246 ST	300	11.01	Ni VI?	1145.57	150	
C II	1141.6574 ST	30	11.01	Si III	1145.669 P		32
C I	1141.678	20	20	Mn III	1145.744	0	
V III	1141.68	25		Br I	1145.854	2	
C II	1141.7445 ST	200	11.01	F IV	1145.89	10	
F III	1141.857	3		N I	1145.90	1	
Se II	1141.94	900	7	Ne V	1146.1 P		
Zn II	1141.955	5b		Zn III	1146.105	50	
Zn IV	1141.955	20b		Zn	1146.190	50	
Ni VI?	1141.96	100		Mn III	1146.335	30	
Al IV	1142.03	50d		Cr III	1146.34	250	
F IV	1142.07	5		Zn	1146.465	15	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V III	1146.75	75	2	V III	1153.18	25	2
Ni VI?	1146.85	80		Fe II	1153.281	400	10
Fe II	1146.963	300	10	Zn II	1153.398	5	
Ge II	1146.972	3		N I	1153.53	4	
Zn	1147.006	10		Cr III	1153.60	150	29
Fe II	1147.413	500	10	O III	1153.773	150	
Ni II	1147.633	1		Fe II	1153.955	300	10
N I	1147.66	4		P II	1153.99	120	3
Br I	1147.689	2		Cr III	1154.12	150	29
Sc	1147.69	300d		N I	1154.19	3	
Cu II	1147.7617	8	19	V III	1154.23	250	2
Br I	1147.943	2		Fe II	1154.401	400	10
Zn	1148.062	12		Zn IV	1154.402	25	
Sc III	1148.241	30		Si II	1154.416	150	
Fe II	1148.295	600	10	Cr III	1154.43	10	29
Ca III	1148.399	100		Sc III	1154.523	40	
V III	1148.46	100	2	Er I	1154.640	1	
Fe II	1148.693	160	155	V III	1154.77	75	2
N I	1148.77	4		Si III	1154.998	120	31
V III	1149.08	25		P II	1155.00	40	3
Cu IV	1149.166	18		V III	1155.11	75	2
As II	1149.306	600		Fe II	1155.273	40	157
N I	1149.39	2		S III	1155.34	200	
Ge II	1149.547	20		Zn IV	1155.384	5	
Mn III	1149.572	550		Cr III	1155.39	150	29
O III	1149.603	50		V III	1155.41	5	
Zn IV	1149.610	25		Zn III	1155.497	60	
Ca III	1149.848	150		Mn III	1155.544	300	
V III	1149.94	500	2	C I	1155.809	50	19
P II	1149.96	70	3	Zn IV	1155.850	40	
F IV	1150.07	10		Si III	1155.957	120	31
Ni VI?	1150.22	100		Se II	1155.99	700	8
V III	1150.25	60	2	C I	1156.028	150	19
Al	1150.27	10		C I	1156.199	20	19
Fe II	1150.292	400	10	Ga IV	1156.2	250	
Br I	1150.312	2		Al IV	1156.21	50	
Zn IV	1150.481	30		Mn II	1156.34	30	30
Ge III	1150.60	240		C I	1156.389	100	19
Fe II	1150.689	400	10	Ge II	1156.462	20	
Se IV	1150.8	100		V III	1156.47	15	
Al IV	1150.85	10		C I	1156.560	200	19
O III	1150.882	100		Fe II	1156.575	40	
Se V	1151.0	700		Mn II	1156.66	25	30
V III	1151.05	150	2	C I	1156.765	20	18.01
Sc	1151.09	200		Si III	1156.782	80	31
Fe II	1151.163	500	10	Mn II	1156.83	20	30
V III	1151.30	25		As II	1156.908	10	
Br I	1151.381	3		Se II	1156.91	600	1
O I	1152.1512	200	6	Mn II	1156.92	20	30
Cu III	1152.155	1		P II	1156.96	50	3
V III	1152.17	150	2	Cu II	1157.0206	5	19
Zn IV	1152.278	20		Al II	1157.10	20	
N I	1152.30	4		Ni VI?	1157.13	150	
Br I	1152.418	5		Ni II	1157.132	1	
Fe II	1152.440	300	10	V III	1157.18	400	
N I	1152.63	1		C I	1157.186	20	17
Ca III	1152.706	100		Zn III	1157.289	40	
Mn III	1152.716	700		Se II	1157.31	400	
P II	1152.81	50	3	C I	1157.330	50	18
Cr III	1152.82	10	29	Se IV	1157.4	500	
Br I	1152.833	2		C I	1157.405	150	17
Fe II	1152.882	400	10	Ge II	1157.50	500	
Zn	1152.957	10		V V	1157.577	50	
Br I	1152.989	2		Cu IV	1157.603	18	
Na III	1153.04	40		C I	1157.770	350	16

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Kr IV	1157.78	P		Sc	1162.77	200	
Cu II	1157.8719	8	19	V III	1162.81	50	
Cu II	1157.8807	8		Ni VI?	1163.20	100	
C I	1157.910	730	16	V III	1163.26	75	1
C I	1158.019	750	16	Zn	1163.315	15	
F III	1158.073	6		Mn II	1163.32	40	4
Si III	1158.102	140	31	Ga IV	1163.6	150	
C I	1158.132	400	16	Ni II	1163.645	50	
Al II	1158.24	1		Ni II	1163.729	8	
C I	1158.324	100	15.01	V III	1163.87	60	
C I	1158.397	100	15.01	N I	1163.8835	150	7
C I	1158.492	20	16	Ge V	1164.0	200	
C I	1158.674	100	15.01	N I	1164.0016	30	7
C I	1158.732	100	15	Mn III	1164.019	60	
Kr III	1158.737	300		N I	1164.2064	60	7
F III	1158.781	10		Mn II	1164.21	30	4
Ni II	1158.830	100		Ge II	1164.273	100	
V III	1158.86	50		Ni II	1164.279	150	
C I	1158.907	50	15.01	O IV	1164.320	25	
As II	1158.908	300		N I	1164.3246	95	7
C I	1158.967	200		Fe II	1164.48	1	
Mn III	1159.022	150	15	O IV	1164.545	40	
Br I	1159.030	2		Ni II	1164.574	100	
Ge II	1159.066	50		Cu IV	1164.664	12	
P II	1159.08	80	3	O VIII	1164.8	P	
Ge III	1159.12	160		Kr I	1164.867	200	2
F III	1159.227	20		Ge V	1165.2	25	
N I	1159.28	4		Fe II	1165.269	240	73
Fe II	1159.347	400	73	Cu IV	1165.309	10	
Ni II	1159.510	150		Al	1165.38	10d	
V V	1159.520	10		N I	1165.5943	40	
Ge III	1159.62	160		C III	1165.698	P	11.76
V III	1159.75	200	1	Ni II	1165.798	12	
N I	1159.8172	P		Mn II	1165.82	25	28
N I	1159.84	2		N I	1165.8358	15	
Si III	1160.255	120	31	C III	1165.870	P	11.76
Br I	1160.332	3		F III	1165.961	10	
N I	1160.39	3		S III	1166.13	50	
V III	1160.77	300		Mn II	1166.16	10	28
Ni II	1160.776	2		Cr III	1166.23	10	
Ge III	1160.79	160		V III	1166.29	75	
Sc	1160.91	200		V III	1166.45	75	1
N I	1160.9370	P		Se II	1166.53	500	7
Mn II	1161.29	20	29	V III	1166.58	75	1
Ni II	1161.297	15		Li II	1166.63	5	
N I	1161.30	2		Zn III	1166.796	25	
Cr III	1161.43	500		Se IV	1166.8	400	
Si III	1161.579	160	31	Mn II	1166.81	8	28
Mn II	1161.61	3	29	V III	1166.86	0	
Ni VI?	1161.61	20		Ni II	1167.030	25	
Mn II	1161.76	20	29	Mn II	1167.13	20	28
Al IV	1161.85	10d		Cl I	1167.1479	100	
P IV	1161.87	40		Mn II	1167.31	9	28
Ni II	1161.927	1		Al IV	1167.35	10	
V III	1162.02	250		F V	1167.372	1	
Mn II	1162.02	50b	4	N I	1167.4484	350	6
Mn II	1162.02	50b	29	O IV	1167.532	10	
Fe II	1162.351	40	153	Ga II	1167.62	50	6
Sc III	1162.443	50		Zn III	1167.764	30	
S III	1162.52	100		Ni II	1167.803	10	
Al III	1162.588	10		Ni II	1168.040	75	
Cr III	1162.60	10		Mn II	1168.07	5	28
Cu II	1162.6010	3	19	N I	1168.2154	50	
Al III	1162.621	5		Mn II	1168.25	15	28
Ni II	1162.748	150		Cr III	1168.32	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N I	1168.3344	200		Si III	1174.369	100	30
N I	1168.4167	60	6	Si III	1174.432	120	30
Se II	1168.53	800	1	Mn III	1174.810	10	
N I	1168.5358	300	6	Cr III	1174.82	150	
Br I	1168.542	3		C III	1174.933	300	4
N IV	1168.599	150	18.83	C III	1175.263	700	4
Sc III	1168.608	50		Ni XIV	1175.3	f	
Cr III	1168.73	20		C III	1175.590	600	4
C IV	1168.873	150	11.19	Fe II	1175.699	20	
Sc III	1168.883	20		C III	1175.711	1000	4
C IV	1168.990	200	11.19	C III	1175.987	700	4
N IV	1169.063	160	18.83	C III	1176.370	800	4
V III	1169.11	75	1	Ge V	1176.4	25	
O IV	1169.160	2		Kr IV	1176.49 P		
Fe II	1169.19	0		N I	1176.5097	350	
Cr III	1169.25	20		N I	1176.6304	180	
V III	1169.26	50	1	Zn	1176.846	10	
Mn II	1169.28	15	28	Ni II	1177.006	1	
N IV	1169.478	50	18.83	Ni II	1177.109	50	
Mn II	1169.53	15	28	Sc	1177.14	200	
N I	1169.6933	80		Br I	1177.233	5	
Ni VI?	1170.08	150		Se II	1177.31	100	
Cr III	1170.10	30		Al II	1177.43	40	
Zn III	1170.149	50		Mn III	1177.484	6	
N I	1170.1572	10		Zn IV	1177.484	10	
Ni II	1170.169	20		Mn II	1177.52	20	
N I	1170.2766	80		Zn III	1177.651	50	
N I	1170.4165	5		N I	1177.6948	320	
Br	1170.479	3		Mn II	1177.89	18	
Cu I	1170.576	11		F III	1177.988	3	
Ga IV	1170.6	500		Si III	1178.004	160	30
Cr III	1170.64	30		Mn III	1178.031	40	
N I	1170.6743	20		Se II	1178.05	400	
Se II	1170.76	200		Mn II	1178.14	15	
N I	1171.0834	60		Mn II	1178.34	12	
Ni II	1171.117	15		Zn IV	1178.391	15	
V III	1171.27	20	1	Mn III	1178.51	2	
Ni II	1171.291	100		Cr III	1178.55	30	
N I	1171.37	2		Ni II	1178.571	30	
O VIII	1171.5 P			F III	1178.642	3	
Be IV	1171.56 P			Mn II	1178.76	5	
N I	1171.60	2		Cr III	1178.80	20	
Fe II	1171.606	160	154	Zn III	1178.835	25	
Ga IV	1171.7	20		Br I	1178.895	6	
Zn II	1171.943	5		Zn	1178.929	60	
N I	1172.01	2		Ge II	1178.957	100	
As III	1172.2	360		Cr III	1178.99	10	
Zn IV	1172.304	30		F III	1179.035	6	
N I	1172.46	3		Cl I	1179.2927	250	
V III	1172.47	5	1	Al II	1179.34	1	
Si III	1172.529	80	30	Mn III	1179.467	4	
Mn III	1172.721	20		Zn IV	1179.478	50	
Sc	1173.03	300		Cr III	1179.68	30	
Ni II	1173.121	1		Ni VI?	1179.80	200	
Cr III	1173.19	40		Zn IV	1179.814	25	
Cu IV	1173.259	32		Mn III	1179.85	20	7
Ni II	1173.298	50		Ge II	1180.10	1h	
Cr III	1173.34	50		Ni II	1180.271	150	
Ni II	1173.477	75		Zn IV	1180.274	4	
Ge II	1173.707	75		Na III	1180.40	160	
Cr III	1173.77	100		Mn II	1180.69	1	
Ga II	1173.78	100	6	Cr III	1180.81	60	
Ge III	1173.78	200		Cr III	1181.03	10	
Br I	1173.827	4		F III	1181.061	10	
Zn	1173.854	50		Ni II	1181.075	30	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ge II	1181.154	150	11	Cl I	1188.7515	50	
Cr III	1181.45	10		Cl I	1188.7743	130	
As II	1181.596	550		C I	1188.833	200	14
Zn	1181.539	20		N I	1188.971	14	
Ni II	1181.620	15		Ge IV	1188.99	400	
Cr III	1181.63	50		C I	1188.992	500	14
Ge II	1181.650	150	11	C I	1189.065	200	14
F III	1181.909	?		Al II	1189.18	5	
Sc	1181.91	300		C I	1189.249	250	14
Ca III	1181.988	150		N I	1189.249	14	
Zr IV	1182.016	50		Br I	1189.279	10	
Si III	1182.018	60	64	Br I	1189.378	5	
Ni II	1182.169	75		C I	1189.447	500	14
Br I	1182.171	3		Br I	1189.498	10	
F III	1182.427	3		Za IV	1189.565	35	
Cu IV	1182.576	20		Ge II	1189.623	150	11
Se II	1182.65	300		C I	1189.631	700	14
Mn III	1182.825	350		As II	1189.870	550	
N III	1183.030	350	20	C I	1190.021	35	13.01
Mn III	1183.304	30	4	N I	1190.031	5	
Ge IV	1183.39	300		Al II	1190.0493	15	
Al	1183.72	10		S III	1190.17	200	
Ti IV	1183.63	100		C I	1190.253	35	12.01
As	1183.824	12		Ar IV	1190.35	80	
Zn II	1183.83	1		Si II	1190.4157 st	100	5
Mn III	1183.860	25w	7	Ni II	1190.442	1	
Se IV	1183.99	200		N I	1190.494	6	
F III	1184.939	3		N I	1190.688	2	
Ni II	1184.512	20		N I	1190.855	6	
Zn II	1184.528	8 -A		Ca III	1190.864	250	
N III	1184.544	400	20	Ga IV	1190.9	450	
Zn II	1184.858	40		N I	1190.923	8	
Ni II	1184.980	3		N I	1191.019	12	
Mn III	1185.045	0		V III	1191.07	0	
Ni II	1185.146	2		Ge II	1191.264	100	11
Ge II	1185.154	3		V VII	1191.50	0	
Ga IV	1185.3	400		Zr III	1191.597	10	
Ge IV	1185.50	10		N I	1191.603	2	
Zn II	1185.610	1 -A		Ce II	1191.719	15	11
Cu II	1185.8991	2		Ni VI?	1191.72	50	
Ga IV	1186.0	20		Mn III	1191.730	15	4
Mn III	1186.14	10w	7	Al II	1191.8123	50	
Br I	1186.161	3		C I	1191.838	120	13
Cr III	1186.24	20		Zn III	1191.864	40	
Ni II	1186.347	1		N I	1191.925	8	
Ga II	1186.81	150	6	Fe II	1192.02	2	
V III	1186.89	25		C I	1192.218	70	11
Ni VI?	1186.90	20		Si III	1192.228 P		40
Ni II	1186.933	8		Si III	1192.258 P		40
Ni II	1186.993	1		Cu II	1192.261	2	
Ni II	1187.102	20		Se II	1192.29	1000	1
Ca III	1187.303	250		Si III	1192.293 F		40
Ge II	1187.323	50		Ni II	1192.306	5	
Cr III	1187.36	200		Mn II	1192.313	40	15
Zn	1187.404	50		C I	1192.451	120	12
Fe II	1187.41	0		N I	1192.563	4	
Ge II	1187.539	50		Ni II	1192.596	0	
Ni II	1187.608	15		Cr III	1192.69	50	
Cr III	1187.65	300		Mn III	1192.78	8	4
Mn III	1187.735	250		Ni II	1192.983	3	
Ar IV	1187.80	40		Ga IV	1193.0	450	
N IV	1188.006	300	18.49	C I	1193.009	700	11
Mn II	1188.302	50	15	C I	1193.031	300	11
Ca III	1188.606	400		Zn II	1193.231	60	
Ge II	1188.732	200		C I	1193.240	850	11

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
C I	1193.264	150	11	Si III	1198.297 P		40
Ni II	1193.267	5		Cr III	1198.31	70	
Si II	1193.2894 st	200		Zn III	1198.322	15	
C I	1193.393	250	11	Br I	1193.371	6	
Cr III	1193.47	70		Al IV	1198.47	50	
Cu IV	1193.475	15		Mn III	1198.493	30	
C I	1193.679	500	9.02	C IV	1198.58	50d	11.18
Ca III	1193.697	150		V III	1198.61	100	
Cr III?	1193.89	10		Mn II	1198.63	20	27
C I	1193.996	120	9.02	Mn III	1198.994	400	
S III	1194.02	400	1	Fe II	1199.24	1	
C I	1194.064	350	9.02	Mn II	1199.34	30	26
Zn IV	1194.068	30		Mn II	1199.38	50	3
C I	1194.229	120	9.02	Zn	1199.415	60	
C I	1194.301	120	10	N I	1199.5490 ST	1000	1
S III	1194.40	300	1	Se II	1199.72	50	
C I	1194.406	200	9.02	Zn	1199.748	15	
Br I	1194.413	4		N I	1200.2238 ST	950	1
Cr III	1194.44	30		Ni II	1200.307	1	
V IV	1194.467	20		Zn	1200.339	10	
C I	1194.488	350	10	Zn III	1200.635	60	
Si II	1194.5061 st	250	5	N I	1200.7113 ST	700	1
C I	1194.615	250	9.02	Ca III	1200.772	50	
Ge II	1194.787	500	11	Zn III	1200.854	50	
Ni II	1194.857	15		Cr III	1200.91	50	
Cr III	1194.96	30		S III	1200.97	400	1
Mn II	1195.00	30		Cr III	1201.07	50	
Zn	1195.019	12		Ni II	1201.002	3	
Ga IV	1195.1	500		Ni II	1201.119	8	
Ti IV	1195.25	100		Mn II	1201.124	20	3
Zn	1195.366	60		Mn II	1201.23	5	26
Cr III	1195.42	10		Cr III	1201.25	100	
Fe II	1195.46	1		Zn IV	1201.292	25	
Mn II	1195.97	30	27	Cr I	1201.3577	100	
Zn	1196.009	35		F III	1201.358	3	
Cr III	1196.04	30		Cr III	1201.42	150	15
Cr III	1196.32	50	15	Zn IV	1201.489	50	
Mn II	1196.33	25	27	Mn II	1201.57	40	26
Br I	1196.370	4		Ga IV	1201.6	200	
As II	1196.383	600		Cu II	1201.6258	2	
Se II	1196.40	200		S III	1201.71	200	1
Si III	1196.436 P		40	Ni II	1201.838	5	
Si III	1196.470 P		40	Ni II	1201.957	3	
Br I	1196.477	4		Cr III	1202.02	10	
Mn II	1196.52	20	27	S III	1202.10	50	1
As II	1196.561	600		Zn III	1202.152	30	
V III	1196.63	0		V III	1202.25	50	
Mn II	1196.724	25	15	Ca III	1202.309	200	
Be II	1197.094	330	5	Cr III	1202.45	100	15
Zn	1197.098	10		Ni II	1202.452	8	
Zn II	1197.149	40		Ni II	1202.511	10	
Mn II	1197.17	40b	3	Mn III	1202.807	0	
Mn II	1197.17	40b	27	V III	1202.87	5	
Be II	1197.188	670	5	Ni II	1202.911	3	
Cr III	1197.37	200	15	Mn II	1203.07	8	26
Si II	1197.3936 st	100	5	Mn II	1203.25	30	26
Fe II	1197.43	0		Cu IV	1203.261	13	
Zn IV	1197.440	30		Zn III	1203.270	50	
Mn II	1197.57	10	15	Br I	1203.353	4	
Cr III	1197.60	10		F IV	1203.41	40	
P IV	1197.82	40		Zn IV	1203.430	40	
Ar IV	1197.84	40		Ca III	1203.507	10	
Zn III	1197.973	20		Cr III	1203.59	120	
Mn II	1198.00	10	27	V III	1203.86	0	
Li II	1198.082	700		Cr III	1203.95	20	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Zn IV	1204.038	30		Al II	1208.35	20	
Ni II	1204.102	30		B II	1208.36	1	
P IV	1204.30	40		Ni II	1208.433	1	
S II?	1204.30	500		Mn III	1208.476	800	
Zn III	1204.310	60		B II	1208.546	40	
F III	1204.380	6		Ca III	1208.716	50	
Cr III	1204.46	50	7	B II	1208.825	10	
Cr III	1204.59	10		Mn II	1208.83	8	
Ca II	1204.6158	1		Cr III	1209.13	800	7
Mn II	1204.62	25	2	Ni II	1209.170	7	
Cu II	1204.6356	1		Al II	1209.19	1	
Cu II	1204.6531	1		As III	1209.3	450	
Cr III	1204.93	200	15	F II	1209.345	40	
Mn II	1204.95	15		Cr III	1209.42	10	
Zn	1204.964	10		Ni II	1209.492	1	
N VII	1205.0	P		Cr III	1209.66	10	
Ge II	1205.049	15	11	Br I	1209.756	8	
Ni II	1205.088	15		Al II	1210.09	5	
Cu II	1205.1467	0		Ni II	1210.192	10	
Cr III	1205.15	10		Mn II	1210.33	5	
Cu II	1205.1945	0		F III	1210.349	3	
Ni II	1205.201	1		Si III	1210.456	200	21
Cu II	1205.2024	0		Mn III	1210.523	40	
Se II	1205.25	300		P III	1210.60	100	
Ni II	1205.266	20		Si IV	1210.652	P	16
Mn II	1205.42	20	26	S V	1210.71	?	
Ni II	1205.552	10		Ni II	1210.729	3	
Zn IV	1205.594	25		Br I	1210.734	10	
Se I	1205.69	700	17	Ni II	1210.790	1	
Cr III	1205.78	100	15	Mg IV	1210.993	300	
Cu II	1205.9029	2		O IV	1211.043	5	
Cr III	1206.12	10		Cr III	1211.12	800	7
Ni II	1206.246	7		As II	1211.170	800	
Kr III	1206.35	100		Ni II	1211.493	1	
Cr III	1206.38	600	7	Mn III	1211.582	150	
Mn III	1206.425	20		F III	1211.585	6	
Si III	1206.510	600	2	Mn III	1211.725	40	
P IV	1206.52	40d		Si IV	1211.757	P	16
Se III?	1206.53	600		Al IV	1211.80	10	
Si III	1206.533	600	11	Ca III	1211.822	450	
Mn II	1206.55	10		Cr III	1211.84	10	
Cr III	1206.70	30		Zn II	1211.841	25	
Ge II	1206.725	3	11	Ca III	1211.889	250	
Cu II	1206.7691	0		Al II	1211.90	3	
Mn II	1206.87	5		Si III	1212.011	40	50
Ga IV	1206.9	500		Zn IV	1212.110	12	
V III	1206.99	200		Si III	1212.247	P	74
Cr III	1206.99	20		F III	1212.255	6	
Mn II	1207.05	2		Zn III	1212.255	40	
Mn II	1207.12	2		F III	1212.321	1	
Cr III	1207.13	100		V III	1212.38	100	
Ca III	1207.341	150		Mn II	1212.40	5	
Cr III	1207.36	40	7	Ge III	1212.47	160	
As II	1207.44	350		Zn	1212.471	40	
V III	1207.45	100		Ca III	1212.682	200	
Si III	1207.517	180	22	Zn IV	1212.693	25	
Ni II	1207.567	0		V III	1212.82	10	
Cr IV	1207.58	100		Ni II	1212.959	0	
Ni II	1207.620	4		Cr III	1212.98	50	
V III	1207.63	50		O IV	1213.035	60	
Ni II	1207.654	3		Fe II	1213.149	400	71
Zn III	1207.737	10		O IV	1213.196	40	
Ca II?	1207.838	200		Ca III	1213.301	300	
Zn	1208.034	20		F III	1213.353	20	
Ca III	1208.046	150		Ni II	1213.361	7	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1213.50	0		Mn III	1219.801	30	6
Cr III	1213.51	50		Fe II	1219.81	3	
Fe II	1213.764	400	72	Zn	1219.901	12	
Cr III	1213.82	10		V III	1220.09	15	
As III	1214.0	90		Cr III	1220.14	200	
Ni II	1214.104	3		S I	1220.162	5	
Zn IV	1214.121	15		Ni II	1220.530	3	
Ni II	1214.153	40		V III	1220.54	0	
S I	1214.295	1		Al	1220.57	10	
S I	1214.318	7		Fe II	1220.882	100	70
Cu IV	1214.347	15		Mg IV	1220.929	200	
Ni II	1214.350	1		Mn III	1220.940	750	
F III	1214.368	3		Ni II	1220.950	1	
Fe II	1214.409	200	70	Cr III	1221.07	400	
Cu II	1214.5399	1		Mn II	1221.11	6	
Cu II	1214.5546	1		Na III	1221.12	100	
V III	1214.56	100		Br I	1221.128	10	
F III	1214.864	0		Ni II	1221.213	1	
Cu IV	1214.871	18		F II	1221.235	100	
B V	1214.99 P			Ni II	1221.289	1	
Li III	1215.05 P			Cr III	1221.45	10	
He II	1215.088 P	143	13	F II	1221.536	40	
He II	1215.171 P	260	13	S I	1221.753	6	
He II	1215.175 P	30	13	Br I	1221.870	9	
D I	1215.339 P	1060	1	Cr III	1221.90	400	14
H I	1215.668 P	670	1	Se II	1221.94	200	16
H I	1215.674 P	330	1	Ni II	1221.992	40	
Br I	1216.006	8		Ge V	1222.1	25	
Mn IV	1216.062	0		Ni II	1222.220	1	
Si II?	1216.117	10h		Zn III	1222.266	8	
Ga IV	1216.2	0		Si II	1222.288	6	8.01
Mn III	1216.639	20		Ni II	1222.395	20	
Al IV	1216.78	50		Mn IV	1222.489	70	
Kr III	1216.90	100		Mn IV	1222.572	80	
Cu IV	1216.910	21		Si II	1222.635	5	8.02
Ni II	1217.180	100		Ni II	1222.678	1	
Fe XIII	1217.2	f		Mn II	1222.785	30	
Ca III	1217.450	50		S I	1222.799	1	
Zn III	1217.494	3		Ca III	1222.895	200	
V III	1217.64	150		Ni II	1222.989	1	
O I	1217.6477	40 -A	9	As II	1223.149	350	
Ni II	1217.692	1		Mn II	1223.15	8	25
Se II	1218.01	400		Zn IV	1223.181	6w	
As II	1218.099	800		Ca III	1223.185	450	
Se II	1218.27	200	17	Br I	1223.240	10	
O V	1218.406	40		Cr III	1223.28	16	
Cu IV	1218.430	12		Na III	1223.44	80d	
V III	1218.50	125		Ni II	1223.466	2	
S I	1218.571	2		Mn IV	1223.561	20	
S I	1218.595	10		Ni II	1223.643	5	
Cr III	1218.60	100		Zn IV	1223.680	30	
Ca III	1218.738	50		Cl II	1223.71	100	
Cr III	1218.89	50		Ni II	1223.775	1	
Mn II	1218.94	8		Mn III	1223.83	20w	6
As II	1218.95	225		Si II	1223.907	20	8.03
Mn IV	1219.018	0		Ni II	1224.033	75	
Mg IV	1219.019	150		Zn IV	1224.052	50	
F III	1219.032	150		Zn IV	1224.179	20	
Al IV	1219.19	10		V III	1224.19	125	
Cu III	1219.290	3		Cu IV	1224.244	28	
Cu II	1219.3337	1		Si II	1224.252	20	8.02
V III	1219.38	5		Ni II	1224.268	1	
Mn II	1219.50	0		Zn IV	1224.348	20	
Cr III	1219.55	50		Br I	1224.408	12	
Zn	1219.671	12		S I	1224.424	1	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1224.43	30		Si II	1228.617	25	8.01
S I	1224.479	7		Zn IV	1228.646	50	
S I	1224.544	7		Cr III	1228.65	300	14
Se II	1224.63	300		Si II	1228.746	150	8.01
Na III	1224.73	80		F II	1228.763	40	
Mn II	1224.733	30	25	N I	1228.790	20	
Ni II	1224.839	2		Mn III	1228.972	100	5
Mn II	1224.928	6	25	Se II	1229.0 ^A	200	
N IV	1224.960	50	18.76	Zn IV	1229.06 [?]	15	
Si II	1224.972	10	8.02	Mg IV	1229.09 ³	10	
Cr III	1225.02	100		N I	1229.174	14	
N I	1225.027	21		Zn	1229.253	20	
Mn III	1225.133	350		Si II	1229.388	200	8.01
N IV	1225.192	150	18.76	Mg ² .I	1229.389	4	
Cr III	1225.27	150		Cr III	1229.53	150	14
Cr III	1225.32	150		S I	1229.6 ⁹⁸	10	
Ca III	1225.321	200		Mn II	1229.65	25	43
N I	1225.374	20		Ni II	1229.684	10	
Cr III	1225.65	300	14	Ne II	1229.688	70	
Ca III	1225.699	350		Ge IV	1229.81	400	
N IV	1225.71 ⁹	200	18.76	Ne II	1229.832	90	
F II	1225.854	40		Al IV	1225.84	10	
F II	1226.161	10		C IV	1230.045	100	11.14
Cr III	1226.18	10		Cu IV	1230.062	15	
F II	1226.267	40		Mn II	1230.11	20	43
Zn IV	1226.325	8		Ni II	1230.116	8	
Mn II	1226.40	25	25	Mn III	1230.12	20 ^w	5
V IV	1226.523	60		Mn II	1230.15	15	43
Ni II	1226.628	25		B II	1230.160	300	
S II	1226.70	100	7	Cr III	1230.35	10	
Cr III	1226.72	200	14	Ni II	1230.367	1	
Si II	1226.814	50	8.01	S I	1230.374	2	
Si II	1226.887	20	8.02	Zn III	1230.451	25	
Br I	1226.899	12		Mn II	1230.46	1	
Mn IV	1226.966	50		S I	1230.473	4	
Si II	1226.986	40	8.01	C IV	1230.511	150	11.14
S I	1227.089	4		N I	1230.535	7	
Mn IV	1227.093	30		Mn II	1230.62	1	43
Ga II	1227.10	20		Cr III	1230.63	10	14
Cr III	1227.11	20		Ni II	1230.782	40	
N I	1227.241	7		Si IV	1230.795	P	20
Ni II	1227.267	15		Cr III	1230.80	200	21
Cr IV	1227.43	10		Ni I	1230.869	50	
S II	1227.45	100	7	Mn II	1230.87	10	43
Ni II	1227.491	5		Ni II	1230.889	25	
Se V	1227.6	1000		Fe II	1230.93	2	
Si II	1227.604	100	8.02	Zn III	1230.949	1	
Zn IV	1227.615	15		Ca III	1230.975	400	
Mn II	1227.638	23	25	Ni II	1231.041	100	
S I	1227.692	5		Mn IV	1231.099	30	
N I	1227.793	8		Mn II	1231.10	8	43
Ga IV	1228.0	500		P II	1231.18	50	
Zn IV	1228.003	1		Mn II	1231.35	5	43
Cr III	1228.03	10		Si II	1231.406	5	8.01
Br I	1228.049	8		Zn IV	1231.458	25	
Zn II	1228.261	0 -A		N I	1231.578	12	
Al IV	1228.30	50		Cr III	1231.88	500	
Ca III	1228.317	200		Ni II	1232.107	1	
Si IV	1228.349	P	20	Br I	1232.431	75	
Cr III	1228.37	10		V III	1232.49	50	
N I	1228.414	18		Ni II	1232.773	2	
Mn II	1228.423	20	25	Ni II	1232.886	3	
Si II	1228.437	10	8.01	Cr III	1232.96	500	21
Zn IV	1228.482	60		Ni II	1233.036	15	
Ni II	1228.581	0		S I	1233.132	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N I	1233.24	2		Li II	1237.287	10	
Ni II	1233.250	150		F III	1237.308	6	
Cr III	1233.28	10		Si II?	1237.36	3h	
Si II?	1233.354	5h		Mn II	1237.59	2	
S II	1233.36	50	7	Se II	1237.61	300	
Ni I?	1233.484	10		Cu III	1237.776	2	
Ni II	1233.557	100		Mn II	1237.78	1	
Fe II	1233.660	160	275	Fe II	1237.93	0	
Zn IV	1233.806	10		Mn II	1237.95	1	
Cr III	1233.92	200	21	Ni II	1237.976	8	
S I	1233.922	3		Cu III	1238.325	0	
Zn III	1233.948	50		S I	1238.340	5	
Mn II	1233.952	30	24	Mn II	1238.35	5	
Ni II	1234.092	0		Cr III	1238.51	400	21
S II	1234.14	300	7	Ga IV	1238.6	250	
Mn II	1234.30	5	24	N V	1238.821	1000	1
Ni II	1234.375	4		Mn II	1238.84	7	
Ca III	1234.400	100		Ni II	1238.919	1	
Mn II	1234.51	8	24	Ne II	1239.018	80	
Ni II	1234.659	1		Ni II	1239.061	25	
Zn IV	1234.857	20		Zn IV	1239.102	40	
Mn II	1234.871	25	34	Ne II	1239.167	60	
Se II	1234.88	700	16	Mn III	1239.24	50w	5
Mn II	1235.06	8	24	Cu IV	1239.316	13	
Ni II	1235.069	6		Zn III	1239.355	3	
Ni II	1235.112	20		Ni II	1239.506	12	
Mn II	1235.27	10	24	Mn II	1239.51	1	
F III	1235.316	10		Zn IV	1239.602	40b	
Na III	1235.40	80d		Mg III	1239.827	4	
Ni II	1235.405	10		Ni II	1239.832	60	
Si III	1235.431	140	49	Ca III	1239.863	150	
Mn II	1235.46	25		Mg II	1239.9252 P	250	
Ti III	1235.461	2		Ca III	1239.976	400	
S I	1235.624	7		Ni II	1240.012	1	
Mn II	1235.79	10	24	Cu II	1240.0272	1	
Kr I	1235.838	650	1	Mn II	1240.04	0	
Mn II	1235.87	25	24	Cu IV	1240.160	23	
Cu II	1235.8729	0		Al IV	1240.18	100	
Mg IV	1235.908	200		Mg II	1240.3947 P	200	
Si II?	1235.920	10		Zn II	1240.625	3 -A	
Ca III	1236.102	50		Zn III	1240.750	50	
Mn II	1236.15	25b	24	Al IV	1240.83	150	
Mn II	1236.15	25b	23	Ni II	1240.877	50	
Cr III	1236.20	400	21	Ni II	1241.189	1	
Mn IV	1236.238	70		Ni II	1241.233	2	
Ne X	1236.3 P			As II	1241.311	750	
Fe II	1236.34	0		Cr III	1241.32	20	
Ga IV	1236.4	150		Ni II	1241.320	10	
Ni II	1236.474	0		P I	1241.49	1	
Cr III	1236.51	10		Ni II	1241.548	3	
Mn II	1236.54	15	23	Ni II	1241.588	10	
S I	1236.632	4		Mn II	1241.63	10	42
Cr III	1236.71	10		Ga IV	1241.7	50	
Zn IV	1236.768	1		Ni II	1241.827	1	
Mn II	1236.77	20	23	Zn II	1241.874	0 -A	
Ni II	1236.799	25		S I	1241.905	30	
Mn II	1236.87	20	25	Cu II	1241.9641	2	
Mg IV	1236.977	200		P I	1242.02	3	
Ti III	1237.028	4		Cr III	1242.08	10h	
Ni II	1237.049	10		Ni II	1242.099	30	
Ge II	1237.0589 st	500	4	Fe XII	1242.15	25f	
Al IV	1237.14	200		Mn IV	1242.246	900	
Ni II	1237.247	1		V IV	1242.248	3	
Zn IV	1237.250	25		Zn III	1242.411	50	
Ni II	1237.260	1		Cu IV	1242.541	21	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
F III	1242.585	3		Ni II	1247.509	6	
Ni II	1242.627	6		Ni II	1247.568	1	
N V	1242.804	800	1	Mn II	1247.66	15	42
Ca III	1243.008	350		Mn IV	1247.726	850	
As II	1243.081	950		Cr III	1247.86	200	6
Cu II	1243.0857	1		Kr IV	1247.93	P	
Ni II	1243.093	75		As II	1247.949	0	
Zn IV	1243.157	40		S I	1248.045	22	
N I	1243.1796	550	5	Mn II	1248.15	5	42
N I	1243.3066	400	5	Zn IV	1248.184	5	
Ni II	1243.345	1		P I	1248.20	1	
P I	1243.57	3		Ni II	1248.413	9	
Cr III	1243.43	20		Si II	1248.426	150	8
Cr III	1243.60	30		Ni II	1248.467	10	
Ni II	1243.622	3		Mg II	1248.511	60	
V IV	1243.718	10		P I	1248.61	1	
N IV	1243.73	b	18.92	Cr III	1248.61	120	
O V	1243.801	40		Mn IV	1248.638	300	
Zn III	1243.833	20		V III	1248.65	10	7
Ni II	1243.848	5		Al IV	1248.76	100d	
Mg IV	1243.874	20		Cu II	1248.7916	5	
F III	1243.888	6		Mn II	1248.83	4	42
Br I	1243.897	12		Ni II	1248.844	4	
Cr III	1243.97	40		Zn IV	1249.083	3	
Mn II	1244.10	0		Ni II	1249.101	100	
Ni II	1244.104	3		Ni II	1249.213	8	
Ni V	1244.15	300		Mn II	1249.31	6	42
Mn IV	1244.242	80		Ni II	1249.369	3	
Ni II	1244.255	5		Zn IV	1249.402	5	
Mn II	1244.28	15		Mn III	1249.529	0	
V IV	1244.287	2		Br I	1249.589	8	
Mn IV	1244.327	900	P	Zn IV	1249.676	40	
Cu III	1244.377	5		P II	1249.82	200	
Cr III	1244.41	10		Mg II	1249.932	80	
Ni II	1244.560	50		Cu IV	1250.003	13	
Cr III	1244.58	100		Cu II	1250.0483	10	90
Ni II	1244.811	100		As II	1250.058	300	
Zn II	1244.848	2	-A	Si II	1250.089	100	-A 13.05
Mn IV	1244.876	0		Mn II	1250.22	1	
N IV	1244.92	50	18.92	Cr III	1250.33	20	
Cu IV	1245.071	16		Zn III	1250.336	30	
Cr III	1245.09	50		Si II	1250.433	150	-A 13.05
Mn II	1245.14	20		Zn IV	1250.466	30	
P I	1245.19	6		Ni II	1250.467	6	
Cr III	1245.23	150	6	S II	1250.50	300	1
Ga IV	1245.5	600		Cr III	1250.57	20	
Mn II	1245.55	15	42	Mn II	1250.681	7	
As II	1245.668	850		Ni II	1250.685	4	
Mn III	1245.673	750		S I	1250.814	12	
Cu IV	1245.691	30		V IV	1250.918	20	
Cl VI	1245.77			Zn III	1251.021	40	
Mn III	1245.975	700		Si II	1251.164	200	8
Mn II	1246.24	12		Al IV	1251.25	50	
Zn IV	1246.260	3		Ni II	1251.394	10	
N IV	1246.51	100	18.92	Cr III	1251.42	150	6
Ni II	1246.598	150		Ni II	1251.438	16	
Si II	1246.738	100	8	Br I	1251.664	15	
Cr III	1246.83	100		Mn IV	1251.933	950	
Zn IV	1247.000	10		V III	1252.11	500	7
V IV	1247.069	30		Mn III	1252.289	30	
S I	1247.160	45		Cr III	1252.61	500	6
P I	1247.31	2		Mn IV	1252.736	P 450	
Ni II	1247.333	20		Zn III	1252.873	3	
Zn III	1247.355	5		Ni II	1252.879	1	
C III	1247.383	600	9	Mn II	1252.91	15	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
As II	1252.916	5		Fe II	1257.18	0	
Cu IV	1253.061	15		Ne III	1257.19	600	13
Ni II	1253.122	50		Mn IV	1257.277	950	
Cu II	1253.1909	5		Zn IV	1257.291	30	
Zn III	1253.201	10		V III	1257.50	75	7
S I	1253.297	20		Al IV	1257.58	150	
Li II	1253.324	5		Cu II	1257.6833	1	
S I	1253.325	40		Mn III	1257.885	0	
Zn III	1253.345	60		Mn I	1258.028	15	40
Mn II	1253.37	15		Mn IV	1258.131	750	
Ca III	1253.464	300		Ni II	1258.303	0	
C I	1253.467	50		Mn II	1258.51	15	40
Ni II	1253.477	75		Cr III	1258.55	200	6
C I	1253.541	100		Mn III	1258.55	30	
Ni II	1253.599	4		Zn II	1258.581	0 -A	
Zn IV	1253.664	40		As II	1258.585	800	
P I	1253.74	6		Ga IV	1258.7	750	
S II	1253.79	500	1	Kr III	1258.74	60	
Cr III	1253.87	5		Si I	1258.795	50 -A	41.12
Mn II	1253.880	15		Al II	1258.86	40	
V III	1254.01	400	7	Cr III	1259.02	400	20
Mn II	1254.20	10		Mn II	1259.05	12	
Ni II	1254.290	5		Fe II	1259.06	1	
Zn III	1254.316	25		Cu IV	1259.076	23	
Ni II	1254.346	0		Br I	1259.199	15	
Mn II	1254.410	15	41	Ca III	1259.209	150	
Ca III	1254.413	100		Kr III	1259.31	60	
Ni II	1254.471	1		Cu IV	1259.352	18	
Cu III	1254.717	2		Cr III	1259.49	100	20
Ni II	1254.721	50		S II	1259.53	500	1
Sc III	1254.79	20		Mn II	1259.56	8	41
Al III	1254.933			Zn IV	1259.673	5	
Al III	1254.969			Cr III	1259.80	200	5
Ni II	1254.978	7		Zn	1259.843	10	
Mn II	1255.01	1		Ni II	1259.886	1	
Ne III	1255.03	200	13	Zn III	1259.912	20	
Ni II	1255.034	8		Cu III	1259.937	5	
Mn III	1255.078	10		Mn II	1259.97	6	
Cu II	1255.1571	1		Si II	1260.4212 st	500	4
Mn III	1255.21	20		Mn II	1260.52	1	
Si I	1255.276	10 -A	41.12	Fe II	1260.542	400	9
Al III	1255.284			C I	1260.613	200	59
Ni II	1255.325	6		C I	1260.736	250	9
Fe II	1255.41	0		Mn II	1260.77	1	41
Zn	1255.619	15		Mn III	1260.907	40	
Ne III	1255.68	500	13	C I	1260.927	200	9
Bi I	1255.799	10		C I	1260.996	150	9
Ni II	1256.029	5		Ni II	1261.068	1	
S I	1256.093	22		Cr III	1261.09	10	
Cr III	1256.18 P	20		C I	1261.122	250	9
Mn II	1256.18	6		Cu IV	1261.132	11	
Ni II	1256.187	6		Cu II	1261.2154	0	
Mn IV	1256.457	40		Mn II	1261.27	8	
Ni II	1256.459	0		Cu III	1261.315	1	
C III	1256.47	100d	11.53	Ca III	1261.381	150	
Mn II	1256.47	8	41	C I	1261.426	250	9
Si I	1256.490	40 -A	41.12	Cr III	1261.53	20	
C I	1256.498	200		C I	1261.552	500	9
Na III	1256.68	20		Br I	1261.658	12	
Ni II	1256.708	1		Ni II	1261.786	12	
Cr III	1256.73	80	20	F III	1261.859	6	
Ni II	1256.905	6		Cr III	1261.86	400	20
Ni II	1256.930	40		Ge II	1261.9053 st	1000	4
Mn II	1256.96	10	41	Ni II	1261.975	10	
Ni II	1257.116	8		Ni II	1262.239	8	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1262.248			Zn IV	1267.397	40	
Cr II	1262.34	300	5	Fe II	1267.437	500	9
Mn II	1262.35	4	41	Ni II	1267.478	6	
Al I	1262.440			As II	1267.588	800	
Al IV	1262.51	50		C I	1267.596	50	57
Zn III	1262.541	50		F III	1267.711	200	
Mn II	1262.57	4		Ni II	1268.007	8	
Ca III	1262.653	500		Cr III	1268.01	250	5
S I	1262.8596	70		Zn III	1268.077	50	
Cu II	1262.9249	3	90	Cr III	1268.15	20	13
Ni II	1262.979	2		F III	1268.27	3	
Cr III	1263.06	50	13	Ni II	1268.359	2	
V III	1263.20	150		Zn III	1268.423	50	
Ni II	1263.294	100		Ge II	1268.444	2	
Mg III	1263.375	7		Ar II	1268.483	100	
Zn II	1263.412	40		Cu IV	1268.546	36	
Cr III	1263.61	350	20	F III	1268.573	35	
V III	1263.68	125		Cu II	1268.6686	0	
As II	1263.770	950		Cu IV	1268.748	32	
Mn II	1263.77	1		Zn III	1268.792	10	
F III	1263.987	6		Mn II	1268.90	10	40
Al IV	1264.14	150d		As III	1269.0	150	
Zn IV	1264.205	0		Ni II	1269.059	1	
Cr III	1264.21	350	13	Mn III	1269.104	800	
Mn IV	1264.412	900		Cr III	1269.11	250	13
Mn II	1264.45	12		Zn IV	1269.144	4	
Ni V	1264.46	200		S I	1269.2086	50	
P II	1264.47	30		Ca III	1269.333	10	
P IV	1264.48	40		Cu IV	1269.342	77	
Ge IV	1264.6	500		F III	1269.368	20	
Ge II	1264.7096 st	300	4	Mn II	1269.42	5	40
Si II	1264.7374 st	1000	4	Cu II	1269.4464	1	
Cr III	1264.75	10		Mn II	1269.54	0	
F III	1264.870	3		F III	1269.559	60	
Si II	1265.0010 st	100	4	Ni II	1269.917	2	
Ni II	1265.157	14		Fe II	1269.96	0	
Cu IV	1265.172	11		Ni II	1270.061	1	
Cr III	1265.22	5		As II	1270.110	5	
Zn IV	1265.223	3		Ni II	1270.180	15	
Kr III	1265.32	80		Kr III	1270.20	100	
Zn III	1265.370	60		N IV	1270.280	250	18.75
Mn II	1265.39	10	40	Ca III	1270.333	450	
Cu II	1265.5062	15	91	Zn III	1270.573	50	
Mn II	1265.57	2		Co III	1270.646	1	
Na III	1265.66	40		S I	1270.7821	100	
Zn IV	1265.716	60		F III	1271.075	10	
Cr III	1266.01	20	20	V IV	1271.153	2	
Ni II	1266.065	1		Mn II	1271.22	2	
Mn II	1266.13	8		Cu III	1271.234	3	
Cr III	1266.14	150	5	Fe II	1271.235	20	9
Br I	1266.200	12		Mg II	1271.2388 P	80	
Fe II	1266.24	2		Zn III	1271.291	8	
C I	1266.270	20	58.01	Cu II	1271.3178	2	90
Cu II	1266.3101	10	89	Fe II	1271.37	1	
As II	1266.340	800		Mg III	1271.784	2	
C I	1266.419	100	58	Cu III	1271.839	1	
Cr III	1266.53	20		Cr III	1271.85	200	13
Ni II	1266.608	8		Co II	1271.940	20	
Al II	1266.66	0		Mg II	1271.9462 P	90	
Fe II	1266.694	400	9	Ni II	1271.993	1	
F III	1266.867	150		Fe II	1272.001	500w	9
Cu IV	1266.879	29		Zn III	1272.037	50	
P II	1267.06	5		Cu II	1272.0417	8	102
Ga IV	1267.2	900		S I	1272.0749	30	
Ga III	1267.25	150		Ni II	1272.080	1	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
N IV	1272.160	200	18.75	C I	1276.483	100	
Mn II	1272.18	6		Na II	1276.597	30	
Zn IV	1272.192	50		Cu IV	1276.641	104	
Co III	1272.416	2		C I	1276.750	200	
F III	1272.463	3		Cr III	1276.76	200	
Ca III	1272.544	100		Cu IV	1276.766	19	
Fe II	1272.638	300	9	Mn II	1276.77	10	59
Al IV	1272.70	150d		N II	1276.800	100	P
Mg I	1272.7212	80		Se II	1276.84	200	
N IV	1272.74	100	18.75	Ni II	1276.859	1	
F III	1272.795	6		Ni V	1276.90	100	
Cu IV	1272.858	12		Co II	1276.914	0	
Zn IV	1272.963	60		Ni XIII	1277.0	1	
V IV	1272.972	30		Zn IV	1277.110	69	
Cr III	1273.31	150	5	Mn II	1277.12	20b	59
Cu IV	1273.352	12		Mn II	1277.12	20b	
Mg II	1273.4232	110		S I	1277.199	40	58
N IV	1273.47	150	18.75	S I	1277.216	90	
Ni II	1273.488	2		Cr III	1277.23	36	
V IV	1273.529	10		Ni II	1277.243	20	
Cu II	1273.7007	2	90	C I	1277.245	300	7
N IV	1273.716	100	18.75	C I	1277.282	700	7
Ni II	1273.717	1		Zn II	1277.306	60	
Cu IV	1273.720	15		Ni II	1277.344	1	
Ca III	1273.775	100		C I	1277.513	100	7
Zn IV	1273.818	30		Zn I	1277.523	40	
Cu II	1274.0708	3		C I	1277.550	1900	7
Mn II	1274.08	2		Ni II	1277.617	1	
Ge I	1274.100	5		Mn IV	1277.628	100	
C I	1274.109	50	3	Fe II	1277.657	10	9
Ni II	1274.180	2		C I	1277.723	250	7
Ni II	1274.270	100		Ni II	1277.725	2	
Si II	1274.300	3h		Mn II	1277.82	20	58
As III	1274.3	240		Cu IV	1277.849	11	
Zn III	1274.383	60		C I	1277.954	70	7
Cu II	1274.4651	3		Ni II	1277.967	18	
Cu IV	1274.721	82		P II	1278.094	5	
C I	1274.756	20	56	Cu IV	1278.187	29	
Ni II	1274.802	10		Mn II	1278.369	10	
Mg III	1274.831	100		Ca III	1278.392	55a	
Mn II	1274.84	2		Zn IV	1278.491	20	
Cu IV	1274.843	158		P I	1278.57	3	
C I	1274.984	150	55	Ni II	1278.637	100	
N II	1275.038	300		Cr III	1278.71	20	13
Mn II	1275.10	20	59	Mn II	1278.75	15	58
Fe II	1275.154	300	9	F III	1278.810	60	
N II	1275.251	P		Cu IV	1278.848	11	
N II	1275.275	P		Na II	1278.90	2	
Cr III	1275.34	150		Kr III	1278.94	20	
Cu I	1275.5717	30	89	Zn III	1279.021	50	
Ni II	1275.640	10		C I	1279.056	100	6
Si II	1275.662	5h		Mn II	1279.09	10	58
Zn IV	1275.756	40		Ga IV	1279.2	500	
V III	1275.78	75		C I	1279.229	150	6
Fe II	1275.801	400	9	Ni II	1279.400	1	
Mn II	1275.97	40	58	Mn II	1279.44	2	58
Mn III	1276.092	700		Br I	1279.477	10	
N II	1276.201	200	P	C I	1279.498	70	6
Zn III	1276.219	60		C I	1279.890	250	5
N II	1276.225	P		Cr III	1279.91	200	12
Mn II	1276.24	20	59	Cu II	1279.9615	0	
C I	1276.287	50		Ge II	1280.050	2	
F III	1276.352	3		S I	1280.0991	50	
Mn II	1276.45	8	59	Mn II	1280.11	10	
Mn III	1276.467	50		C I	1280.135	200	5

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar II	1280.225	100		P I	1284.80	3	
Cu II	1280.2682	5		Cu II	1284.8712	8	
C I	1280.333	700	5	Na II	1285.117	12	
Cu IV	1280.353	113		Ga IV	1285.3	600	
Si III	1280.354	120	63	Cu II	1285.5186	1	
C I	1280.404	75	5	Na II	1285.686	25	
Zn IV	1280.443	60		Zn III	1285.752	40	
C I	1280.597	200	5	P I	1285.84	2	
Mg III	1280.702	2		Cr III	1285.90	10	
C I	1280.847	250	5	Ca III	1285.908	400	
Cu IV	1280.889	59		Cu II	1285.9222	1	
As II	1280.987	700		Mn II	1285.95	8	
Ni II	1281.056	1		Cu IV	1286.119	12	
Cu II	1281.2570	3		S IV	1286.17	100	
Zn IV	1281.292	15		Ti III	1286.228	90	2
Na II	1281.308	15		Br I	1286.259	10	
Cu II	1281.4616	8		Ni II	1286.338	50	
Zn III	1281.508	40		Ti III	1286.365	700	2
Ca III	1281.553	500		Ga II	1286.38	250	
Zn	1281.573	20		Ni II	1286.396	3	
Ni II	1281.609	5		Se II	1286.41	300	
Ni II	1281.704	4		P I	1286.44	9	
Ni II	1281.723	12		Ca III	1286.523	600	
Mn IV	1281.727	30		Ni II	1286.561	50	
Ni II	1281.834	50		Co III	1286.626	1	
Cr III	1281.98	200		Cr III	1287.05	400	12
Zn IV	1282.027	20		V III	1287.19	50	5
Ni II	1282.179	2		Ni II	1287.329	15	
F III	1282.240	10		V III	1287.34	75	5
Ge II	1282.345	15		Cu II	1287.4683	15	102
Zn IV	1282.363	50		As II	1287.538	700	
Cu II	1282.4547	15	102	Mn III	1287.589	400	9
Ti III	1282.484	125	2	V III	1287.87	500	5
Ar II	1282.620	100		Mn II	1287.978	15	57
Cu IV	1282.702	12		Ca III	1288.029	100	
Ni II	1282.732	1		C I	1288.037	200	54
Ni II	1282.825	10		C I	1288.422	500	53
P I	1282.96	6w		V III	1288.63	100	5
F III	1283.098	6		Mn III	1288.682	50	9
Cr III	1283.12	50	13	C I	1288.710	100	52
Kr III	1283.31	60		Zn III	1288.767	40	
Ni II	1283.399	12		Zn IV	1288.875	40	
Al IV	1283.48	10		C I	1288.917	100	51.02
Zn IV	1283.497	50		Ni II	1289.024	9	
Mn III	1283.581	500	9	Fe II	1289.09	1	
Ni II	1283.731	5		Mn II	1289.13	15	57
Kr III	1283.80	5		Na II	1289.213	60	
Cu II	1283.8298	3		Ni II	1289.298	3	
P I	1283.89	5		Ti III	1289.299	500	2
Zn III	1283.941	50		Mn II	1289.35	8	
P III	1283.95	10		Ni II	1289.354	7	
Mn III	1284.058	30	9	Ni II	1289.369	11	
Cr III	1284.09	200	12	V III	1289.42	400	
F III	1284.105	3		Ni II	1289.513	2	
Zn IV	1284.185	40		P II	1289.57	30	
N IV	1284.218	150	18.87	Ni II	1289.656	6	
V III	1284.27	150	5	Ni II	1289.682	1	
P II	1284.31	5		Cr III	1289.81	200	
Ni II	1284.327	25		C I	1289.891	50	51.01
Zn IV	1284.382	50		Zn III	1289.935	50	
Cr III	1284.46	10		C I	1289.977	300	51
Cu IV	1284.702	52		Zn III	1290.051	50	
Zn IV	1284.715	50		Ge II	1290.07	100h	
Mn II	1284.76	2		P III	1290.13	1	
Ar II	1284.793	100		Fe II	1290.204	300	88

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Zn IV	1290.440	40		Mn II	1294.803	10	57
Ni II	1290.442	1		V III	1294.82	50	
V III	1290.46	100	5	F III	1294.83	1	
Mn II	1290.52	8	6	Fe II	1294.914	240	87
V III	1290.77	300		Ni II	1294.968	2	
Fe II	1290.78	0		Mr II	1295.15	10	57
Zn III	1290.789	5		Zr II	1295.318	50	
Ni II	1290.908	4		Ga III	1295.45	100	
Cr III	1290.93	200	37	Zn III	1295.465	10	
Mn II	1290.93	10	6	S I	1295.6526	110	9
Cu IV	1290.969	72		Cu III	1295.700	0	
Se II	1290.97	800	14	Mn II	1295.74	6	57
Cu IV	1291.084	58		V III	1295.76	150	
Cr III	1291.25	20	37	Co II	1295.853	30	
Ni II	1291.251	10		Ti III	1295.883	400	1
C I	1291.304	100	50	Ga IV	1295.9	750	
V III	1291.40	15		Cr III	1296.01	40	
Cr III	1291.53	250	37	Mn II	1296.03	3	57
F III	1291.565	1		Fe II	1296.088	400	86
Mn II	1291.58	10	6	S I	1296.1738	70	9
V III	1291.59	5	5	Br III	1296.3	1000	
Fe II	1291.594	300	87	C III	1296.33	200d	12.07
Ni II	1291.614	10		Mn II	1296.43	6	57
Mn III	1291.6.8	300	9	Zn IV	1296.589	50	
Ti III	1291.622	450	2	N IV	1296.600	250	18.86
Mn II	1291.70	10		S IV	1296.61	200	
Mn III	1291.714	600	9	Mn II	1296.67	5	57
V III	1291.76	25	5	Si III	1296.726	280	4
Cr III	1291.77	250	37	Zn IV	1296.730	50	
Zn IV	1291.795	50		Cu IV	1296.752	14	
Al	1291.81	10		Cu IV	1296.878	11	
Ge II	1291.82	2		F III	1296.940	20	
C VI	1291.9	P		Ni II	1296.950	13	
Zn II	1292.00	3		Ni II	1297.087	2	
Ni II	1292.033	2		F III	1297.188	60	
Ni II	1292.224	2		Ni II	1297.417	3	
Zn III	1292.231	50		F III	1297.537	100	
Zn III	1292.484	60		Cu II	1297.5498	2	
Mn II	1292.57	10		F III	1297.757	1	
V III	1292.79	250	5	Na II	1297.856	12	
Mn II	1292.87	15	57	V III	1297.94	50	
Ti III	1293.228	400	2	Mn IV	1297.947	0	
Ni II	1293.232	5		Cu II	1297.978	1	
Cu IV	1293.476	173		Ca III	1298.035	600	
Ga III	1293.50	200		Ne II	1298.046	80	
Ni II	1293.533	6		F III	1298.072	6	
Fe II	1293.543	10	88	Na II	1298.14	15	
Cr III	1293.57	100		Cu II	1298.3945	15	101
Mn III	1293.661	200	9	Zn III	1298.539	50	
Cu IV	1293.780	13		Ti III	1298.659	1000b	1
Ca III	1293.871	450		Zn III	1298.689	50	
Ne II	1293.902	70		Zn	1298.783	10	
Mn II	1293.92	1		Mn II	1298.800	6	
Mn IV	1293.930	150		Fe II	1298.815	40	87
Na II	1293.974	60		Si III	1298.891	300	4
Kr III	1293.99	60		Cu II	1298.9053	1	
Cu IV	1294.142	104		Si III	1298.960	360	4
F III	1294.279	1		Ti III	1298.970	800	1
Zn IV	1294.306	10		Na II	1299.018	30	
Se II	1294.41	300	15	F III	1299.055	3	
Mn II	1294.437	2		V III	1299.07	50	
Ni II	1294.500	10		Mn II	1299.09	5	
Si III	1294.543	340	4	V III	1299.25	50	
P II	1294.64	150		Cu II	1299.2678	10	89
Ti III	1294.698	600b	1	As IV	1299.3	500	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ga IV	1299.5	750		F III	1305.008	0	
Co II	1299.551	30	12	Ni II	1305.083	6	
Cr III	1299.55	40		Mn II	1305.136	10	
Mn II	1299.66	5		Cu IV	1305.168	18	
Fe II	1299.984	10	86	Ni II	1305.169	25	
F III	1300.466	3		Ni III	1305.344	100	
Mn II	1300.52	1		V IV	1305.420	40	
Cu IV	1300.572	16		Cu IV	1305.468	10	
Si III	1300.763 P		54	P II	1305.48	350	2
Ni V	1300.97	50		Cu II	1305.5608	5	
Mn II	1301.06	4		Si II	1305.590	50h -A	13.04
Zn IV	1301.082	30		Cu IV	1305.617	11	
Si III	1301.146	280	4	Mn II	1305.63	15	56
Zn IV	1301.204	50		F III	1305.697	3	
Mn II	1301.31	3		As II	1305.701	700	
Zn III	1301.371	40		F III	1305.870	35	
Zn III	1301.687	50		Mn II	1305.87	5	
Na II	1301.782	15		S I	1305.8834	95	9
Zn IV	1301.665	40		O I	1306.0286 ST	200	2
P II	1301.87	200	2	F III	1306.04	60	
Cu IV	1301.999	11		Zn IV	1306.097	40	
Mn II	1302.12	1		F III	1306.122	20	
As IV	1302.13	100		Cr III	1306.16	60	
O I	1302.1686 ST	1000	2	Mn II	1306.17	5	
Ni II	1302.246	10		V III	1306.21	50	
S I	1302.3370	100	9	Cu IV	1306.256	90	
Co II	1302.378	20		Ni II	1306.279	4	
Cr III	1302.45	20		Zn III	1306.322	50	
Kr III	1302.59	40		Ni II	1306.528	1	
F III	1302.599	6		Mg III	1306.59		
Ni I	1302.603	1		Ni V	1306.60	100	
Mn II	1302.61	9		Na II	1306.618	20	
Cr III	1302.85	5		Ni II	1306.621	6	
S I	1302.8633	80	9	Zn IV	1306.641	60	
Fe V	1302.99	100		Mg II	1306.7139 P	110	
Fe II	1303.04	0		Zn II	1306.741	5	
Ni II	1303.078	4		Mn II	1306.81	10	
S I	1303.1105	80	9	Co II	1306.935	30	12
Mn II	1303.12	1		Co II	1306.969	10	
Ni II	1303.170	2		F III	1306.991	6	
Ni II	1303.237	0		Ni II	1307.146	10	
Ni II	1303.283	5		Se IV	1307.2	700	
Si III	1303.320	320	4	Cr III	1307.24	100	
S I	1303.4295	85		Fe II	1307.24	0	
Cr III	1303.47	40		Ni II	1307.276	50	
Ga IV	1303.5	750		Zn III	1307.384	60	
Mn II	1303.52	4		Mn II	1307.41	1	
Zn III	1303.551	50		Cr III	1307.47	10	
Fe V	1303.59	100		Cu IV	1307.600	128	
F III	1303.624	6		Cr III	1307.64	60	
Cu II	1303.6602	2		As II	1307.74	350	
F III	1303.871	35		Mg II	1307.8754 P	120	
Na II	1303.957	15		Mg IV	1307.934	100	
Cu II	1303.9783	2		Na II	1307.936	10	
V IV	1304.173	30		V IV	1308.061	50	
F III	1304.368	20		Mn II	1308.16	1	
Si II	1304.3729 st	100	3	Cr III	1308.27	150	
P II	1304.47	200	2	Mg II	1308.2809 P	120	
Na II	1304.546	15		Cu II	1308.2971	30	101
Ni II	1304.555	1		Zn III	1308.450	5	
Ni II	1304.594	10		Zn III	1308.569	60	
P II	1304.68	150	2	Br III	1308.6	500	
F III	1304.705	1		Ag III	1308.654	2	
Cn III	1304.769	50		C III	1308.70	200	11.44
O I	1304.8575 ST	600	2	Ni II	1308.714	8	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu IV	1308.822	205		Cu IV	1312.948	15	
Ni II	1308.869	16	10	N I	1313.08	3	
Se II	1308.89	800	15	S I	1313.2493	60	
Ni II	1309.079	0		Br III?	1313.5	500	
Si II	1309.2769 st	200	3	Cu III?	1313.313	1	
Mn II	1309.29	1		V III	1313.35	400	6
Cr III	1309.34	200	28	C I	1313.387	100	45.61
Ni IV	1309.340	30		Ni II	1313.403	7	
Ca III	1309.418	50		Mn II	1313.41	2	56
Cu IV	1309.427	212		C I	1313.464	300	45
Mg II	1309.4434 P	140		Se I	1313.53	60	
Si II	1309.458	20h	13.04	Mn II	1313.77	10	56
Cu II	1309.4633	15	101	V II	1313.82	5	
V IV	1309.502	10		Ni II	1313.903	2	
Zn II	1309.521	-A		Zn III	1314.067	60	
N IV	1309.557	200	18.55	Cu II	1314.1495	15	149
Ga IV	1309.6	500		Ge II	1314.15	10h	
Mn II	1309.72	3		Cu II	1314.3366	30	101
Si II	1309.77	2h	13.04	Se IV	1314.4	800	
P II	1309.87	250	2	Mg III	1314.50		
Br I	1309.908	30		Ni IV	1314.760	30	
F III	1310.117	3		Ni II	1314.771	12	
Zn III	1310.117	60		Zn III	1314.796	60	
Cr III	1310.18	30		Ga IV	1314.8	250	
S I	1310.1940	10		Ni II	1314.847	12	
Mg III	1310.271	2		Cr III	1315.00	100h	33
Cu IV	1310.319	2		Cr IV	1315.00	100b	
Ni II	1310.358	1		Ni II	1315.255	70	
Ni II	1310.457	1		Zn	1315.262	15	
N I	1310.5401	200	13	Co II	1315.393	0	12
Mg III	1310.633	7		N I	1315.44	3	
C I	1310.657	200	49	Cr III	1315.44	20	28
Ca III	1310.669	450		Ni II	1315.558	3	
P II	1310.70	600	2	Cr IV	1315.86 P	125	
Mg III	1310.720	2		C I	1315.918	200	44
N I	1310.9429	150	13	Co II	1316.086	0	12
N I	1310.9495	25	13	Mn III	1316.091	80	
Zn III	1311.104	50		Cu III?	1316.143	3	
Co II	1311.124	10d	12	Cr III	1316.16	200	
Ni II	1311.152	1		Mn II	1316.16	9	80
Na II	1311.158	10		Se I	1316.26	60	
Ge II	1311.249	50h		N I	1316.2906	2	
Si II	1311.265	2h		Cr III	1316.40	200	28
C I	1311.363	1000	48	F III	1316.401	35	
Cu IV	1311.505	15		Mg IV	1316.482	20	
Mg IV	1311.693	200		Fe II	1316.49	1	
Cu II	1311.7947	1		Ni II	1316.502	4	
Cu IV	1311.855	66		F III	1316.531	35	
Co II	1311.864	10	12	S I	1316.5423	160	8
C I	1311.924	200	47	S I	1316.6183	120	8
Zn IV	1311.939	10		Br I	1316.735	30	
F III	1311.963	1		Ni II	1317.045	6	
Mg IV	1311.97	1		Ni II	1317.122	10	
Na II	1312.026	30		Ni II	1317.220	500	10
C I	1312.247	100	46	V III	1317.27	300	6
Cu III	1312.400	5		Br I	1317.372	10	
Na II	1312.587	20		Mn II	1317.39	3	56
Si III	1312.590	260	10	Zn III	1317.509	0	
Cu IV	1312.715	221		Ni II	1317.531	15	
V IV	1312.717	20		V IV	1317.566	5	
F III	1312.763	1		Br I	1317.695	20	
Cu IV	1312.790	169		Ca III	1317.699	550	
Mn II	1312.80	2		Mn II	1317.70	4	56
N I	1312.87	3		F III	1317.744	3	
Zn III	1312.904	35		F III	1317.975	6	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Zn IV	1317.975	50		Mn II	1323.78 P		80
Ni II	1318.017	100		Cu II	1323.7943	6	148
B V	1318.05			Mn II	1323.81 P		80
Mg III	1318.072	12		C II	1323.8617 ST	30	11
Mn II	1318.09	3	56	C II	1323.9059 ST	300	11
Cu IV	1318.140	280		C II	1323.9513 ST	450	11
Se II	1318.25	700	14	N IV	1323.98	100b	18.81
Ni V	1318.47	200		C II	1323.9955 ST	30	11
Cu III	1318.582	1		Cu III?	1324.033	3	
Co II	1318.589	0	12	Fe II	1324.25	0	
N I	1318.8224	5		N III	1324.40	150	
P III	1318.91	10		Zn III	1324.455	20	
N I	1318.9981	150	12	Ni II	1324.475	25	
N I	1319.0048	90	12	Ar II	1324.51	30	
Zn III	1319.096	60		Br III	1324.8	500	
Ni IV	1319.139	30h		Ni IV	1324.859	100	
Zn IV	1319.200	5		Cr IV	1325.03 P	200	
Mn II	1319.21	10	80	Ni II	1325.105	1	
Ge I	1319.3	10h		F III	1325.214	6	
Ni II	1319.310	8		Ni II	1325.242	1	
Cu IV	1319.433	129		Cu II	1325.2421	1	
N I	1319.6693	50	12	Ni II	1325.359	100	
N I	1319.6760	250	12	P III	1325.51	70	
Cr IV	1319.68	150		Cu II	1325.5135	3	
Mg III	1320.922	4		Cu IV	1325.524	16	
F III	1320.203	3		Fe II	1325.61	2	
Cu IV	1320.206	11		Zn IV	1325.659	5	
F III	1320.451	1		N IV	1325.685	50	18.81
Cu II	1320.6858	10	148	Ni II	1325.691	4	
Zn IV	1320.699	50		Zn III	1325.831	30b	
Al	1320.71	10		Zn IV	1325.831	30b	
Ni II	1320.799	0		Cr IV	1325.86 P	50	
Cr IV	1320.85	40		Ni II	1326.292	7	
Cu IV	1321.168	101		Cu III	1326.379	2	
Zn IV	1321.188	50		Cu II	1326.3954	10	147
Ni II	1321.432	3		Ni II	1326.548	11	
F II	1321.515	10		N I	1326.5639	10	11
Mn IV	1321.588	20		N I	1326.5707	50	11
Cr III	1321.65	30	28	Ni II	1326.623	12	
Ni II	1321.704	2		Mo II	1326.63	10	
V IV	1321.719	10		S I	1326.6432	160	8
C	1321.7962	5		V IV	1326.666	5	
Ni III	1321.804	10		Zn III	1326.708	50b	
V IV	1321.917	10		Zn IV	1326.708	50b	
S I	1322.06	20		V IV	1326.807	5	
Mn III	1322.186	40		Se I	1326.83	40	
Na II	1322.295	12		Zn III	1326.899	50	
Zn IV	1322.308	50		F III	1326.926	20	
Zn IV	1322.414	50		N IV	1326.964	20	18.81
Cu II	1322.6326	6		F II	1327.058	200	
Mn XII	1322.8	f		Fe II	1327.10	0	
Ni II	1322.825	2		Cr III	1327.17	10	
Cr III	1322.83	100	28	Cu III?	1327.178	3	
Ni II	1323.107	1		Ni II	1327.187	3	
Ga III	1323.15	300		Ni II	1327.319	20	
Ge III	1323.15	80		Mn II	1327.48	12	79
As I	1323.2	3		Mg III	1327.512	4	
Cu II	1323.2042	3		Ti III	1327.592	550	4
Cr III	1323.22	10		Cu IV	1327.622	11	
F III	1323.311	3		Ni IV	1327.655	50	
Ni II	1323.417	25		Si III	1327.703 P		53
Zn III	1323.512	50		Ni II	1327.730	8	
S I	1323.5153	180	8	Na II	1327.742	50	
S I	1323.5220	45	8	Ni II	1327.755	50	
Mn II	1323.76	15	80	Cr III	1327.79	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Sc I	1327.80	20		Cr III	1331.56	50	
Ga II	1327.81	250		V IV	1331.630	30	
V III	1327.87	150		V IV	1331.665	0	
N I	1327.9170	25	11	Zn III	1331.823	50	
N I	1327.9238	15	11	Cu II	1331.8507	5	
Ni III	1328.084	75		Cr IV	1331.91 P	50	
Mg IV	1328.09	1		V III	1331.99	500	9
Br III?	1328.1	750		F II	1332.042	100	
F II	1328.103	300		Cu II	1332.228	5	148
S III	1328.12	50		Mg III	1332.310	4	
Cr III	1328.37	10		Cr IV	1332.44 P	250	
Zn III	1328.372	50		V IV	1332.459	3	
Cu II	1328.4129	5		F II	1332.512	100	
Ni IV	1328.470	70		Mn IV	1332.660	20	
Na II	1328.497	12		Ni II	1332.706	1	
S III	1328.52	50		Ni II	1332.766	6	
Zn III	1328.561	40		Ni II	1332.808	7	
Mn IV	1328.564	0		Cu III?	1332.985	8	
Se I	1328.75	80		Cu II	1333.0452	20	163
Cr III	1328.78	10		F III	1333.139	60	
Si III	1328.806 P		48	As II	1333.147	750	
C I	1328.8332 ST	150	4	Zn IV	1333.168	40	
Ni II	1328.847	?		Ni II	1333.171	3	
Ca III	1328.945	500		Zn IV	1333.296	50	
Ni II	1328.964	25		As IV	1333.3	100	
V III	1329.05	25	9	Sc II	1333.32	300	
Zn IV	1329.061	5		Mn IV	1333.561	10	
C I	1329.0863 ST	150	4	F II	1333.588	200	
C I	1329.1001 ST	200	4	S I	1333.792	2	
C I	1329.1230 ST	110	4	Ni II	1334.101	10	
C III	1329.187 P		11, 59	Ni II	1334.287	12	
Mn II	1329.25	1		F III	1334.292	3	
V IV	1329.288	10		Mg III	1334.359	30	
Cr III	1329.29	20		V IV	1334.493		
C I	1329.5775 ST	600	4	Cu II	1334.5063	2	
Mg III	1329.583	60		C II	1334.5323 ST	800	1
C I	1329.6005 ST	200	4	Cu II	1334.6546	2	
Cu II	1329.6696	1		P III	1334.87	650	1
F III	1329.704	1		Cu IV	1335.043	106	
Ti III	1329.837	40		V III	1335.12	500	9
Ni II	1329.857	13		Ca III	1335.129	550	
Ni IV	1329.885	10		Ni II	1335.203	400	
F III	1329.892	6		Mn II	1335.27	25	79
Zn III	1329.923	40b		Cu IV	1335.554	87	
Zn IV	1329.923	40b		C II	1335.6627 ST	100	1
V IV	1329.968	10		C II	1335.7077 ST	1000	1
Fe II	1330.05	1		Cl I	1335.7257	250	2
Zn III	1330.087	40		Ni II	1335.779	18	
Zn III	1330.178	40		Zn III	1335.846	50	
Zn III	1330.297	40b		Mg III	1335.951	2	
Zn IV	1330.297	40b		Mn IV	1336.125	450	
V IV	1330.355	10		Ni II	1336.201	2	
Cu III	1330.365	1		Ni IV	1336.790	70	
F III	1330.490	6		Mg IV	1336.884	60	
Br III	1330.5	500		Zn IV	1336.889	40	
Se I	1330.55	80		As IV	1336.9	20	
Mn II	1330.61	12	79	Mn IV	1336.918	400	
Ni III	1330.787	2		Zn III	1336.996	2	
Zn III	1330.897	40		F III	1337.196	6	
K II	1330.948	20		Se II	1337.23	50	
Ni II	1331.264	9		Cu IV	1337.364	76	
V III	1331.30	100		Na III	1337.39	120d	
Zn IV	1331.390	40		Ca III	1337.466	200	
Kr II	1331.402	20		P III	1337.50	70	
Mn IV	1331.42	8		Cu II	1337.5114	0	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Zn III	1337.571	20		O IV	1342.992	120	
Cu III	1337.572	3h		Cu III	1343.032	1	
P III	1337.71	150		S III	1343.25	50	
Ni IV	1337.737	100		N II	1343.338 P	200	
Al	1337.86	50		Zn III	1343.355	60	
Ni II	1337.958	15		Si III	1343.388	120	39
Mn IV	1338.061	350		O IV	1343.512	275	
Ga IV	1338.1	750		S III	1343.53	50	
Cr IV	1338.20 P	10		Ni II	1343.544	10	
Cu III?	1338.386	1		N II	1343.574 P		
Ni II	1338.402	1		F II	1343.603	300	
Na II	1338.575	35		Ni II	1343.642	2	
O IV	1338.612	200		Cu III?	1343.730	3	
Zn III	1338.659	20		Zn IV	1343.794	50	
Ni IV	1338.786	70		P III	1343.8	70 -A	
Cu III?	1338.858	1		Cu IV	1343.992	40	
Zn III	1338.939	50		F II	1344.037	200	
Ni IV	1339.071	740		Zn IV	1344.063	50	
Cu IV	1339.179	45		Mn II	1344.14	50	
Ni II	1339.221	3		Ni II	1344.196	2	
V IV	1339.335	5		F II	1344.295	100	
F III	1339.337	6		Ni II	1344.334	1	
Ni II	1339.394	1		P III	1344.34	1000	1
Ni II	1339.487	3		Mn II	1344.35	6	
Cu II	1339.4952	0		Cu III?	1344.363	1	
Cu III	1339.497	3		V IV	1344.493	0	
Ti III	1339.691	170		Ni II	1344.614	50	
Cr II	1339.7713	5		P III	1344.90	650	1
Cr IV	1339.84 P	50		Cu IV	1344.994	63	
Ni II	1340.007	15		N II	1345.076 P		
Cu IV	1340.102	240		Cr III?	1345.12	100	
Zn IV	1340.162	50		N II	1345.313 P	100	
Fe II	1340.22	0		N II	1345.340 P		
Ni II	1340.374	20		Cr III?	1345.46	70	
Mn IV	1340.617	250		Cu III?	1345.506	1	
Zn III	1340.676	3		Se I	1345.54	80	
Cu II	1340.9141	3		Mn II	1345.62	2	
Ge II	1340.92	5h		Zn IV	1345.622	10	
Cr III	1341.17	10		Cu IV	1345.665	360	
Cu III?	1341.178	1h		Mg IV	1345.677	10	
Ni II	1341.226	0		Ni IV	1345.718	760	
Na II	1341.369	35		Mn II	1345.77	15	
Ni III	1341.421	10		N III	1345.81 P	200 -A	
Mn IV	1341.461	300		Ni II	1345.882	50	
Si III	1341.465	160	39	Mn IV	1346.014	0	
Si III	1341.496 P		39	Cu III?	1346.062	3	
Cu III	1341.497	1		Ni IV	1346.083	740	
As II	1341.549	950		Zn III?	1346.146	50	
Ca II	1341.889	240	2	N III	1346.22 P	200 -A	
Se I?	1342.04	80		Ni II	1346.334	1	
Cu IV	1342.092	61		N II	1346.413 P		
Ni III	1342.143	50		N II	1346.441 P	10	
Mg IV	1342.193	300		Mg III	1346.46		
Cu III	1342.193	2h		Mg IV	1346.573	800	
Cr III	1342.24	40		Mn III	1346.58	100	
Ni II	1342.242	20		Se I	1346.58	10	
Si III	1342.351 P		39	Cr IV	1346.62 P	10	
Si III	1342.392	140	39	Mg IV	1346.680	300	
Na II	1342.401	20		Mn III	1346.854	50	
Si III	1342.432 P		39	Mn IV	1346.865	0	
Ca II	1342.535	120	2	Si II	1346.873	100	7
Kr III	1342.68	20		Mn II	1346.94	1	
As IV	1342.7	350		P III	1347.00	200 -A	
Zn IV	1342.720	50		Ga IV	1347.0	150	
Cu IV	1342.741	190		V IV	1347.030	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu III	1347.048	2h		Mg IV	1351.652	100	
Mn III	1347.087	0		Cl I	1351.6568	350	2
Cl I	1347.2397	550	2	Na II	1351.799	12	
Zn III	1347.286	50		Cu II	1351.8366	25	147
Fe II	1347.29	1		Ni II	1351.862	35	
Se II	1347.31	100		F IV	1351.924	10	
As IV	1347.5	450		Cu IV	1351.925	221	
Se I	1347.50	20		Cr III	1351.94	10	
P III	1347.51	10	-A	Mg IV	1352.049	600	
Na II	1347.547	45		Ni III	1352.952	20	
N III	1347.56	10	-A	Na II	1352.118	35	
Mn III	1347.62	80		Mn II	1352.17	4	
Cu IV	1347.811	212		Ni II	1352.237	10	
Zn IV	1347.949	50		Zn IV	1352.247	40	
Cu III	1348.077	0		Cu IV	1352.585	217	
Ni II	1348.333	30		Mn III	1352.599	30	
Mg III	1348.342	7		Si II	1352.635	100	7
Zn IV	1348.354	40		Mg III	1352.80		
Se I	1348.40	100		Al III	1352.810	100	
Cr IV	1348.44	20		Al III	1352.816	5	
P III	1348.45	10	-A	Mn II	1352.83	1	
Si II	1348.543	100	7	Al II	1352.858	70	
Cu IV	1348.569	147		Zn IV	1352.876	60	
Cu III?	1348.584	2		Cu IV	1352.957	166	
Ar II	1348.751	100		Se I?	1353.02	140	
Cu IV	1348.880	171		Mn III	1353.027	30	
P III	1349.11	200	-A	V III	1353.05	100	
Mg III	1349.132	12		Mn II	1353.33	6	
Mg III	1349.365	2		Zn IV	1353.476	3	
Mn II	1349.41	5		Ni III	1353.512	20	
Cu III?	1349.441	3		Cu IV	1353.576	58	
Fe XII	1349.57	30f		Ni II	1353.606	8	
Ni II	1349.594	0		Si II	1353.713	100	7
Cu IV	1349.598	38		Cu IV	1353.720	82	
Fe II	1349.60	0		Al IV	1353.73	10	
Co IV	1349.61	30		Mg III	1353.804	7	
Mn III	1349.782	0		Ni II	1353.821	15	
Ni II	1349.791	12		Se I	1353.86	140	
Cu IV	1349.860	27		Mn II	1353.90	1	
Zn IV	1349.872	50		As IV	1353.9	300	
Si II	1350.057	150	7	Mg III	1353.915	2	
Mg III	1350.156	12		Ga III	1353.94	400	
Cu IV	1350.165	166		Zn III	1353.953	50	
Al II	1350.18	150		Cu III	1353.964	1	
Ni IV	1350.215	650		Ni II	1354.023	2	
Ni II	1350.256	5		Fe II	1354.03	0	
Ni II	1350.321	10		Mn II	1354.08	5	
Zn III	1350.377	50		Cr III	1354.16	10	
Cu IV	1350.390	191		Zn III	1354.189	50	
Cu IV	1350.424	191		C I	1354.288	500	43
As I	1350.5	2		Cu IV	1354.318	98	
Si II	1350.520	20	7	Cu IV	1354.602	161	
Cu II	1350.5938	15	147	Se I	1354.63	100	
Zn III	1350.638	50		Zn III	1354.650	1	
Si II	1350.658	20	7	Cr III	1354.75	50	
Zn III	1350.968	10b		Fe II	1354.87	0	
Zn IV	1350.968	10b		Ar II	1354.915	200	
Ga IV	1351.0	100		Cu IV	1354.928	26	
Ni III	1351.256	30		P III	1354.96	10	
Cu III	1351.271	2		As IV	1355.1	100	
Ni II	1351.287	10		V IV	1355.131	80	
As IV	1351.3	350		Cu II	1355.3053	15	147
Ar II	1351.333	100		Zn II	1355.332	25	
Se I	1351.62	80		Cu IV	1355.391	136	
Cr IV	1351.63	40		Ca III	1355.415	450	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn IV	1355.441	250		F IV	1359.053	15	
Zn III	1355.518	30		Na II	1359.055	20	
O I	1355.5977	100	1	C I	1359.275	200	40
Cu IV	1355.617	17		Fe V	1359.41	100	
Mg IV	1355.67	20		C I	1359.438	50	39.01
C I	1355.844	750	42	V III	1359.45	5	
Mn II	1355.90	1		Zn IV	1359.460	50	
As II	1355.933	750		Al IV	1359.49	10	
Mn III	1355.959	20		Mn XI	1359.5	f	
Zn IV	1355.967	40		Zn III	1359.604	50	
Ni IV	1356.078	650		Cu IV	1359.616	70	
Mg IV	1356.132	200		Se I	1359.7	60	
Zn IV	1356.178	50		Si III	1359.751	P	68
Cr III	1356.25	10		Zn III	1359.804	50	
Mg IV	1356.277	20		Cu III	1359.833	0	
Cl VII	1356.3			Mn II	1359.86	2	
Ni II	1356.518	5		Mn IV	1359.890	350	
As IV	1356.4	100		F III	1359.921	100	
Cu III	1356.424	3		Cu IV	1359.929	41	
Mn IV	1356.436	0		Cr IV	1359.93	10	
Ni II	1356.469	20		Cu II	1359.9362	5	
Fe II	1356.48	0		Ca III	1360.010	500	
Zn III	1356.519	50		Fe II	1360.17	0	
V IV	1356.529	10		Zn III	1360.220	0	
Se II	1356.57	50		Mn II	1360.24	0	
Zn	1356.608	10		Si III	1360.360	20	68
Ni II	1356.653	9		Cr III	1360.40	60	
Mn II	1356.74	1		Cr III	1360.56	20	
Cr III	1356.86	20		Mn III	1360.718	1000	8
Ni IV	1357.063	760		Ar II	1360.735	100	
Ni II	1357.132	11		Se II	1360.86	50	
C I	1357.134	300	41	Fe II	1360.870	100	111
Fe V	1357.18	100		V II	1360.896	3	
Cr III	1357.20	150	36	Cu III?	1360.922	2	
Cu IV	1357.313	61		Ni II	1360.956	14	
Ni II	1357.371	5		Cr III	1360.97	10	
Ar II	1357.435	20		Mn III	1361.032	10	
Mn II	1357.45	5		Cu IV	1361.146	196	
Zn III	1357.496	15		Cr III	1361.15	200	
C I	1357.659	100	40.01	Mn III	1361.26	1	
Cr III	1357.69	20		Cr II	1361.30	200	
Zn IV	1357.787	50		Zn IV	1361.321	50	
Se I	1357.79	10		Fe II	1361.372	85	
Ni III	1357.802	50		Fe V	1361.42	500	
Cr III	1357.85	5	36	Mg IV	1361.526	50	
V III	1357.90	40		Si III	1361.597	160	46
Mn II	1357.91	1		Mn II	1361.60	2	
Cu III?	1358.130	1		Si III	1361.719	P	68
Mn II	1358.32	1		Ni II	1361.757	5	
V II	1358.44	50b		Ni II	1361.885	50	
V III	1358.44	50b		Zn III	1361.979	60b	
Cu III	1358.440	1		Zn IV	1361.979	60b	
Ni II	1358.475	25		Mn IV	1361.996	0	
O I	1358.5123	60	1	Cu IV	1362.052	276	
Mn IV	1358.594	450		Ca III	1362.222	200	
Zn IV	1358.608	30		Zn III	1362.335	5	
Cr III	1358.65	30		Si III	1362.366	100	38
Cu IV	1358.732	220		B II	1362.461	600	1
Cr III	1358.75	20		V III	1362.51	50	4
V II	1358.769	0		Zn III	1362.523	60b	
Cu IV	1358.770	226		Mg IV	1362.526	20	
Cu II	1358.7730	30	3	Zn I	1362.541	60	
Mn III	1358.958	40		Cu II	1362.5997	20	147
Ni II	1358.992	15		Fe II	1362.771	400	152
Cu II	1359.0091	20	173	Ni III	1362.783	3	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu IV	1362.808	128		Se I	1366.78	20	
Cr III	1362.85	50		Cu IV	1366.802	30	
Ni II	1362.926	20		Cr III	1366.88	20	
Fe V	1363.00	400		Ni II	1366.947	5	
Ar II	1363.032	200		Cu IV	1366.960	259	
Cu IV	1363.061	196		Zn III	1366.978	60	
Mg IV	1363.18	10		Si III	1367.049	140	46
Ni IV	1363.258	560		Ni II	1367.067	20	
Zn III	1363.413	60b		F III	1367.083	60	
Zn IV	1363.413	60b		Cr III	1367.13	40	
Ni II	1363.421	3		Cu IV	1367.140	133	
Cl I	1363.4471	600	?	Mg II	1367.2568 P	150	
Si III	1363.459	140	38	Cr IV	1367.39	150	
Cu II	1363.5031	5		Ni II	1367.394	1	
Si III	1363.504 P		38	V III	1367.48	100	
Ni II	1363.540	2		Cu IV	1367.562	178	
Ni II	1363.617	2		Cu III?	1367.646	3	
Fe V	1363.72	300		Mg II	1367.7082 P	150	
Cr III	1363.73	20		Se I	1367.91	10	
Se I	1363.80	20		Cu II	1367.9509	25	2
Kr III	1363.85	40		Zn III	1368.027	60	
Ni II	1363.861	1		Fe II	1368.098	50	
Zn IV	1363.913	60		Zn IV	1368.135	8	
Ni II	1364.067	25		Ni II	1368.171	10	
C I	1364.164	600	39	Mn III	1368.20	20	8
Ni II	1364.202	25		Cr III	1368.23	20	36
Cr III	1364.26	50		V III	1368.31	100	
F III	1364.291	10		Ti II	1368.442	25	
Zn III	1364.323	60		Mn II	1368.53	2	
Fe II	1364.38	0		Fe II	1368.57	1	
Cr IV	1364.49	10		Si IV	1368.571 P		19
Ni II	1364.505	70		Si IV	1368.573 P		19
Fe II	1364.575	240	103	Cr III	1368.60	150	36
Mn III	1364.65	5	8	Cu III	1368.923	1	
Ga IV	1364.7	50		Cu IV	1368.972	189	
Ni II	1364.793	2		V III	1369.06	50	
Se II	1364.83	200		Al	1369.20	10d	
Ti III	1365.021	6		Co XII	1369.4	f	
Ni II	1365.048	25		Mg II	1369.4231 P	180	
Cr III	1365.06	40		Mn III	1369.430	400	8
Fe V	1365.14	300		Si III	1369.437	100	46
Cu IV	1365.189	177		Cu IV	1369.497	173	
Mn III	1365.199	800	8	Zn IV	1369.497	60	
Zn IV	1365.233	60		Mn III	1369.535	700	
Si III	1365.253	160	38	Cr IV	1369.58	20	
Cr III	1365.29	200	36	Cu III	1369.612	3	
Si III	1365.292 P		38	Ni II	1369.651	20	
Si III	1365.337 P		38	V III	1369.70	100	4
Mg II	1365.5442 P	140		As II	1369.770	950	
Si IV	1365.549 P		19	Cu IV	1369.847	75	
Zn III	1365.702	60		Cu III	1369.988	0	
Fe V	1365.73	300		Ni II	1370.136	500	8
Ni II	1365.760	4		Cr III	1370.20	20	
Cu III?	1365.862	1		Cu II	1370.2520	1	
Cr III	1365.94	70	36	V III	1370.26	100	4
Mg IV	1366.03	5		Zn IV	1370.385	60	
Cr III	1366.06	70		P III	1370.39	10	-A
Na II	1366.242	15		Zn III	1370.532	60	
Zn	1366.390	10		Ni II	1370.549	25	
Cu III?	1366.400	2		Cu II	1370.5600	2	
Mn III	1366.46	4		Cr III	1370.74	20	
Cr III	1366.63	120		Ni II	1370.804	4	
Zn II	1366.682	60b		Cu IV	1370.849	23	
Zn III	1366.682	60b		Mg IV	1370.898	10	
Fe II	1366.720	85		Fe V	1371.00	400	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe II	1371.024	500		P III	1374.78	100	-A
Mg IV	1371.077	150		Mn II	1374.81	1	
Cu III	1371.144	5		Cr III	1374.91	10	
Zn IV	1371.176	50		Se I	1375.03	40	
Al II	1371.24	5		As II	1375.074	1000	
O V	1371.292	800	7	Si III	1375.085	40	67
Co III	1371.419	1		As IV	1375.1	500b	
Cu II	1371.451	2		Zn III	1375.105	20	
Mn III	1371.647	300	8	Mn II	1375.11	4	
Si III	1371.652	60	67	Fe II	1375.172	200	
Ni IV	1371.679	580		Zn IV	1375.304	60	
Mn II	1371.73	5		F II	1375.319	100	
Ni II	1371.733	1		Cu II	1375.5019	3	
Mg III	1371.769	4		Mg IV	1375.531	100	
Co III	1371.779	2		Cr IV	1375.56	200	
Cu II	1371.8399	20	162	Na II	1375.618	15	
P III	1372.01	100	-A	Cu III	1375.621	3	
P I	1372.03	9		Si III	1375.688	40	67
V II	1372.115	2		Cu IV	1375.783	160	
Cu IV	1372.142	216		As II	1375.783	750	
Cr III	1372.27	60		Ni II	1375.822	50	
Fe II	1372.29	1		Zn IV	1375.954	40	
Cu IV	1372.372	192		V III	1375.98	5	
V III	1372.43	10		Ar II	1376.106	50	
Mn II	1372.48	2		Ni II	1376.183	15	
Se II	1372.51	100		V II	1376.220	15	
Zn III	1372.541	50		Cu IV	1376.339	128	
V II	1372.547	3		Fe V	1376.45	600	
P III	1372.71	300	-A	Co III	1376.576	0	
Cu III	1372.899	3		Fe II	1376.672	10	
Cu III?	1372.965	2		Mg III	1376.713	7	
Si III	1373.030	100	67	Cu III	1376.807	15	
Se I	1373.03	40		Cr III	1376.90	10	
Cl I	1373.1163	200	1	Ar II	1376.956	100	
Mn II	1373.17	2		Ni II	1377.001	10	
Zn III	1373.200	1		Se I	1377.04	40	
Mg IV	1373.226	200		P I	1377.06	60	
Cu IV	1373.278	157		Si III	1377.082	60	67
Cu III	1373.305	2		V III	1377.15	125	
V III	1373.34	5d		Cu III	1377.182	1	
Zn III	1373.381	1		Ar II	1377.211	400	
Cr IV	1373.46	20		Si III	1377.238	40	67
P I	1373.49	60		V II	1377.295	10	
As II	1373.650	800		Zn III	1377.346	40	
Fe V	1373.68	600		Mg IV	1377.419	50	
Zn III	1373.687	60		Ar II	1377.442	20	
Fe II	1373.717	120		Cu II	1377.477	3	
Ni II	1373.746	4		Cu III	1377.504	15	
Cu IV	1373.748	172		Cu III?	1377.559	1	
Cu IV	1373.812	172		Zn IV	1377.621	50	
Zn III	1374.005	3		Cu IV	1377.800	172	
Cu III	1374.033	2		Kr III	1377.83	40	
Ni II	1374.075	150	9	Ni II	1377.912	7	
Zn III	1374.130	1		Zn III	1377.915	50	
V II	1374.279	10		P I	1377.93	60	
Cu III?	1374.298	2		Mn II	1377.94	15	14
Fe II	1374.41	P	103	Se I	1377.98	200	11
Ni III	1374.491	5		V III	1377.99	100	
Cu IV	1374.564	136		Fe II	1377.99	2	
Zn III	1374.638	60		Cu IV	1378.109	44	
Cu IV	1374.655	113		B II	1378.18	1	
Ni III	1374.660	10		Co III	1378.208	1	
Na II	1374.688	90		Cu III	1378.238	0	
P I	1374.73	6		Cu IV	1378.488	210	
Cu III	1374.758	2		Ni II	1378.578	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca III	1378.584	250		Mg IV	1382.578	300	
B I	1378.645	10	-A	Ni II	1382.695	2	
Co III	1378.665	5		Fe II	1382.71	0	
Mg III	1378.700	40		Ar II	1382.770	100	
B I	1378.868	20	-A	Fe III	1382.857	70	
Mg III	1378.891	2		Mn II	1383.05	4	14
B I	1378.932	40	-A	Cu IV	1383.130	209	
As I	1379.0	4		Cr IV	1383.24	10	
B I	1379.157	10	-A	Cu IV	1383.350	20	
Zn III	1379.161	60		Cu IV	1383.520	11	
Zn I	1379.337			Fe II	1383.578	20	
Ar II	1379.378	100		Zn III	1383.700	60	
Cu III	1379.379	0		Cr III	1383.79	250	35
P I	1379.40	75		Zn III	1383.920	1	
Fe II	1379.466	40		Ni II	1383.966	0	
Se I?	1379.50	10		Co III	1383.971	10	
Cl I	1379.5278	900	1	Cu IV	1384.053	165	
Ni II	1379.586	50		Al III	1384.132	800	
Fe II	1379.61	0		Co III	1384.187	25	
Cu IV	1379.640	169		Cu III?	1384.276	1	
Al III	1379.670	600		Cu III	1384.324	3	
Cu III?	1379.775	1		Ni II	1384.327	12	
P III	1379.87	500	7	Zn IV	1384.341	40	
Ar II	1379.884	300		Fe V	1384.37	100	
Ti III	1379.960	25		Cr III	1384.44	10	35
Ni II	1379.980	12		Mg IV	1384.463	900	
Cu IV	1380.020	170		V III	1384.49	75	
Fe V	1380.18	200		Br I	1384.598	120	
Mn II	1380.32	1		Se I	1384.63	40	
Ge II	1380.425	100h	10	Fe V	1384.75	100	
P III	1380.46	1000	7	Na II	1384.794	10	
Zn III	1380.554	12		Cu III?	1384.840	3	
Ar II	1380.728	100		Cu III	1384.929	2	
Co III	1380.775	2		S I	1385.041	1	
Ni II	1380.793	20		Cr III?	1385.07	10	
Cu IV	1380.818	227		P V	1385.11	20	
Zn III	1380.828	50		Ni II	1385.216	6	
Se II	1380.96	100		Fe V	1385.32	200	
Zn III	1380.986	60		V III	1385.34	15	
P III	1381.11	1000	7	Cu III	1385.380	0	
Na II	1381.236	30		Ca III	1385.426	550	
Fe II	1381.250	200h	152	Mn II	1385.43	4	14
Ni II	1381.295	200	8	Zn IV	1385.473	4	
Zn III	1381.314	40		S I	1385.5100	550	7
Ni II	1381.425	6		Se I	1385.54	160	
P I	1381.47	75		Mg IV	1385.772	500	
Ne II	1381.509	40		Mn II	1385.89	10	14
S I	1381.5521	650	7	Zn IV	1385.908	6	
P III	1381.63	800	7	Cu III	1385.921	2	
P I	1381.65	45		Ne II	1385.937	30	
Cr III	1381.67	30		Ni II	1386.063	1	
Ni II	1381.694	4		Mg IV	1386.19	1	
As IV	1381.8	300		Cu IV	1386.248	31	
Ne II	1381.894	10		Cu IV	1386.289	34	
Zn IV	1382.035	15		Fe V	1386.43	50	
Ni III	1382.077	10		Fe II	1386.47	0	
Cu IV	1382.123	52		Mg III	1386.691	2	
Cr III	1382.19	100		Cu III	1386.714	0	
Ar II	1382.228	200		Mn III	1386.833	0	
Mn II	1382.30	10	14	Zn IV	1387.046	50	
Ni IV	1382.448	380		Zn III	1387.215	50b	
V III	1382.45	100		Zn IV	1387.215	50b	
Cu IV	1382.545	230		Fe II	1387.22	4	
Se I	1382.56	60		N III	1387.31	200	
Cu III?	1382.561	3		V III	1387.46	15	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Zn III	1387.440	50		Cr III	1391.78	10	
Ne II	1387.515	80		Zn III	1391.790	40	
Mg IV	1387.527	800		Ne II	1391.854	70	
Ne II	1387.665	20		Se I	1392.13	100	
Zn IV	1387.695	50		Cu IV	1392.133	350	
Ni II	1387.745	10		Fe II	1392.14	3	
Mn II	1387.75	6	14	Zn III	1392.170	30	
Ni II	1387.851	5		Ge II	1392.265	100h	10
Fe II	1387.87	0		Ne II	1392.316	10	
Ni III	1387.870	3		Ni III	1392.377	30	
Zn III	1387.925	3		Cr III	1392.40	100	
Si III	1387.948	25	37	Cu IV	1392.424	147	
Si III	1387.979	10	37	S I	1392.5878	650	7
Si III	1387.994	8	37	Se II	1392.81	50	
Si III	1388.011	50	37	Fe II	1392.82	4	
Si III	1388.052	8	37	Cr III	1392.83	10	
Si III	1388.098	1	37	Na II	1392.940	15	
Cr III	1388.13	40		Cr III	1393.00	10h	
Fe V	1388.17	500		Se I	1393.0	80	
Mn II	1388.21	2	14	Zn IV	1393.019	50	
Cr III	1388.24	20		Cu II	1393.1275	10	147
Zn IV	1388.258	50		Cr III	1393.22	10	
Cu III	1388.276	0		Ni II	1393.330	100	
S I	1388.4347	950	7	Mg III	1393.391	350	
Cr IV	1388.49	20		Zn III	1393.460	50	
Ne II	1388.491	50		Fe II	1393.49	1	
Ni III	1388.629	5		Si IV	1393.755	1000	1
Al IV	1388.77	100		Ni II	1393.867	12	
Ni I	1388.796	1		Cr III	1393.98	10	
Cu IV	1388.827	246		Fe III	1394.024	70	
Mn II	1388.87	3	14	Mn III	1394.051	10	
Fe V	1389.05	100		Cr III	1394.33	100	
Co III	1389.079	5		V III	1394.46	5	
Ni III	1389.149	1		Zn IV	1394.509	50	
S I	1389.1538	450	7	Cr III	1394.58	70	
Mg III	1389.504	4		As II	1394.64	800	
N V	1389.514	50	43	Fe V	1394.77	300	
Cu III	1389.528	3		Zn III	1394.911	60	
Cr III	1389.55	70		V IV	1395.001	60	
Zn III	1389.604	60		Cu IV	1395.038	51	
Cl I	1389.6928	1000	1	Fe III	1395.213	200	
Cr III	1389.73	150		Cu IV	1395.251	206	
Ni III	1389.735	20		Fe III	1395.382	20	
V III	1389.79	200	8	Se I	1395.43	200	8
N V	1389.822	40	43	V III	1395.44	0	
Cl I	1389.9569	900	1	Ni III	1395.459	10	
Fe V	1389.97	50		Ga IV	1395.5	200	
Cu III?	1390.306	5		Cu III	1395.578	0	
Zn II	1390.372	40		Mg III	1395.642	4	
As I	1390.4	4		Zn III	1395.652	60	
Cu IV	1390.433	154		Fe III	1395.750	150	
S III	1390.67	50		Cr IV	1395.83	30h	
As IV	1390.7	20		Se I	1395.88	200	10
Cr III	1390.77	40		Ni IV	1395.985	480	
Se I	1390.99	120		S I	1396.1122	1000	7
V IV	1391.105	20		Cu IV	1396.175	10	
Zn III	1391.216	60b		Co III	1396.210	1	
Zn IV	1391.216	60b		Ar II	1396.231	100	
Cr III	1391.26	20	35	C III	1396.26	10	
Se I	1391.27	80		Ca III	1396.417	0	
Mg III	1391.271	200		Cr III	1396.42	100	
Cr III	1391.61	150	35	Cl I	1396.5267	600	1
Cu III?	1391.667	1		Cr III	1396.63	30	
Ne II	1391.704	60		Ni II	1396.695	10	
Ni II	1391.761	2		Ni II	1396.790	14	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1396.96	30h		Mn II	1400.66	2	
Cu IV	1397.110	65		Cr III	1400.72	10	
Mn II	1397.17	3		Ne II	1400.809	40	
O IV	1397.20	10		Ne II	1400.866	20	
Mn II	1397.39	6		Kr III	1400.90	20	
Cr III	1397.40	30		Mn III	1400.955	40	
Ni II	1397.480	2		Se II	1401.01	50	
Se I	1397.5	40		O IV	1401.156	60	
Fe II	1397.572	10	350	Cl II	1401.16	10	
V III	1397.62	60	8	Ni III	1401.214	15	
Ca III	1397.687	550		Ge II	1401.235	200h	10
Cr III	1397.69	10		Cu IV	1401.273	127	
Ni II	1397.858	2		Cu III	1401.376	1	
Cr III	1397.90	30		V III	1401.38	10	
Ni II	1398.009	3		S I	1401.5136	100	6
Cr III	1398.12	50		Cr III	1401.55	100h	
S IV	1398.13	P		Cu III?	1401.602	3	
Na II	1398.143	12		Cu III	1401.655	3	
Fe V	1398.15	300		Zn III	1401.762	60	
F III	1398.190	10		Fe II	1401.772	4	
Ni IV	1398.195	780		F III	1401.794	3	
Fe II	1398.38	1		Cr IV	1401.81	30	
Cu III	1398.397	3		Se I	1401.92	80	
V III	1398.47	75	8	Cr III	1402.07	30	
Ni II	1398.612	40		Zn IV	1402.097	20	
Cu IV	1398.620	74		As II	1402.114	10	
Cu II	1398.6419	10	128	Cu III?	1402.250	3	
Ni II	1398.758	16		Ni II	1402.379	20	
Mg IV	1398.850	30		Co III	1402.415	5	
Ni II	1399.026	80	8	Cu III	1402.435	2	
Cu IV	1399.036	85		Fe V	1402.45	600	
Cr III	1399.05	100		Zn IV	1402.500	35	
Na II	1399.070	30		Ga IV	1402.5	100	
Mn II	1399.15	2		Cr III	1402.62	40	
Cu III	1399.190	3		Se I?	1402.63	20	
Mn II	1399.24	3		Si IV	1402.770	800	1
Cu II	1399.3527	3		Cu II	1402.7770	15	186
Ni II	1399.361	12		Mg III	1402.82		
Mn II	1399.39	4		Cu III	1402.917	0	
Cr III	1399.42	10		Cr III	1402.99	10	
F III	1399.491	6		Ni III	1403.113	15	
Cr IV	1399.50	10		Ne II	1403.135	50	
Ne II	1399.532	80		F III	1403.153	1	
Zn III	1399.599	2		Cu III?	1403.181	5	
Si III	1399.615	P	73	Ne II	1403.202	20	
Cu IV	1399.643	201		Fe II	1403.246	1	
O IV	1399.774	25		Cu IV	1403.403	218	
F III	1399.839	60		Cr III	1403.42	70	
Na II	1399.860	12		V IV	1403.618	8	
Ne II	1399.956	20		Ne II	1403.679	80	
Cr III	1400.02	5		Co III	1403.755	3	
Zn IV	1400.111	50		Cu III	1403.763	0	
Fe V	1400.30	400		Si II	1403.783	5h	13.03
As II	1400.306	800		Cr III	1403.92	30	
Cr III	1400.34	150	35	Zn IV	1403.954	40	
Cu IV	1400.341	171		Co III	1404.009	5	
Zn III	1400.344	8		Zn I	1404.119	20	
V IV	1400.416	5		Si II	1404.170	1h	13.03
Cu IV	1400.527	14		Cu IV	1404.247	12	
Cu III?	1400.539	1		As II	1404.323	5	
Mn II	1400.54	2		Se I	1404.45	160	8
Mn II	1400.57	3		Si II	1404.478	6h	13.03
F II	1400.611	300		Cr III	1404.50	10	
Cr III	1400.62	10		Na II	1404.675	90	
Ni II	1400.644	30		Mg IV	1404.68	300	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Al IV	1404.72	100d		Cu II	1408.8124	2	
S IV	1404.77	70		Ni III	1409.000	15	
O IV	1404.812	15		Zn III	1409.050	30	
Zn III	1404.853	3		Si II	1409.073	10h	13.02
Co III	1405.032	3		Cr III	1409.10	10	
Cu III?	1405.115	1		Fe V	1409.19	500	
V III	1405.14	5		Cu III	1409.248	0	
Mg III	1405.170	80		Fe II	1409.277	1	
Mn III	1405.244	40		S I	1409.3369	125	6
Ni III	1405.279	10		Co III	1409.340	25	
Cr III	1405.37	30		Mg IV	1409.361	1000	
Se I	1405.37	200	9	Zn IV	1409.370	60	
Ne II	1405.373	80		Mn II	1409.51	25	
Ga IV	1405.4	20		Fe V	1409.51	700	
Ni III	1405.421	10		Al IV	1409.52	10	
Co III	1405.451	0		Ni II	1409.612	15	
Cu IV	1405.493	196		Mn II	1409.69	5	
Fe II	1405.604	2		Ne II	1409.747	60	
Cu IV	1405.659	164		Cr III	1409.81	20	
Cr III	1405.72	20		Ni IV	1409.846	640	
V III	1405.74	5		Zn III	1409.855	50	
Fe II	1405.797	1		Si II	1409.90	2h	13.02
S IV	1406.00	36		Ni III	1409.974	5	
Ge II	1406.105	20	10	Cu II	1410.002	1	
Cu IV	1406.194	10		V IV	1410.018	8	
Ni III	1406.250	50		Cr III	1410.03	20	
Ge II	1406.269	20h	10	F III	1410.039	20	
Cr III	1406.31	40		Ni III	1410.126	10	
Zn III	1406.326	60		Si II	1410.219	20h	13.02
Se I	1406.37	200	9	Ni II	1410.219	4	
V III	1406.52	50		Zn IV	1410.310	25	
Se I	1406.60	200	9	Cu IV	1410.336	26	
Cu IV	1406.733	11		Ni III	1410.344	15	
Fe V	1406.78	700		Cr IV	1410.37	20	
Cr III	1406.90	100		Na II	1410.374	12	
Mn III	1406.957	0		Zn	1410.410	60	
Zn III	1407.039	40		Zn II	1410.443	100	
F II	1407.135	200		Ni III	1410.446	3	
Cu III	1407.139	3		Cu II	1410.570	2	
Cu II	1407.1689	15	88	Cu IV	1410.582	368	
Zn II	1407.189	2		F II	1410.618	100	
Cu III	1407.196	2		Ni III	1410.642	5	
Cr III	1407.22	10		Cr III	1410.82	20	
Zn II?	1407.259	7		Mn II	1410.913	25h	78
As I	1407.34	2		Zn IV	1411.015	60	
O IV	1407.386	25		Ni II	1411.071	100	
Fe II	1407.46	0		Cu IV	1411.264	16	
Cu IV	1407.605	253		Mn II	1411.28	4	
Zn III	1407.619	40		Zn III	1411.287	40	
Mg III	1407.880	40		Ne II	1411.306	10	
Cr III	1407.89	40		P I	1411.31	24	
Cu IV	1408.016	62		Ni IV	1411.461	78e	
Fe V	1408.19	100		Fe II	1411.47	1	
Ni IV	1408.236	10		Cr III	1411.53	10	
Cu III	1408.310	0		Na II	1411.536	7	
Mn III	1408.350	30		Mn II	1411.55	4	
Fe II	1408.478	80		Cu IV	1411.558	244	
Cu III	1408.536	0		Zr III	1411.647	60	
V IV	1408.639	8		P I	1411.75	2	
Zn III	1408.687	70		N I	1411.9318	150	10
Cr III	1408.71	50		N I	1411.939	30	10
Cu IV	1408.770	162		N I	1411.9494	300	10
Ni II	1408.796	10		Co III	1412.012	3	
Co III	1408.808	3		Al IV	1412.24	10	
Zn I	1408.808			Cr IV	1412.24	30	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni III	1412.304	50		Fe II	1416.73	0	
Cu III	1412.553	3		Se I	1416.84	160	11
Cr III	1412.67	30		S IV	1416.94	10	
V IV	1412.686	20		Ni III	1416.956	75	
Cu III	1412.724	3		Si II	1416.972	10h - A	18.06
Cu III	1412.794	3		Ni II	1417.007	10	
Zn	1412.818	12		Cu III	1417.060	1	
Fe II	1412.834	70	47	Cu III	1417.124	1	
Ni II	1412.868	30		Cr III	1417.13	70	
S I	1412.8726	100	6	Si III	1417.237	260	9
Co III	1412.974	5		Ni III	1417.249	2	
Zn IV	1412.996	10		Ni III	1417.387	2	
Cu IV	1413.066	247		Cu III	1417.538	5	
Zn III	1413.168	2		Ni II	1417.553	1	
Ni III	1413.211	5		Al IV	1417.58	10	
Cr III	1413.32	10		O V	1417.653	40	
Mn III	1413.387	0		Cu IV	1417.654	172	
Cl IV	1413.39	100		Cr III	1417.67	10	
Cu IV	1413.564	10		Zn III	1417.682	5	
Ni II	1413.679	10		Ni II	1417.699	10	
Fe II	1413.699	70		V III	1417.71	50	
Cr III	1413.77	40		Fe II	1417.727	30	
Zn IV	1413.867	50		Fe II	1417.744	400	143
Co III	1413.884	5		Si II	1417.781	5 - A	18.06
Kr II	1413.894	20		Ni III	1417.841	10	
Mg IV	1413.895	10		Zn III	1417.868	40	
Ne II	1413.956	70		O V	1417.908	80	
Cu III?	1414.086	1		Mn II	1417.95	10	
Mn II	1414.18	4	88	Si II	1418.110	0 - A	18.06
Se II	1414.25	200		Mn II	1418.13	18	
Ni II	1414.299	15		Zn III	1418.152	0	
S I	1414.365	2		Ni III	1418.292	5	
Ni III	1414.389	20		Ne II	1418.375	90	
Mn II	1414.40	30	78	O V	1418.393	120	
V IV	1414.409	50		Mg IV	1418.393	30	
Cu III	1414.431	2		Cu II	1418.4265	25	86
Ga II	1414.44	1090	2	Mn II	1418.48	15	88
Ni II	1414.444	1		Zn III	1418.482	1	
Cu III	1414.553	4		Ni IV	1418.501	150	
Mn IV	1414.596	10		V IV	1418.533	30	
Cr III	1414.62	50		Na II	1418.579	20	
Mn II	1414.73	6		Mn II	1418.63	12	88
Cr III	1414.79	10		Zn IV	1418.667	40	
V IV	1414.842	20		Ne II	1418.687	20	
Fe II	1414.89	1		Ne II	1418.745	80	
Cu II	1414.8980	10	87	Cu III	1418.811	3	
Ni III	1414.916	15		Fe II	1418.855	10	
Mn II	1415.15	30		V IV	1418.921	10	
Cr III	1415.25	50		O V	1419.009	80	
Cu IV	1415.261	197		Cr III	1419.25	70	
Mn II	1415.43	6		Fe II	1419.31	0	
Ni III	1415.467	3		Ni III	1419.382	10	
Cu III	1415.478	0		Zn II	1419.416	3	
Ne II	1415.715	70		F II	1419.485	10	
Ni II	1415.728	20		Zn IV	1419.572	40	
Mn II	1415.75	35		V IV	1419.580	80	
Fe II	1415.73	1		Ni IV	1419.583	470	
Cr III	1415.81	10		Mn II	1419.61	40	78
Ni III	1415.909	5		F III	1419.740	1	
Zn III	1416.048	40		Cu II	1419.7455	2	
Ni II	1416.060	12		Cu IV	1419.788	53	
Cu IV	1416.167	29		As II	1419.855	0	
Cr III	1416.33	50		Zn II	1419.982	200	
Fe II	1416.62	0		Cu IV	1420.014	262	
Ni II	1416.660	0		Ti III	1420.036	300	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca III	1420.067	200		Ti III	1424.340	300	
P I	1420.08	30		V IV	1424.377	0	
Na II	1420.216	12		Fe II	1424.31	0	
Mn II	1420.24	8	93	Mn II?	1424.49	5	
Ge II	1420.385	200h	10	Ni III	1424.511	100	
Fe V	1420.39	300		Cr IV	1424.62	100	
Ti III	1420.440	280		F III	1424.64	3	
Ni III	1420.448	75		Fe II	1424.716	70	47
Cu IV	1420.485	175		F II	1424.737	1	
Zn III	1420.509	10		F III	1424.74	1	
As II	1420.624	0		Si III	1424.775	40	62
Se I	1420.64	160		Ni II	1424.890	3	
Ni II	1420.674	5		V IV	1424.916	10	
Cu IV	1420.805	77		Al IV	1425.00	10	
Cr III	1420.81	100		Zn III	1425.002	25	
Ni II	1420.843	18		Zn IV	1425.002	25b	
Li II	1420.891	60		Ni II	1425.025	10	
Fe II	1420.911	30		Mn II	1425.03	3	
Zn III	1420.920	60		S I	1425.0301	300	5
Cu IV	1421.022	246		Mn III	1425.05	2h	22
Ni III	1421.082	10		Cu III	1425.079	1	
Cr III	1421.20	50h		Li I	1425.11	-A	
Ni IV	1421.225	620		S I	1425.1882	90	5
Cu IV	1421.364	12		Zn III	1425.210	50	
Cu II	1421.3737	5		Zn IV	1425.210	50b	
B III	1421.41	1		S I	1425.2190	65	5
Zn III	1421.494	50		Cu III	1425.282	0	
Mg III	1421.538	20		P I	1425.29	30	
Ti III	1421.631	280		Cr III	1425.30	10	
Mn II	1421.71	5	93	Co III	1425.329	0	
Cu II	1421.7589	25	85	Mn II	1425.40	12	
Ti III	1421.767	250		Cu IV	1425.445	281	
Mn II	1421.77	2		Na II	1425.499	7	
Cr III	1421.80	10		Mn II	1425.544	20	
Mn II	1421.87	3		Ni II	1425.579	6	
Na II	1421.889	7		Ni II	1425.604	3	
Ni II	1421.913	1		Co III	1425.650	2	
Cl IV	1421.97	100		Zn	1425.709	10	
Mn IV	1422.038	10		Ni III	1425.737	5	
Mg III	1422.118	7		Ni IV	1425.802	100	
Al	1422.17	10		Mn II	1425.93	12	87
Mn II	1422.36	3		Na II	1426.048	7	
Ti III	1422.405	65c		Be I	1426.117	125	
Mn II	1422.42	2		Mn II	1426.15	1	87
Cr III	1422.47	40		Zn III	1426.150	25	
Kr II	1422.512	40		C III	1426.22	10	12.05
Fe II	1422.53	9		Mn II	1426.32	10	87
Cr III	1422.58	20		Ni IV	1426.362	510	
Zn III	1422.976	50		Mn II	1426.43	3	87
Na II	1422.996	12		C III	1426.45	400	11.52
Cr IV	1423.16	100		Cr IV	1426.58	10	
Ni II	1423.212	16		Zn III	1426.611	60	
V IV	1423.420	10		Cu IV	1426.642	251	
Mn II	1423.48	2		Se II	1426.65	500	
Cu III?	1423.504	5		V IV	1426.654	100	
Mn II	1423.55	4		C III	1426.80	100	12.05
Kr III	1423.55	20		Cu IV	1426.841	268	
Ne II	1423.564	80		Cl IV	1426.89	100	
V IV	1423.719	30		Cr III	1427.00	150	
Ni III	1423.722	10		Cu IV	1427.002	266	
Ni II	1423.786	11		Ni III	1427.087	5	
F III	1423.831	10		Cr III	1427.20	10	
Li III	1423.88	P		Mn III	1427.238	6	22
Cu III	1424.020	3		Na III	1427.27	10	
Fe II	1424.047	50	47	Co III	1427.308	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni IV	1427.453	400		Fe V	1430.61	800	
Cu II	1427.5912	10	86	P I	1430.73	30	
Ni III	1427.639	20		Mn II	1430.77	10	
Cr IV	1427.71	10		Fe II	1430.780	200	
Zn IV	1427.759	10		Mn III	1430.784	20	22
Mg IV	1427.760	60		Fe II	1430.895	120	
P I	1427.77	1		Cu III	1430.969	2	
Ni II	1427.782	10		Zn II	1430.992	150	
Cu II	1427.8290	20	126	Ni IV	1431.013	370	
C III	1427.85	300	11.52	Na II	1431.015	7	
Se I	1427.87	120		Mn II	1431.046	20	
Ge II	1427.877	200h	10	Mg III	1431.136	100	
Zn IV	1427.879	40		Na II	1431.228	15	
Ni III	1427.914	3		Ni II	1431.270	8	
P I	1428.05	1		Co III	1431.323	15	
Cu III	1428.081	3		Mn II	1431.36	5	
C III	1428.17	200	11.75	Ni II	1431.492	25	
Mn II	1428.19	0		P I	1431.50	1	
Co III	1428.331	1		Mn II	1431.52	2	
Cu II	1428.3580	25	129	Zn IV	1431.592	8	
Cr III	1428.46	10		C I	1431.597	100 -A	65
C III	1428.50	200	11.52	Cu III	1431.671	5	
Ne II	1428.579	90		Co III	1431.800	5	
C III	1428.66	10	11.75	As II	1431.817	0	
Fe II	1428.69	0		Cu III	1431.901	2	
Cu IV	1428.748	54		Cu IV	1431.925	107	
Mn II	1428.85	2		Al IV	1431.93	100	
Ni III	1428.870	200		Cu IV	1431.963	153	
C III	1428.95	100	11.75	Mn V	1431.98	12	
Co II	1429.002	20		Co III	1432.065	5	
Mn II	1429.02	2		C I	1432.105	75 -A	65
Cu IV	1429.034	177		Zn III	1432.143	60	
Cr III	1429.04	50		Mn II	1432.13	1	
C III	1429.10	10	11.75	Cu III	1432.275	2	
V IV	1429.114	10		Ni IV	1432.453	210	
Cr III	1429.17	50		Ca II	1432.503	120	7
Mg IV	1429.189	20		C I	1432.530	50 -A	65
Cu III	1429.201	3		Zn III	1432.716	2	
Co III	1429.236	0		Mn II	1432.78	40	86
P III	1429.24	100		Mg IV	1432.79i	50	
Co III	1429.324	0		Fe II	1432.87	2	
Cr IV	1429.41	10		Mn II	1432.95	5	
Cu IV	1429.504	247		Cu IV	1432.964	11	
Cu IV	1429.552	256		As II	1433.053	0	
Al	1429.57	10		Mn II	1433.08	4	86
Mn II	1429.60	1		Cr III	1433.26	50	
Mn II	1429.66	2		Mn II	1433.27	4	
P I	1429.77	12		V IV	1433.276	1	
Na II	1429.857	10		S I	1433.2800	225	5
Cr III	1430.02	40		S I	1433.3105	100	5
Zn III	1430.107	50		Cu IV	1433.369	162	
Fe II	1430.12	0		Ge II	1433.48	5h	
P I	1430.13	150d		Mn II	1433.50	15	77
Cr III	1430.15	30		Mn II	1433.63	6	
Co III	1430.177	15		Si III	1433.690	120	66
Ni IV	1430.186	430		Ni II	1433.745	1	
Cu II	1430.2428	40	84	Ca II	1433.749	200	7
Zn II	1430.285	15		Cu IV	1433.776	35	
Mn II	1430.37	0		Cu II	1433.8404	10	87
Cu III	1430.373	2		Ti III	1433.85	40	
P III	1430.41	200		Zn III	1433.853	50	
Cr III	1430.42	50		Zn III	1434.027	25	
Ni IV	1430.439	540		V IV	1434.092	15	
Co III	1430.530	15		Ni III	1434.133	30	
Se I	1430.58	120		Cr III	1434.19	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu IV	1434.197	54		Mg IV	1437.636	1000	
Zn	1434.219	10		Cu III	1437.645	?	
Co III	1434.259	100		Mn II	1437.70	3	
Mn II	1434.26	10	86	Cr III	1437.76	20	
N. III	1434.306	200		Cu III	1437.762	1	
Ni II	1434.373	12		Zn III	1437.767	1	
Si II	1434.400	1h	13.01	Mg IV	1437.844	10	
Mn II	1434.44	30	86	Cr III	1438.03	10	
Ni II	1434.493	14		Cu IV	1438.093	3:2	
Si II	1434.542	2h	13.01	Fe II	1438.13	1	
Ni II	1434.546	12		Ni III	1438.152	2	
Co III	1434.642	0		Si III	1438.228	40	66
Ni II	1434.688	1		Mg IV	1438.267	100	
Cu II	1434.7699	15	5	N IV	1438.37	150	18.96
As I	1434.77	3		Fe II	1438.44	1	
Mn II	1434.79	1h	86	Zn IV	1438.558	15	
Ni II	1434.837	1		Si II	1438.576	2h	13
V IV	1434.842	15		Si III	1438.702	40	66
Mg IV	1434.892	150		Mn II	1438.71	1	
Cu II	1434.9037	125	125	Co II	1438.710	10	
Fe II	1434.994	40		Zn III	1438.808	10	
Zn III	1435.037	2		Cu IV	1438.846	282	
Kr II	1435.085	120		Cr III	1438.90	5	
Se I	1435.28	240	8	Si II	1438.931	4h	13
Cu II	1435.3155	10	128	Cu III?	1438.983	1	
Ni II	1435.348	5		Zn II	1439.091	500	
Co III	1435.426	50		Ni II	1439.094	8	
Mg III	1435.550	40		Mn II	1439.16	15	86
Ni III	1435.609	10		Cu III?	1439.275	1	
Kr II	1435.676	40		Ni II	1439.283	1	
Mn II	1435.68	1h	86	Al III	1439.311		
Se I	1435.75	240	10	Ni II	1439.352	8	
Na II	1435.776	10		Si III	1439.391	40	66
Si III	1435.776	160	61	Fe II	1439.42	2	
Ni IV	1435.792	190		Al III	1439.726		
Co III	1435.840	3		Mg III	1439.770	4	
Fe II	1435.85	0		Ni III	1439.809	20	
Mn II	1435.87	4	86	V IV	1439.854	1	
As IV	1435.9	200		As IV	1440.0	100	
Zn	1435.914	20		Zn III	1440.159	12	
Zn III	1436.075	40		P I	1440.24	15	
Ne II	1436.086	90		Mn IV	1440.324	70	
Cu IV	1436.086	322		Cr XI	1440.4	f	
Ni II	1436.165	50		Cu III	1440.446	2	
Si III	1436.166	140	52	Fe II	1440.52	0	
Na III	1436.21	240		Cu IV	1440.576	16	
Zn III	1436.219	15		Fe V	1440.59	700	
Cu II	1436.2359	25	125	Mn II	1440.63	8	86
Co III	1436.236	10		Mn II	1440.81	0	
Cu IV	1436.267	83		Si III	1440.908 P		66
Cu IV	1436.375	117		Cl IV	1440.95	10	
Zn IV	1436.577	40		Mn II	1440.96	1	86
Cr III	1436.65	20		Zn III	1441.017	15	
F III	1436.687			Cr III	1441.06	60	
Si III	1436.724	80	66	Cu III?	1441.102	1	
Cu III?	1436.846	1		Fe II	1441.11	2	
S I	1436.9675	125	5	Ne II	1441.188	40	
Cu III	1436.994	8		Mn II	1441.37	1	
Mn II	1437.13	15	77	Zn III	1441.474	50	
Cr III	1437.17	70		Cu III?	1441.635	2	
Zn III	1437.296	12		Si III	1441.732	100	3.05
Mn II	1437.32	1	86	Al IV	1441.81	50d	
Mn II	1437.42	4		Se I	1441.81	100	
Mg IV	1437.53	500		Cr III	1441.90	50	
Cu III?	1437.554	1		Fe II	1442.10	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu II	1442.1386	5	33	Cu IV	1446.315	276	
Zn III	1442.192	3		P I	1446.33	3	
Cu IV	1442.227	130		Mn III	1446.467	5	
Ni III	1442.235	5		Mn V	1446.49	60	
Mn II	1442.28	10		Cr III	1446.52	150	
Cu IV	1442.410	295		Ni II	1446.589	20	
Fe II	1442.42	2		Cu IV	1446.695	23	
Zn III	1442.512	60		Cr III	1446.70	80	
Cu IV	1442.590	48		Mn IV	1446.740	60	
Mn II	1442.594	25	77	Ni III	1446.748	15	35
Ni IV	1442.675	170		Se I	1446.78	200	9
As I	1442.69	5		Cu IV	1446.836	19	
Fe II	1442.746	20		Cu II	1446.9006	1	
P I	1442.76	15		Mn II	1446.908	20	
Cr III	1442.78	10		Zn III	1446.915	40	
Mn IV	1442.807	80		Se I	1446.98	200	9
V III	1442.85	5		Cr IV	1447.03	10	
Na II	1442.907	30		V IV	1447.120	0	
Zn II	1442.962	5	-A	Si III	1447.196	120	3.05
Fe II	1443.01	1		Mg III	1447.260	30	
Cu IV	1443.042	268		Cr III	1447.31	20	
Cr III	1443.08	20		Mg IV	1447.424	300	
Ni II	1443.080	13		Al IV	1447.47	1000	
Cu IV	1443.163	203		Mn II	1447.49	15	
Mn II	1443.46	7		P I	1447.50	60	
Cu IV	1443.510	46		Cr III	1447.50	20	
Cu II	1443.5419	3	100	P III	1447.51	200	
Fe II	1443.73	1		Mn II	1447.86	10	
Mg III	1443.738	60		P V	1447.92	50	
Cu IV	1443.771	199		Co II	1448.037	70	
Cr III	1443.82	60		Mn II	1448.08	15	
Ni II	1443.838	10		Ni III	1448.175	30	
Mn II	1443.85	10		S I	1448.2290	125	12
Cu IV	1444.007	18		Mg IV	1448.243	30	
Mn II	1444.01	6		Fe II	1448.393	70	
Mn IV	1444.078	100		Mn II	1448.47	4	
Cu II	1444.1304	2		Mg IV	1448.476	30	
Mn II	1444.19	6		Cu II	1448.512	1	
Zn III	1444.216	10		V III	1448.58	10	
S I	1444.2907	30		As II	1448.593	500	
Cu IV	1444.330	210		Cu II	1448.6383	1	
Kr II	1444.343	120		Mn II	1448.714	15	
Ni IV	1444.420	440		Mn IV	1448.789	120	
Mn II	1444.58	3		Ni IV	1448.799	120	
Cu III	1444.692	0		Mn II	1448.83	12	
Cr III	1444.84	20		Fe V	1448.91	600	
Se I	1444.85	200	8	Cu II	1449.0580	20	125
Zn II	1445.042	700		Mn III	1449.07	10	
Ni II	1445.098	13		Cu IV	1449.071	11	
Ni III	1445.374	40		Ne II	1449.132	40	
Fe II	1445.39	0		Se I	1449.16	300	8
Co III	1445.427	1		V II	1449.262	5	
Mn II	1445.43	2		Ga II	1449.40	250	
Ni II	1445.460	14		Zn IV	1449.496	40	
Co II	1445.572	0		V IV	1449.681	20	
P I	1445.66	3		Al IV	1449.70	10	
Fe XI?	1445.89	40		Cu IV	1449.700	350	
Cu II	1445.9835	20	85	Mn II	1449.74	4	
P I	1446.01	12		Zn III	1449.832	40b	
Zn III	1446.086	50		Zn IV	1449.832	40b	
N IV	1446.114	250	18.85	Cr III	1449.89	20	
Ne II	1446.183	20		Br I	1449.903	30	2
Mg III	1446.254	40		Ni II	1450.005	14	
Cu IV	1446.255	20		Cu III	1450.165	2	
Cr III	1446.27	20		Cr III	1450.22	5	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1450.23	10		Ti III	1455.734	8	
Zn II	1450.234	5 -A		Co II	1455.884	70	
Cu II	1450.3035	40	98	Na II	1455.969	12	
Mn IV	1450.315	120		Fe V	1456.23	500	
Ti III	1450.358	25		Se I	1456.31	240	8
P I	1450.38	9		Mn II	1456.45	2	
Mn II	1450.46	12		Fe II	1456.47	1	
Mn XI	1450.5	f		Zn III	1456.707	60	
Cr III	1450.52	10		Zn II	1456.907	500	
Mg IV	1450.66	1		Ni II	1456.913	16	
Mn II	1450.71	15		F III	1457.145	3	
Zn II	1450.778	700		Cu II	1457.1759	10	99
Mn II	1450.82	4		Cr III	1457.22	30	
V IV	1451.042	56		Mg IV	1457.229	100	
Zn III	1451.147	50		Si III	1457.253	100	60
Cu III	1451.478	0		Mn II	1457.30	5	
Mg IV	1451.48	3		Ni II	1457.359	5	
V IV	1451.496	10		Zn II	1457.422	150	
Ni III	1451.504	200		Ni III	1457.430	10	
Ti IV	1451.75	600	3	F III	1457.441	1	
Ar II	1451.879	100		Mn IV	1457.560 P	80	
Cr III	1451.95	80		Zn I	1457.572	20	4
Mn II	1452.05	6		Ne III	1457.575	10	
Cr IV	1452.242	13		Mn II	1457.67	7	
Cu II	1452.2935	20	85	Ni III	1457.829	50	
Ni III	1452.532	20		Ni II	1457.863	4	
Ni II	1452.558	15		Al	1457.92	50d	
Cu II	1452.6956	0		Zn	1457.922	10	
P II	1452.89	300		Ge II	1457.96	2h	
Mn IV	1452.893	200		Cu II	1458.0016	15	100
Mn II	1452.99	3		Cu IV	1458.086	306	
V III	1453.00	5		Na III	1458.15	60	
P I	1453.01	45		Cr III	1458.17	10	
F IV	1453.14	1		Ni II	1458.170	4	
Ca III	1453.157	650		Mg III	1458.172	20	
Ni II	1453.359	15		Mn II	1458.18	3	
V II	1453.515	2		Ni III	1458.284	5	
Mn IV	1453.626	20		Se I	1458.29	160	9
Zn III	1453.700	1		Ni II	1458.342	4	
Ni III	1453.882	50		Cr III	1458.41	80	
V IV	1454.000	40		Zn II	1458.455	20 -A	
Cr III	1454.00	50		Ge II	1458.64	1	
Mn II	1454.03	6		F III	1458.802	6	
Mn II	1454.18	6		Mn III	1458.90	10	
Mg IV	1454.212	5		C I	1459.0317 st	300	38
Ni II	1454.292	2		Fe II	1459.311	300	193
Fe II	1454.308	20		Mg IV	1459.38	1	
Ne II	1454.390	5		Cu II	1459.4117	25	126
Mn II	1454.40	1		F III	1459.503	10	
Zn IV	1454.465	25		Mg IV	1459.540	300	
Cu IV	1454.650	207		Cu III	1459.568	0	
Fe V	1454.71	300		Ni II	1459.611	1	
Zn	1454.804	10		Mg IV	1459.617	400	
Ni II	1454.852	200	7	Ni II	1459.640	1	
Mn IV	1454.961	60		Ni II	1459.715	12	
Co II	1454.962	50		Mn II	1459.72	2h	
Mn II	1454.97	20		Ca III	1459.787	600	
Ti III	1455.194	1000	5	Ni II	1459.809	9	
Cu III	1455.200	2		Fe V	1459.85	500	
Cr III	1455.27	300		Ar II	1459.878	100	
Mn II	1455.33	5		Cu IV	1459.883	311	
Ar II	1455.484	100		Zn IV	1459.964	40	
Fe V	1455.59	500		Ni II	1460.078	6	
Zn IV	1455.630	30		Ar III	1460.08	200	
Cu II	1455.6624	3		Ni II	1460.136	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ar III	1460.25	100		Fe III	1465.309	200h	
Ni II	1460.312	1		Fe V	1465.37	300	
Ni II	1460.408	2		Zn IV	1465.386	20	
Zn II	1460.616	12	-A	Ca III	1465.477	300	
V III	1460.64	15		Ar III	1465.53	100	
Ne II	1460.716	30		Cu II	1465.5408	15	121
F III	1460.750	1		B I	1465.548	30	-A
Fe V	1460.86	200		Co III	1465.558	2	
Cu III	1460.915	5		Ni III	1465.606	10	36
Cr IV	1461.04	20		B I	1465.709	40	-A
Ni IV	1461.063	140		Ar III	1465.71	150	
Mn II	1461.48	5		Ge II	1465.73	i	
Cu II	1461.5539	15	84	Zn III	1465.744	60	
Ni III	1461.649	10		Fe III	1465.763	200h	
Ni II	1461.840	8		Fe III	1465.820	20h	
Ca III	1461.875	550		B I	1465.837	20	-A
As I	1461.92	3		Ge IV	1465.9	50	
Ge II	1461.970	5		Zn III	1465.952	15	
Se I	1461.99	120		Ni III	1466.027	5	
Cr III	1462.12	30h		Cu II	1466.0702	70	126
Na II	1462.160	10		Cr IV	1466.14	20	
Ni III	1462.239	5		Co II	1466.209	100	
Mn III	1462.243	60		Cu IV	1466.353	132	
Mn II	1462.27	3		Kr II	1466.460	20	
Mg III	1462.305	20		Fe III	1466.492	250h	
F III	1462.313	6		Cu II	1466.5240	4	99
Ge II	1462.388	10		Co III	1466.579	3	
Cu IV	1462.437	16		Mg IV	1466.655	100	
Ni II	1462.482	3		Zn	1466.682	30	
Fe V	1462.67	300		Zn II	1466.697	15	
Zn II	1462.743	150		Cu II	1466.7284	5	
Ne II	1462.744	40		Co III	1466.919	2	
F II	1462.842	1	-A	Cr III	1467.04	20	
Mn II	1462.87	5		Mg III	1467.188	12	
Ni II	1462.944	20		Ni II	1467.265	60	
Mn II	1463.02	8		Cu IV	1467.291	12	
Ni II	1463.113	14		Mn II	1467.31	1	
Ar II	1463.155	200		Ti IV	1467.35	600	3
Fe II	1463.198	6		Co III	1467.394	5h	
V III	1463.21	5		Fe XI	1467.4	f	
Zn IV	1463.283	30		C I	1467.402	300	36
Ca III	1463.335	750		Cu IV	1467.423	11	
C I	1463.3360 st	600	37	Mn II	1467.53	10	
Ga I?	1463.65	100		P I	1467.58	9	
Cu II	1463.7515	100	98	P IV	1467.59	P	40
F III	1463.808	3		Ni II	1467.637	10	
Cu II	1463.8381	25	100	Co III	1467.663	5	
Cr III	1463.87	10		Cr III	1467.68	50	
As I	1463.9	5		Ni II	1467.694	10	
Co III	1463.936	i		Fe III	1467.751	250h	
Kr II	1464.072	40		Ni II	1467.762	100	6
As I	1464.10	2		Ar III	1467.84	150	
Ar II	1464.176	100		Zn II	1467.867	4	-A
Zn III	1464.198	75		C I	1467.877	30	35.01
Ni II	1464.301	8		Ar III	1468.01	100	
Ni II	1464.369	10		Kr II	1468.021	20	
Mn II	1464.372	30		Mn II	1468.03	20	
Fe V	1464.73	600		Cr III	1468.05	50	
Co III	1464.773	1		Cu IV	1468.062	11	
Co III	1464.932	1		Zn III	1468.113	4	
Ni III	1464.989	5		Co II	1468.235	20	
Cr III?	1465.00	30		Ni II	1468.268	30	
Fe II	1465.043	400	193	Co II	1468.383	20	25
Co III	1465.101	1		C I	1468.410	100	25.01
Ar II	1465.153	100		Ni II	1468.465	25	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe III	1468.526	20h		S I	1472.503	4	12
Fe II	1468.605	4d		Ni II	1472.571	10	
Zn I	1468.845	3		Mn II	1472.62	3	
Mg IV	1468.882	20		Co III	1472.756	2	
Fe III	1468.986	150		Zn III	1472.769	2	
Co III	1468.992	5		Ni II	1472.835	5	
Ni II	1469.200	10		Ni II	1472.889	2	
Ti IV	1469.21	300	3	Co II	1472.898	100	
Cu III	1469.259	0		S I	1472.972	225	4
Fe II	1469.38	0		Mg IV	1472.984	30	
Cu III?	1469.460	1		As IV	1473.0	50	
Cr III	1469.55	50		S I	1473.019	120	4
Ni II	1469.601	3		P II	1473.129	10	
Fe II	1469.68	0		Ni II	1473.249	1	
Cu II	1469.6928	15	145	Co III	1473.305	1	
P I	1469.71	3		Cr III	1473.32	30	
Co II	1469.727	20		Mn II	1473.32	0	
Ni III	1469.836	3		Zn III	1473.394	75	
Fe III	1469.881	400h		Cu II	1473.5299	8	125
C I	1470.094	100	35	Cu IV	1473.640	10	
Zn II	1470.222	2 -A		P I	1473.65	6	
Ni II	1470.322	1		Ga II	1473.73	150	
Mn II	1470.33	0		F III	1473.820	3	
Ni II	1470.386	2		Cr III	1473.82	10	
Zn	1470.452	15		Fe II	1473.834	400	193
Cr III	1470.60	10		Ne II	1473.894	10	
Ni III	1470.642	2		Ni III	1473.939	5	
Ni II	1470.666	5		Cu II	1473.9785	25	83
N III	1470.68	10 -A		S I	1473.995	350	3
Cu II	1470.6974	150	98	Zn III	1474.132	15	
Mn II	1470.73	8		Mn II	1474.18	1	
Mg IV	1470.799	100		Zn III	1474.270	20	
Na I	1470.916	10		Si II	1474.304	1h	12.02
N III	1471.02	50 -A		Ni II	1474.312	1	
Mn II	1471.024	5		S I	1474.380	125	3
Fe III	1471.051	20		Ni III	1474.402	5	
Cl II	1471.06	200		Ar II	1474.537	100	
Co III	1471.140	1		Mn II	1474.54	10	
Mn II	1471.19	7		S I	1474.572	60	3
P III	1471.2	10		Ni II	1474.597	4	
Zn III	1471.224	30		Si II	1474.649	15h	12.02
Co III	1471.328	1		V III	1474.71	125	
Ni II	1471.466	10		V II	1474.876	0	
Co III	1471.575	0		Mg III	1474.898	4	
Mn II	1471.586	8		Ni II	1474.910	1	
Fe III	1471.638	70		Cu II	1474.9348	40	125
N III	1471.69	100 -A		Co II	1475.018	20	25
Si II	1471.775	2 -A	30	Cr IV	1475.10	10	
S I	1471.832	25	12	Mn II	1475.11	3	
Zn II	1471.862	50 -A		Si II	1475.188	5h	12.02
Co II	1471.879	20	25	Co III	1475.266	0	
Mn II	1471.93	2		Ni II	1475.270	3	
Ni II	1471.961	1		Ni III	1475.368	15	37
Co III	1472.019	10		Mn II	1475.46	6	
Fe II	1472.023	4		Zn III	1475.591	50	
Mn II	1472.08	2		Co III	1475.635	10	
Ne II	1472.121	20		Ni II	1475.645	1	
C I	1472.231	60	34.01	Ni III	1475.662	5	
Zn IV	1472.256	20		Fe II	1475.686	0	
As I	1472.32	4		Mn II	1475.72	5	
Cu II	1472.3950	15	1	Ni II	1475.734	3	
Cu IV	1472.421	40		F III	1475.787	3	
V III	1472.45	5		Ni II	1475.801	2	
Cr III	1472.45	20		Co II	1475.807	70	
As IV	1472.5	50		Cu II	1475.846	60	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ne II	1475.959	80		Mn II	1480.85	10	
Mg II	1475.9998 P	200		Mg II	1480.9797 P	200	
Mn V	1476.02	30		Co II	1480.953	50	
Cr III	1476.04	50		Mg IV	1481.060	8	
Mn II	1476.04	12	85	Ni II	1481.091	75	
F III	1476.043	1		Fe III	1481.169	150	
Ni II	1476.043	25		Zn IV	1481.232	30	
Fe II	1476.054	200	192	Cu III	1481.243	10	
Cu II	1476.0593	25		Al IV	1481.26	10	
P I	1476.11	9		Mn II	1481.35	5	
V II	1476.116	0		Mg IV	1481.509	400	
Co III	1476.366	3		Cu II	1481.5438	10	
Zn IV	1476.410	40		Ni II	1481.560	15	
Mn II	1476.64	12		Na II	1481.578	15	
Co II	1476.661	50		S I	1481.665	170	4
Mn IV	1475.740	0		Cr V	1481.69	300	
O III	1476.89	600		S I	1481.712	100	4
Si II	1476.928	1	12.01	Ni II	1481.744	15	
Mn II	1476.98	5	85	C I	1481.7635 st	450	34
Zn II	1477.016	400		Zn IV	1481.837	25	
Ni II	1477.063	1		Mg IV	1481.859	15	
Ni II	1477.227	4		Ni II	1481.883	12	
Co III	1477.260	1		Ni II	1481.898	4	
Ni II	1477.264	1		Co III	1481.905	50	
Mg III	1477.416	2		Ni II	1481.982	10	
Cr III	1477.49	10		Cr IV	1482.07	20	
Fe II	1477.50	0		Zn II	1482.139	30	A
Fe II	1477.55	0		Ni II	1482.240	100	
Mn II	1477.61	3		Cr IV	1482.36	20	
C III	1477.68	300	12.04	Ni II	1482.393	8	
Ni III	1477.801	10	38	Mn II	1482.40	0h	
Mn II	1477.83	5h		Mg III	1482.67		
Zn II	1477.938	5	A	Cu IV	1482.779	157	
Mg II	1478.0037 P	250		Cr V	1482.89	250	
C III	1478.05	200	12.04	Mg II	1482.8903 P	300	
Cr III	1478.08	20		S I	1483.039	280	3
Zn II	1478.216	300		Ni III	1483.044	10	
F III	1478.224	3		Mn V	1483.09	160	
Cu II	1478.2363	2		Cr III	1483.11	20	
Ni III	1478.252	10		S I	1483.233	125	3
Mg IV	1478.267	200		Mn II	1483.25	3	85
C III	1478.30	100	12.04	Zn III	1483.266	30	
Co III	1478.367	25		Ni II	1483.277	40	
Mn II	1478.59	25	85	Co III	1483.363	5	
Cr III	1478.64	20		Fe II	1483.38	0	
Mn II	1478.79	20	85	Kr III	1483.43	40	
Ni III	1478.854	10		Ni IV	1483.432	30h	
F III	1478.879	1		Cr III	1483.45	10	
Fe V	1479.29	400		Ga II	1483.48	150	
Co III	1479.393	2		Ne II	1483.502	60	
Ni II	1479.443	10		Na II	1483.597	15	
V III	1479.57	150		Ni II	1483.554	15	
V II	1479.720	5		Mn II	1483.685	10	
Mn II	1479.76	1	85	Cr III	1483.75	50	
Co III	1479.880	1		Co III	1483.800	10	
Cu IV	1479.940	56		Cu III	1483.831	8	
Cr III	1480.16	100		Ga II	1483.95	150	
Mn II	1480.16	2		Zn III	1483.979	8	
Ni II	1480.331	30		Cu III	1484.010	3	
Ca III	1480.425	450		V II	1484.135	1	
Fe II	1480.437	0		Ni II	1484.227	25	
V II	1480.487	10		Fe III	1484.241	20	
Ca III	1480.527	450		Co II	1484.259	20	25
As IV	1480.6	450		Ni III	1484.268	3	
Mg IV	1480.798	25		Cr III	1484.39	10	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1484.45	0	85	Cr III	1488.72	20	
Zn III	1484.484	5		Ni II	1488.730	16	
P IV	1484.51	240		Co III	1488.753	1	
Fe II	1484.546	70		Cu II	1488.831	10	
Co III	1484.565	0		Ni II	1488.845	5	
Ni II	1484.592	1		Ni II	1488.896	100	
Cr V	1484.67	150		Cr X	1488.9	f	
Na II	1484.677	15		Zn II	1488.926	120	
Cl II	1484.76	10		Ni II	1489.079	35	
Ca III	1484.869	800		P IV	1489.10	160	
Si II	1484.873	15	12	Cr III	1489.10	20	
Si II	1485.024	90h -A	15.04	Mn II	1489.13	12	
Cr IV	1485.04	150		Co III	1489.243	0	
Co III	1485.170	8		Zn III	1489.245	40	
Ni II	1485.185	10		Cr III	1489.35	20	
Si II	1485.224	30	12	Zn	1489.492	10	
Cu II	1485.3277	6	14i	V II	1489.620	10	
Ni II	1485.375	60		Co II	1489.659	10	
Mg IV	1485.446	80		Mn III	1489.669	10	
P II	1485.49	250		Zn III	1489.708	3	
Si II	1485.513	100h -A	15.04	Ni II	1489.729	c	
Cu II	1485.6102	2	97	Cr V	1489.75	500	
S I	1485.622	150	4	Cu IV	1489.774	32	
Cu II	1485.6778	6	82	P II	1489.834	10	
Na II	1485.987	25		Co III	1489.899	10	
Ni II	1485.987	2		Cr III	1489.93	40	
Cr III?	1486.02	10		Ni II	1490.262	7	
Zn II	1486.065	700		Mg IV	1490.451	350	
Mn II	1486.068	8		Mn V	1490.68	160	
V II	1486.153	1		V II	1490.837	4h	
Fe III	1486.265	450h	85	Kr II	1490.928	4g	
Ni II	1486.372	5		Zn III	1490.943	50	
Mn II	1486.40	1		Kr II	1491.104	200	
Co II	1486.492	70	25	Ni III	1491.111	1	
Mn III	1486.494	300		Ni II	1491.176	5	
N IV	1486.496	100	0.01	Co III	1491.273	5	
Cr III	1486.54	10		Mn V	1491.30	30	
Mn II	1486.55	12		Ni II	1491.308	4	
Mg III	1486.624	12		Ni III	1491.309	2	
Cu III	1486.659	15		P I	1491.36	150	
Mn II	1486.66	3	85	Fe II	1491.37	1	
Ni II	1486.668	7		Cr III	1491.50	20	
Mn V	1486.74	30		Mn IV	1491.579	0	
Al IV	1486.87	50d		Ni II	1491.583	4	
Zn	1486.884	25		Co II	1491.701	10	
Cu III	1486.904	5		Be I	1491.755	250	
F III	1486.913	3		Ni II	1491.76	6	
Cr III	1487.03	40		Ni II	1491.823	3	
S I	1487.150	200	3	Li I	1491.87	-A	
Ni II	1487.242	50		Ni II	1491.899	40	
Mg IV	1487.28	6		Ti III	1491.978	35	
Ni II	1487.438	5		Mg IV	1491.998	100	
Ni II	1487.455	6		Fe II	1492.04	0	
Cu III	1487.566	0		Cu IV	1492.044	220	
Zn III	1487.566	25		Cr III	1492.05	40	
P IV	1487.80	160		P III	1492.1	500	
Cr III	1487.86	10		Zn II	1492.121	30 -A	
Mn II	1487.86	50	85	Cu II	1492.1525	4	126
Co III	1487.962	1h		Ni IV	1492.162	100	
Zn	1487.996	10		Cr III	1492.23	40	
P I	1488.01	60		Co II	1492.263	20	25
Co III	1488.174	3		As I	1492.34	4	
Ni III	1488.424	3	37	Zn II	1492.369	2 -A	
Br I	1488.452	500	2	Co III	1492.528	3	
Cu II	1488.6372	900	82	Fe II	1492.56	2	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni III	1492.622	30		Zn III	1495.715	15	
N I	1492.6254	620	4	Kr II	1495.769	120	
Cu II	1492.6817	5	185	Mg IV	1495.993	60	
C I	1492.738	60	64.08	Zn II	1496.001	5	-A
N I	1492.8195	100	4	Na II	1496.011	40	
Mg IV	1492.82	3		Ni II	1496.308	10	
Cu II	1492.8343	40	126	Ni II	1496.409	2	
Li II	1492.931	60		P II	1496.44	5	
Li II	1492.973	100		Se I	1496.44	60	
Cr III	1492.98	50		Ni II	1496.463	1	
P I	1492.99	120		Cr III	1496.47	10	
Ni III	1492.990	30		Fe II	1496.523	40	
Ni II	1493.022	15		Ti III	1496.597	30	
Li II	1493.036	20		As II	1496.598	0	
F II	1493.091	450		Cu II	1496.6867	50	82
Mg III	1493.097	12		Mn II	1496.78	4	
Zn II	1493.133	300		Ca III	1496.884	600	
Zn IV	1493.146	40		Zn III	1497.327	10	
Co II	1493.152	10		Zn	1497.396	40	
F II	1493.235	300		Zn II	1497.410	80	-A
As II	1493.259	0		Mg IV	1497.422	20	
C I	1493.273	10	64.07	As II	1497.547	0	
F II	1493.311	200		Co II	1497.675	10	
Ni II	1493.315	2		Na II	1497.731	45	
P I	1493.34	45		Cu II	1497.966	1	
Cu II	1493.3665	26	161	Cr V	1498.02	700	
Sc III	1493.502	2		As II	1498.058	0	
Zn III	1493.506	30		V II	1498.114	6	
Co III	1493.595	2h		Co III	1498.144	1	
Fe III	1493.640	600h	85	Fe II	1498.28	1	
Cr III	1493.68	10		Ni III	1498.338	5	
Co II	1494.124	0		V III	1498.39	10	
Ni II	1494.151	50		Mn V	1498.50	8	P
Ni II	1494.236	6		Cu II	1498.5756	3	
Cr III	1494.45	50		Mn II	1498.60	8	
Sc III	1494.506	2		V II	1498.604	4i	
C I	1494.532	25		Ti III	1498.697	600	3
Fe II	1494.59	4		Ni II	1498.734	1	
Mg IV	1494.647	15		Zn III	1498.778	60	
Cu II	1494.6526	5		Fe III	1498.825	70h	
N I	1494.6751	400	4	S I	1498.850	2	
F I	1494.680	100		F III	1498.933	300	
Ni II	1494.701	10		S I	1498.942	1	
Na II	1494.729	20		Ne II	1499.006	40	
Mn I	1494.754	20	84	Zn II	1499.052	20	-A
Ge IV	1494.89	40		Zn II	1499.077	20	-A
Mn II	1494.97	7		As II	1499.108	0	
P II	1494.990	10		Co III	1499.124	25	
Cr III	1495.01	20		As II	1499.168	0	
Ti III	1495.08	20		Ti III	1499.173	300	
Ga III	1495.10	500		Ge III	1499.18	10	
Ga II	1495.11	150		Zn III	1499.400	70	
Br I	1495.132	0	1	F III	1499.425	150	
Cr III	1495.21	20		P I	1499.51	24	
Fe III	1495.216	70h		Cu II	1499.5132	3	123
Na II	1495.212	45		Mn II	1499.61	1	84
Mn II	1495.26	1		Ni II	1499.704	15	
Cr III	1495.56	20		Mn IV	1499.769	0	
B V	1495.38	P		Zn III	1499.780	5	
Ni II	1495.383	40		Mn II	1499.84	8	
Cu I ¹	1495.4298	20		Co III	1499.877	3	
N V	1495.5	40w-A	63	Mn II	1499.95	20	84
Mg IV	1495.505	300		As II	1500.074	0	
Ni II	1495.570	20		Ni IV	1500.128	300	
Ni III	1495.641	20	38	Mg IV	1500.142	70	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Si III	1500.241	240	36	V III	1503.95	0	
Cu IV	1500.258	11		Fe III	1504.002	150	
Mn II	1500.26	5		Zn II	1504.034	5	-A
Co III	1500.269	10		As I	1504.09	2	
Zn III	1500.398	60		Cu I?	1504.091	9	
Mn II	1500.41	0	84	Cr III	1504.16	26	
Ni II	1500.437	200	7	Cu IV	1504.167	30	
Cr IV	1500.46	10		F III	1504.177	300	
Ge IV	1500.61	120		Zn III	1504.188	15	
Ni II	1500.651	7		As II	1504.20	150	
Co II	1500.897	20		Fe II	1504.27	3	
Se I	1500.91	300	7	Ga II	1504.31	150	
Mn II	1500.99	4		Co III	1504.362	2	
Fe II	1501.01	0		P I	1504.37	36	
Si III	1501.150 P		36	Mn V	1504.38	200	
Cu III	1501.173	0		Ni II	1504.485	75	
Si III	1501.191	200	36	Ni II	1504.590	5	
Ni III	1501.311	5	38	Ti III	1504.621	120	
Cu II	1501.3363	5	125	P I	1504.72	6b	
Cr III	1501.38	30		P III	1504.72	900b	6
Mn II	1501.44	0		Zn	1504.754	12	
Mg IV	1501.534	30		Cu II	1504.7571	30	119
P III	1501.55	700	6	F III	1504.785	600	
Si III	1501.780 P		36	Ti III	1504.974	70	
P I	1501.81	60		Mn II	1504.99	1	
Si III	1501.827 P		36	Ga II	1505.00	150	5
Si III	1501.870	180	36	V III	1505.02	25	
Ni II	1501.885	20		Ni III	1505.165	5	
Ni V	1501.90	30		Fe III	1505.166	650h	85
Ni II	1501.962	6		Ni IV	1505.173	230	
Na II	1501.995	25		Zn III	1505.234	20	
F I?	1502.014	400		Co III	1505.249	5	
Zn III	1502.077	5		Cu II	1505.3878	10	118
Cu III	1502.107	0		Fe II	1505.43	0	
Co IV	1502.11	300		As II	1505.556	2	
Cu IV	1502.114	221		Ni II	1505.642	13	
Ni II	1502.150	75		Cr III	1505.76	100	
P I	1502.17	24		P I	1505.84	2	
P III	1502.27	1000	6	Cu II	1505.8572	5	
Ti III	1502.311	200		Zn III	1505.903	75	
Mn V	1502.36	120		Si III	1506.060	120	72
Mn II	1502.38	1		Ti III	1506.084	80	
Co III	1502.531	3		Se I	1506.09	60	
Se I	1502.57	40		Cu IV	1506.103	11	
As II	1502.615	0		Ni II	1506.184	16	
Ni II	1502.669	20		F III	1506.300	500	
Cr III	1502.87	30		Na II	1506.307	80f	
Cu IV	1502.955	88		P II	1506.44	30	
Fe III	1502.964	150h		Mg IV	1506.48	3	
Mg IV	1502.970	15		Ni III	1506.518	1	37
Mn II	1503.02	3		Fe II	1506.53	1	
Mn III	1503.066	5		V III	1506.57	15	
Zn IV	1503.079	30		Ni II	1506.585	25	
Zn II?	1503.109	20		P I	1506.63	21	
P I	1503.12	3		Mn II	1506.63	7	84
Ni II	1503.123	7		O V	1506.72	400w	
Ni II	1503.209	12		F III	1506.767	300	
Cu II	1503.3682	10	124	Cr III	1506.82	10	
P I	1503.48	3		Mg III	1506.826	7	
Ni IV	1503.432	310		Mg IV	1506.83		
Mn II	1503.54	1	84	Ni II	1506.851	7	
Mn V	1503.59	80		Ca III	1506.876	550	
Cr III	1503.65	30		Fe II	1506.898	6	
Zn II	1503.653	25	-A	Na II	1506.914	60	
Zn III	1503.803	0		Cr III	1506.95	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni II	1506.968	10		Mg IV	1510.691	200	
P II	1506.975	10		As I	1510.70	6	
P I	1506.98	18		Na II	1510.701	35	
As I	1506.99	2		Ni II	1510.741	5	
Ni II	1506.995	5		Ni II	1510.859	75	6
Cu IV	1507.022	11		C I	1510.981	100	64.04
Mn V	1507.11	40		Fe III	1511.133	150h	
As II	1507.145	5		Mn V	1511.15	40	
Fe II	1507.19	2		Ni II	1511.185	8	
Ni II	1507.465	18		Se I?	1511.27	40	
Fe III	1507.530	150h		Ni II	1511.314	3	
Mn II	1507.78	4		Co III	1511.404	3	
Zn III	1507.862	15		Ni II	1511.467	10	
Cr III	1507.93	30h		V II	1511.606	2	
Ni II	1507.961	15		Fe III	1511.617	300h	
V II?	1508.078	10		Zn II	1511.694	12	-A
Cr III	1508.14	100		Zn II?	1511.718	15	
Cu II	1508.1846	15		Co III	1511.730	2	
Fe II	1508.22	0		Cr III	1511.78	80	
Zn III	1508.220	10		Mn II	1511.84	4	84
Ni II	1508.249	10		C I	1511.907	25	64.03
Ni II	1508.262	7		Co III	1511.920	3	
Fe II	1508.27	2		V II	1512.018	2	
Ni II	1508.31	10		Ni III	1512.046	10	
Ni II	1508.498	4		Fe II	1512.053	4	
Mg IV	1508.534	20		Si II	1512.072	50h	11.01
Cu II	1508.6323	10	118	Cu II	1512.1739	5	115
Zn II	1508.645	70	-A	Mn III	1512.177	5	
Co III	1508.683	0		Fe III	1512.192	150h	
Cr III	1508.71	50		Cr III	1512.22	100	
P I?	1508.74	9w		Ni II	1512.237	1	
Si II	1508.741	3h	11.01	Fe II	1512.24	1	
Ni II	1508.816	100		Fe III	1512.262	20h	
Mg IV	1508.811	250		Be II	1512.269	555	4
Fe II	1508.87	1		Fe III	1512.346	200h	
Cr IV	1508.89	120		Be II	1512.407	1000	4
Mn V?	1509.02	4		Be II	1512.419	110	4
Si II	1509.101	100h	11.01	Cu II	1512.4646	4	
Ni II	1509.113	1		Zn III	1512.611	2	
Cl VII	1509.2	1		Ni IV	1512.733	600	
Co II	1509.240	60		Ni II	1512.742	11	
Fe II	1509.27	0		Fe III	1512.830	20	
Ni II	1509.308	12		P II	1512.87	5h	
Cr III	1509.31	30h		Fe III	1512.896	150h	
Ni II	1509.345	8		Co II?	1512.997	3	
Cu IV	1509.415	19		Ni II	1513.016	11	
As I	1509.60	3		Na II	1513.102	70	
Ni II	1509.602	4		C I	1513.150	50	64.02
Ni II	1509.767	100		Cr III	1513.18	10	
Cr IV	1509.85	10		Fe II	1513.31	1	
Co II	1509.954	30		Mn II	1513.32	2	
V III	1510.02	15		Cu II	1513.3659	15	143
Zn II	1510.045	5	-A	Cr III	1513.39	10	
Cr III	1510.05	10		Zn I	1513.522	20	-A
Ni II	1510.067	1		Si III	1513.533	40	-A 94
Mn II	1510.14	0	84	Fe III	1513.539	300h	
Ni II	1510.232	16		Ni II	1513.550	1	
Zn II	1510.353	150		Si II	1513.570	30	-A 29
Ni II	1510.366	4		Mn III	1513.635	10	
As I	1510.41	6		Mn IV	1513.635	20	
Co III	1510.489	1		Mn III	1513.67	1h	
Cu II	1510.5058	30	144	Co III	1513.706	3	
Cr III	1510.62	10		Ni II	1513.783	15	
C I	1510.668	25	64.05	Mn IV	1513.867	0	
Ni II	1510.690	3		Mn II	1514.03	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni II	1514.222	50		Cu II	1517.1599	5	142
Cu II	1514.2339	4	144	Zn	1517.209	20	
As II	1514.260	2		Zn	1517.314	25	
Ni II	1514.336	10		Cu IV	1517.345	22	
Fe II	1514.339	1		Cr III	1517.43	20	
Ni II	1514.372	80		Ni II	1517.449	25	
Ni II	1514.411	17		Ni II	1517.480	40	
Zn II?	1514.479	25		Co III	1517.482	8	
Cu II	1514.4924	200	115	Zn III	1517.611	20	
Ni II	1514.552	5		Cu II	1517.6310	10	97
Fe III	1514.563	150		Co III	1517.724	5	
Ga II	1514.57	250	5	Fe III	1517.771	20h	
Kr II	1514.585	20		Cr III	1517.85	20	
Zn II	1514.763	120	5	Ni II	1517.894	100	
F II	1514.789	100		Cu IV	1517.918	31	
Ni II	1514.856	8		Cu II	1517.9300	4	
Fe III	1514.948	20h		Ni II	1517.984	15	
Cr III	1515.01	20		F III	1518.137	3	
Co III	1515.027	25		Zn III	1518.150	3	
F II	1515.034	40		Si II	1518.221	5 -A	29
P I?	1515.10	6w		Zn III	1518.396	6	
Ga II	1515.15	150	5	Cr III	1518.48	40	
Ni II	1515.157	15		Mn II	1518.48	0	
As II	1515.207	20		Na II	1518.505	35	
Na II	1515.229	30		Zn II	1518.631	3 -A	
Ni II	1515.269	25		Co III	1518.636	0	
Zn III	1515.289	10		Fe III	1518.842	300h	
Cu IV	1515.293	298		Zn III	1518.979	2	
Ni II	1515.329	8		Cr V	1519.02	700	
Se I	1515.33	160		Co III	1519.326	8	
Mn III	1515.34	1		Ni II	1519.371	40	
Zn IV	1515.425	15		Co II	1519.412	10d	
Cr III	1515.44	80		Fe II	1519.43	0	
As I	1515.48	20		Cu II	1519.4918	100	82
Fe III	1515.481	300h		Fe II	1519.50	2	
Ni II	1515.518	5		Mn III	1519.51	5h	20
Co III	1515.638	1		Ni II	1519.513	15	
V II	1515.675	1		Ni V	1519.55	30	
Ni II	1515.692	1		Mn V	1519.62	40	
Na II	1515.709	30		Na II	1519.629	60	
Co III	1515.776	1		Cr III	1519.66	10	
Ni II	1515.791	30		Ni II	1519.745	4	
Ni II	1515.825	40		Mn II	1519.79	5	
Zn III	1515.833	80		Mn V	1519.83	40	
Fe II	1515.89	1		Cu II	1519.8371	200	
Fe II	1515.93	1		Ni II	1519.935	100	
Co III	1515.982	2		Se I	1519.99	80	
Zn II	1516.045	35 -A		Cr III	1520.01	70	
Ni II	1516.048	17		Zn II	1520.022	2 -A	
Ni II	1516.215	50		Ni II	1520.077	4	
Fe III	1516.222	20Ch		V IV	1520.142	60	
Mn II	1516.36	5		Ni II	1520.168	14	
Ni II	1516.503	3		V II	1520.241	1	
Fe III	1516.591	20		Ni II	1520.294	10	
Ni IV	1516.671	590		Ni II	1520.392	30	
Mn II	1516.75	8		Ni II	1520.467	40	
Mn III	1516.76	5h	20	Zn II	1520.527	50 -A	
Mn V	1516.78	160		Cu II	1520.5396	15	
Fe III	1516.790	20h		Ni IV	1520.631	660	172
Cu II	1516.9010	5		Zn III	1520.713	60	
Si II	1516.910	60 -A	29	F III	1520.716	3	
As I	1516.97	1		Zn	1520.780	30	
Co III	1517.070	1		Cr III	1520.79	40	
Zn	1517.117	15		Fe II	1520.87	2	
Co III	1517.153	1		Ni II	1520.932	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni II	1520.944	20		Fe III	1524.658	300	
Mg IV	1520.97	10		Mn II	1524.71	4	
Zn II	1520.998	15	-A	Ni II	1524.758	4	
Cl VII	1521.0			Fe III	1524.799	70	
Ni II	1521.119	100		Ni II	1524.834	22	
Se I	1521.20	60		Cu II	1524.8601	15	143
Zn II	1521.276	40	-A	Se I	1524.88	120	
Cr III	1521.29	10		Co III	1524.942	1h	
N VII	1521.4		P	Ni II	1524.996	14	
Mn II	1521.42	2		Fe III	1525.041	400	
F II	1521.590	10	-A	Co III	1525.163	1h	
Cr III	1521.59	30		Cr III	1525.27	10	
Ni II	1521.596	15		Na II	1525.311	30	
Co IV	1521.61	250		Ni IV	1525.316	710	
P II	1521.62	300w		Ge III	1525.34	200	
Ni II	1521.673	18		Fe III	1525.343	70	
Ni II	1521.889	12		Zn III	1525.371	8	
Fe III	1521.891	20h		Zn	1525.406	16	
Ni II	1521.992	10		Co III	1525.407	8	
P II	1522.11	4		Cr II	1525.42	5	
Co III	1522.149	2		Ni II	1525.422	8	
Cu I?	1522.252	0h		B I	1525.48	1	
Cr III	1522.29	5		Kr II	1525.486	20	
P II	1522.392	10		P II	1525.58	1	
Mn II	1522.420	3		Cu II	1525.6312	10	114
Se I	1522.45	120		Fe III	1525.634	150	
V IV	1522.493	40		Cu II	1525.6409	10	
Ni II	1522.517	0		Cu II	1525.6686	16	
Ni II	1522.569	30		V IV	1525.756	10	
Cu II	1522.5768	7	119	Cu II	1525.7645	15	
Mn III	1522.577	8h	20	Cr III	1525.78	10	
Cu IV	1522.587	11		Co II	1525.793	10	
P II	1522.59	5		Fe III	1525.801	400	
Fe II	1522.69	2		Cu II	1525.8381	8	
Ni II	1522.691	10		B I	1525.84	1	
Cu IV	1522.773	13		Cu III	1525.895	2	
Mn IV	1522.805	0		Fe III	1526.016	150h	
Ni II	1522.846	12		Mn III	1526.05	10h	20
Co III	1522.885	10		Al IV	1526.15	50d	
Ni II	1522.990	11		F IX	1526.3		P
Ni II	1523.102	3		Ni III	1526.305	5	
Cr III	1523.12	50		Fe II	1526.37	1	
Mn II	1523.14	12		Zn III	1526.417	2	
Ni II	1523.160	6		Ni II	1526.480	4	
F II	1523.197	100		Fe II	1526.517	20	
Cr III	1523.21	80		Cu IV	1526.559	15	
Zn II	1523.241	2	-A	Si II	1526.7076	500	2
Ni II	1523.278	30		Co III	1526.734	15	
Cu I?	1523.371	1h		As I	1526.78	2	
P II	1523.44	10		Zn	1526.845	30	
F II	1523.583	40		Cu II	1526.9276	5	
Cu II	1523.7413	3	171	Zn II	1526.969	15	-A
Cl I?	1523.851	0h		Ni II	1526.999	20	
Ni II	1523.897	15		Zn II	1527.002	20	
Zn II	1523.903	150		Ge III	1527.10	40	
Mn II	1523.92	10		Zn II?	1527.125	25	
F II	1523.925	10		Fe III	1527.145	400	
Co III	1524.113	8		V IV	1527.223	15	
Ni IV	1524.245	280		Zn II?	1527.236	20	
Ni II	1524.302	50		Fe III	1527.260	200h	
Co III	1524.472	2		Fe II	1527.296	20	
V III	1524.52	60		Ni II	1527.497	15	
Fe III	1524.522	300		F III	1527.524	1	
Mn II	1524.55	10		Na II	1527.555	15	
Cr III	1524.65	20		Ni II	1527.661	i	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni IV	1527.693	750		Zn II?	1531.725	1h	
V IV	1527.721	15		Br I	1531.743	300	2
Mn II	1527.75	7		C III	1531.83	200	11.65
Fe III	1527.767	70h		Se I	1531.84	400	6
Co III	1527.780	10		Cu II	1531.8559	400	96
Cu II	1527.8126	5		Fe III	1531.864	450h	84
Zn II	1527.915	100 -A		Ni II	1531.952	16	
Co III	1527.948	2		Ni II	1531.972	20	
Ni II	1527.968	18		Zn	1532.019	20	
Na II	1527.985	20		Co III	1532.032	5	
Mn V	1528.13	120		Cr III	1532.09	20	
Cr III	1528.38	30		Cu II	1532.1306	90	115
Ni II	1528.508	22		Zn	1532.188	15	
Cr III	1528.52	40		Cl IV	1532.19	100	
Zn II?	1528.550	40		P II	1532.51	700w	1
Mn III	1528.64	2h		Cr III	1532.54	10	
Ni II	1528.703	1		Zn III	1532.588	6	
Na II	1528.742	50		Cu IV	1532.594	46	
Zn II?	1528.759	9		Al III	1532.600		
Cu II?	1528.782	2		Ni II	1532.741	14	
Ca III	1528.866	450		Fe V	1532.80	400	
Fe III	1528.884	20h		Fe II	1532.82	0	
Cu II	1528.8952	2		Mn V	1533.07	40	
Cl II	1528.91	100		Zn III	1533.087	30	
Cr III	1528.91	20		Mn II	1533.10	2	
Cu IV	1529.088	11		Cr III	1533.12	70	92
Ni II	1529.148	4		Si IV	1533.220 P		24
Cr III	1529.16	20		Cl IV	1533.25	100	
Cl IV	1529.28	10		Cr IV	1533.42	20	
Mn III	1529.40	6h		Si II	1533.4320 st	1000	2
Na III	1529.67	20		Fe III	1533.439	250h	
Fe III	1529.764	200h		Fe V	1533.57	200	
Ni II	1529.812	0		As I	1533.60	3	
Zn IV	1529.833	25		Zn IV	1533.667	20	
Ni II	1530.080	18		Ni II	1533.669	17	
N VII	1530.2 P			Mn II	1533.68	5	
Fe III	1530.220	150h		B I	1533.86	1d	
Na II	1530.307	50		Ni II	1533.885	12	
Mn III	1530.364	30h	20	Co IV	1533.93	150	
Se I	1530.39	500	6	Cu II	1533.9865	30	
Ni II	1530.428	10		Ni II	1533.991	20	
Fe II?	1530.431	20h		Cr III	1534.09	80	
P I	1530.58	12		Na II	1534.163	10	
Cr III	1530.59	5		B I	1534.22	1d	
Zn II	1530.620	25 -A		Co III	1534.268	100	
Ni II	1530.636	75		Cu IV	1534.277	10	
Ni II	1530.663	30		Mn II	1534.34	0	
Co III	1530.906	5h		Zn	1534.371	15	
Ni II	1530.995	16		Cr III	1534.40	10	
Cl VII	1531.0			Ni II	1534.484	12	
Mn II	1531.01	8		Al III	1534.489		
Co III	1531.068	8h		Ga III	1534.51	500	
Zn II	1531.083	30 -A		Na II	1534.538	25	
Ni II	1531.288	3		Ni II	1534.546	11	
Fe III	1531.293	400h	84	Zn III	1534.563	2	
Se I	1531.33	300	6	Mn II	1534.58	0	
Zn IV	1531.372	25b		As I	1534.65	4	
Zn II	1531.394	3 -A		Ni IV	1534.715	810	
V II	1531.405	2		P I	1534.73	15	
Ni II	1531.408	14		Na II	1534.737	12	
Cu III	1531.588	0		F III	1534.754	60	
Fe II	1531.62	1		Mn II	1534.80	5	
Ni II	1531.640	18		Co II	1534.834	10	
Fe III	1531.644	550h	84	Ni II	1534.861	10	
Ni II	1531.720	1		Se III	1534.9	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni IV	1534.931	480		Ni II	1538.482	30	
Cu II	1535.0023	150	96	Ni II	1538.567	4	
Zn II	1535.081	200	5	Fe III	1538.632	650h	84
F III	1535.269	100		Ni II	1538.722	0	
Cu IV	1535.307	38		As I	1538.79	20	
Zn IV	1535.415	25		V II	1538.818	4	
Mn II	1535.42	1		Ni II	1538.831	3	
Fe III	1535.421	250h		Ni IV	1538.927	610	
Ni II	1535.477	12		Ni II	1538.956	1	
Ga II	1535.50	400	5	Zn IV	1539.068	6	
Cu II	1535.5238	10	160	Kr II	1539.075	20	
Cr III	1535.66	10		Fe III	1539.128	550h	84
Mn II	1535.66	6		Mn II	1539.24	3	
Zn II	1535.823	30 -A		Co III	1539.255	1	
P II	1535.90	1000w	1	Cl IV	1539.30	200	
Mn II	1535.91	0		Mn II	1539.33	5	92
Ni II	1535.961	15		Mn V	1539.40	80	
Ni II	1536.051	30		Co III	1539.458	10	
Mn II	1536.10	3		Fe III	1539.480	300h	84
F III	1536.11?	150		Ni II	1539.649	15	
Ni II	1536.118	15		Cr III	1539.70	30	
Ni III	1536.246	5		Ni II	1539.731	1	
Cu IV	1536.308	11		Al II	1539.8303	800	10
Ga II	1536.31	250	5	Zn III	1539.845	20	
Ni II	1536.367	1		Na II	1539.895	12	
P II	1536.39	700w	1	Ni II	1539.949	2	
Ni II	1536.398	20		Mn II	1539.99	0	
Zn	1536.405	10		Ni II	1540.015	1	
Fe III	1536.421	150h		Zn II	1540.120	50	
Co III	1536.454	3		Fe III	1540.165	450h	
Fe III	1536.591	70h		Cu II	1540.2394	10	
Mn II	1536.63	7	92	Ni II	1540.281	25	
Fe III	1536.640	150h		Fe III	1540.362	20h	
Ni II	1536.717	15		Cu II	1540.3887	100	140
Zn II	1536.726	20 -A		F III	1540.428	70h	
Ni II	1536.746	25		Mn II	1540.47	0	
Ni II	1536.779	10		Cu II	1540.5883	200	116
Mn II	1536.808	3		Br I	1540.654	250	1
Fe III	1536.830	70h		Ni III	1540.759	50	
Ga II	1536.91	50	5	Ni II	1540.760	35	
Ni II	1536.944	12		Fe III	1540.815	150h	
Co III	1536.955	3		V III	1540.87	250	
Zn III	1536.999	3		Zn II	1540.895	80 -A	
Ni II	1537.038	12		Ni II	1540.908	4	
V III	1537.07	0		Fe II	1541.011	10	
Mn II	1537.070	1		Mn II	1541.06	4	92
Cr III	1537.14	40		Mn V	1541.08	60	
Cl IV	1537.21	300		C III	1541.115	P	17
Ni II	1537.216	20		Mn III	1541.15	15h	
Ni IV	1537.249	700		Na III	1541.19	20	
Ni II	1537.322	2		Ni II	1541.324	14	
Ni II	1537.477	15		Ni II	1541.356	11	
Al IV	1537.52	100		Mn II	1541.39	0	
Cu II	1537.5590	400		C I	1541.510	40	64.01
Mn II	1537.56	2		Ni II	1541.560	4	
Ni II	1537.776	1		Cr III	1541.57	10	
Ni II	1537.859	25		Zn	1541.599	15	
Cr III	1538.04	10		P I?	1541.69	30	
Ge II	1538.0907 st	100	3	Cu II	1541.7032	1000	96
Mn II	1538.14	1		Zn II	1541.707	40 -A	
Ni II	1538.388	30		Mn III	1541.744	30	
Cr III	1538.43	10		Cu II	1541.7560	15	
Mn II	1538.43	0		Ni II	1541.801	2	
Zn II	1538.464	2 -A		Fe III	1541.818	300h	
Cu II	1538.4795	10	159	Cu III	1541.970	20	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni II	1542.024	1		C I	1545.249	40	63.03
Co III	1542.094	50		Mn III	1545.251	20	
Mn II	1542.16	1		Ca III	1545.294	1000	
C I	1542.1766 st	160	64	Ni IV	1545.400	440	
Ni II	1542.208	18		Ni II	1545.408	20	
Zn III	1542.223	25		Fe III	1545.411	200h	
Ni IV	1542.261	220		Ni II	1545.453	12	
P II	1542.29	1000w	1	Si I	1545.565	1r	41.11
Ni II	1542.388	1		Ni II	1545.717	16	
Ni II	1542.401	3		V III	1545.85	150	
Zn	1542.517	20		Ni II	1545.381	5	
Cr III	1542.52	10		P I	1545.95	45	
Mn II	1542.52	1		Ni II	1546.070	4	
Cu III	1542.562	1		Fe III	1546.120	550h	
Co III	1542.616	5		Mn III	1546.197	0	
Fe III	1542.625	70h		Mn II	1546.22	8	
Ni II	1542.773	15		Ni IV	1546.230	690	
Cl II	1542.94	10		Ge I?	1546.234		
As I	1542.94	4		P I	1546.32	9	
Ge III	1542.95	20		Cr III	1546.34	30	
Fe III	1542.965	150h		As I	1546.45	2	
Mn II	1542.98	0		Zn IV	1546.454	20b	
Zn II	1543.037	50 -A		Zn II	1546.460	10 -A	
P II	1543.09	400	1	B I	1546.550	20	
Ni II	1543.132	1		Cr III	1546.55	50	
Cu III	1543.180	1		Si I	1546.559	1r	41.10
P I	1543.26	45		Fe III	1546.570	20	
Mn II	1543.28	0		Ge I?	1546.581		
V III	1543.33	25		Zn II?	1546.650	100	
Ni IV	1543.411	790		Na II	1546.722	12	
Zn II	1543.428	40 -A		Cu IV	1546.762	15	
Cu III	1543.438	250	32	B I	1546.800	30	
P II	1543.61	150	1	Mn II	1546.87	4	
Fe III	1543.640	400h		Ge I?	1546.883		
Fe V	1543.66	200		Fe III	1546.928	250h	
Si I?	1543.713	1r		Zn II?	1546.991	25	
Zn	1543.868	10		Cr III	1547.05	30	
Zn III	1543.954	10		Na II	1547.066	15	
C I	1543.960	60	63.04	Ge I?	1547.069		
Co III	1543.981	15		Se I	1547.12	240	7
Cu III	1544.062	1		V II	1547.20	150	20
Fe III	1544.067	200h		Co III	1547.309	3	
Cu III	1544.110	1	32	Ni II	1547.337	15	
Co III	1544.129	2		Ar II	1547.355	100	
Cu IV	1544.141	206		Si I?	1547.373	1r	
Ar II	1544.177	200		Ni II	1547.407	13	
Fe III	1544.232	250h		Ge I?	1547.412		
Mn III	1544.25	10h		Mn III	1547.45	1h	
Ni II	1544.273	3		Fe III	1547.494	20h	
F III	1544.276	3		Ni II	1547.547	3	
Co III	1544.411	15		Fe III	1547.640	550h	
Fe V	1544.50	300		Ni III	1547.641	20	
Cu II	1544.6771	150	119	Mn III	1547.68	1h	
Ar II	1544.711	200		Zn II?	1547.800	20	
Fe II	1544.78	1		Cu II	1547.9582	6	118
Cu IV	1544.847	12		Co II	1547.965	50	
Co III	1544.880	20		Ni IV	1548.037	760	
Zn II?	1544.922	50		C IV	1548.185	1000	1
Ni II	1544.967	5		Fe III	1548.251	300h	
Ni II	1544.983	10		Se I	1548.29	160	
Cr III	1545.05	30		Ni II	1548.344	16	
Zn III	1545.086	20		Mn III	1548.371	1w	
Si I?	1545.095	1r		Co III	1548.413	10	
Mn II	1545.13	1		Fe II	1548.42	1	
Cl IV	1545.19	200		P I	1548.43	180	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Zn II	1548.434	20	-A	Cu IV	1551.924	11	
Mn V	1548.44	0		Cu III?	1551.932	1	
Mn II	1548.634	4		Si I?	1551.9323	1	
N V	1548.67		46	Fe II	1551.933	20	
Ni IV	1548.676	450		Na II	1551.934	20	
Na III	1548.68	160		Fe III	1552.067	550h	
Fe II	1548.692	1d	46	Zn III	1552.090	5	
Si I	1548.7149	2	41.09	Na II	1552.203	20	
Cr III	1548.86	20		Si I	1552.2089	1	41.09
Cu III	1548.867	150	32	V II	1552.268	1h	
Zn I?	1548.957	3	-A	Ni II	1552.276	5	
Cl IV	1549.15	200		Zn III	1552.288	50	
Zn III	1549.173	10		Cr III	1552.31	40	
Co III	1549.203	5		Ni III	1552.365	10	
Mn II	1549.25	0		P II	1552.51	5h	
Cu IV	1549.288	94		Mn II	1552.60	2	
N V	1549.30	85	46	Cu II	1552.6464	300	
Na II	1549.352	20		Fe III	1552.681	20h	
Cu IV	1549.459	14		Ni IV	1552.730	50	
F III	1549.492	3		Co II	1552.756	70	
Na II	1549.507	20		Zn III	1552.937	30	
Ni II	1549.525	1		P II	1552.94	1	
Cu II	1549.5252	2		Si I	1552.9498	2	41.08
Ni II	1549.810	0		Cr III	1552.95	10	
Co III	1549.940	10		Al IV	1553.00	50d	
Ni II	1549.964	4		Ni II	1553.012	0	
Cr III	1550.09	20		Co III	1553.015	3	
Ni IV	1550.185	320		F III	1553.023	250	
Fe III	1550.196	800h	84	V II	1553.09	150	20
Mn III	1550.20	2h		Cr IV	1553.09	10	
Fe II	1550.260	20	45	Zn III	1553.106	25	
Cu I	1550.2967	3		Ca II	1553.176	200	6
Na I	1550.348	20		V III	1553.25	0	
Mn II	1550.41	4		Cr III	1553.30	40	
Fe III	1550.450	300h		Si I?	1553.3712	1	
V II	1550.47	5		Cr II?	1553.38	50	
Ni II	1550.479	3		P II	1553.392	1	
Ni II	1550.495	2		Ni IV	1553.426	690	
Fe II	1550.52	1		Ni IV	1553.491	590	
Cu II	1550.6533	25	120	Zn	1553.564	20	
C IV	1550.774	950	1	Co II	1553.762	20	
Ni IV	1550.775	700		P II	1553.82	10	
Mg III	1550.82			Fe II	1553.82	0	
Mn II	1550.82	2		Mn II	1553.85	0	
V II	1550.858	3		Cu II	1553.8962	90	114
Fe III	1550.862	550h	84	Zn IV	1553.941	20	
Fe V	1550.90	200		Zn III	1554.030	20	
Ni II	1550.912	10		Ni II	1554.124	50	
Zn II	1550.936	80		Fe II	1554.13	1	
Cr III	1550.94	10		As I	1554.19	4	
Zn II?	1551.031	75		Zn	1554.199	15	
P I	1551.04	105		Zn II?	1554.225	6	
Fe III	1551.085	150h		Fe V	1554.27	100	
Fe III	1551.149	150h		Ni II	1554.293	8	
Fe II	1551.17	0		Ni II	1554.332	8	
Cr IV	1551.20	10		Ni II	1554.509	6	
Si I?	1551.2411	2		V III	1554.61	0	
Cl IV	1551.27	100		Ca II	1554.642	320	6
Fe III	1551.377	250h	84	Si I?	1554.7021	2	
Cu II	1551.3890	90	118	Cr III	1554.71	30	
P I	1551.42	45		Zn	1554.724	20	
Cr III	1551.43	50		Zn II	1554.740	6	-A
Co III	1551.536	3		P I	1554.84	3	
Na II	1551.793	20		Mn II	1555.01	1	
Si I	1551.8595	2	41.09	Ni II	1555.062	2	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu II	1555.1344	200	115	Si I	1558.2400 st	2	41.06
Fe III	1555.166	20h		Ni IV	1558.240	560	
P I	1555.25	6		Cu IV	1558.271	312	
Mn III	1555.299	3h		As I	1558.28	4	
Mn III	1555.343	0		Fe III	1558.310	20h	
Ni II	1555.398	16		Cu II	1558.3447	80	139
Mn III	1555.40	1		V III	1558.40	10	
Zn IV	1555.431	20		Ni II	1558.443	12	
Ni II	1555.495	30		Fe III	1558.5	P	
Si I	1555.5157 st	1	41.03	Ni II	1558.501	2	
Cu IV	1555.521	10		Zn	1558.505	10	
Ca III	1555.527	750		Fe II	1558.542	200	46
Se I	1555.55	80		Ni II	1558.544	5	
Ni II	1555.585	8		Ni II	1558.597	15	
Ni III	1555.598	2		Mn III	1558.602	10	
Si I?	1555.6630	1		F III	1558.641	200	
Cu II	1555.7030	300	113	Ni II	1558.655	40	
Zn II?	1555.764	100		Na II	1558.678	7	
Fe III	1555.861	200h		Fe II	1558.690	200	46
Cr III	1555.94	30		B I	1558.70	5	
Al II	1555.9433	1		Zn III	1558.738	25	
Ni II	1555.957	13		V II	1558.76	150	20
Cu II	1556.0255	8	140	Kr III	1558.80	40	
V II	1556.05	5		As II	1558.884	500	
Fe III	1556.075	300h		Zn IV	1558.971	25	
Zn	1556.100	10		Si I	1559.06		41.03
Mn III	1556.121	8		B I	1559.07	10	
As I	1556.14	40		Ar II	1559.072	300	
Si I?	1556.1626	1		Fe II	1559.084	400	45
V III	1556.17	75		Ni II	1559.159	18	
P I?	1556.18	2		Mn II	1559.24	3	
Na II	1556.370	15		Ni IV	1559.327	440	
Fe III	1556.427	70h		V II	1559.347	2	
Fe III	1556.493	550h		Si I	1559.3645 st	2	41.07
Si I	1556.5273 st	1	41.05	Fe III	1559.463	150h	
Se I	1556.54	20		Zn II	1559.466	10 -A	
V II	1556.561	2		As I	1559.53	4	
Ni IV	1556.669	230		Cr III	1559.67	10	
Na II	1556.753	12		Zn II	1559.709	15b -A	
Fe III	1556.756	70h		Zn IV	1559.709	15b	
Ni II	1556.766	10		Ni II	1559.822	1	
Fe III	1556.902	150h		Ni IV	1559.917	640	
Mn II	1556.94	2		Ni IV	1560.175	690	
Zn III	1556.993	15		Ar II	1560.191	400	14
Ni II	1556.997	4		Fe II	1560.260	40	45
Cr III	1557.01	30		Se I	1560.28	240	7
Co II	1557.039	50		C I	1560.3095 st	250	3
Ni II	1557.194	1		Ni II	1560.341	6	
As I	1557.20	30	14	Al II	1560.35	1	
Al IV	1557.24	250a		Si I	1560.39		41.03
Ni II	1557.290	12		Ni II	1560.459	25	
Ar II	1557.305	100		Fe III	1560.483	200h	
Co III	1557.328	3		Ni IV	1560.492	340	
Mn II	1557.43	1		Ni II	1560.517	10	
Ne II	1557.487	30		C I	1560.6832 st	500	3
Fe III	1557.561	150h		C I	1560.7079 st	200	3
Co II	1557.566	60		Si I	1560.7425 st	8	41.06
V II	1557.569	1		Zn III	1560.780	70	
Cu II	1557.5867	20	115	Ni II	1560.796	5	
F III	1557.592	300		Ni II	1560.831	15	
Zn IV	1557.881	20		Fe III	1560.857	150h	
Ni II	1558.087	10		Co II	1560.874	20	
Cr II?	1558.14	30		Ni II	1560.935	4	
Cl II	1558.15	100		F III	1560.939	60	
Mn III	1558.182	5	19	Si III	1560.974 P		71

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni II	1561.015	4		V II	1564.999	2h	
Ni IV	1561.153	200		Ni II	1565.001	1	
Mn II	1561.17	4		As I	1565.05	7	
Fe III	1561.179	20h		Fe III	1565.100	200h	
Ni II	1561.229	15		Cu IV	1565.168	162	
C I	1561.3407 st	200	3	Cu III	1565.194	3	
C I	1561.367 P		3	Si I	1565.32		41
C I	1561.4382 st	1000	3	Fe II	1565.374	4	46
Mn III	1561.570	20		Ar II	1565.377	100	
Mn II	1561.61	4		Ni II	1565.399	20	
Mn III	1561.681	40		Cr III	1565.40	20	
Cr III	1561.72	10		F III	1565.539	250	
Ni II	1561.733	2		Cr III	1565.54	20	
Co III	1561.746	1		Mn III	1565.830	30h	19
Zn II	1561.778	5 -A		Si I	1565.84		41.03
Cu III	1561.790	2	14	Cu II	1565.9243	100	96
Si I	1561.792	10r	41.06	V II	1565.98	80	20
Ni II	1561.968	11		Ni II	1566.019	7	
Si I	1562.0065 st	4	41.05	Zn	1566.039	15	
Mn III	1562.033	20		F III	1566.070	200	
Cu IV	1562.049	10		V II	1566.166	1h	
Si I	1562.0531 st	1	41.02	Mn III	1566.198	40	
Mn III	1562.212	2h		B I	1566.292	10	
F III	1562.234	100		As I	1566.39	15	
Si I	1562.28		41.03	Cu II	1566.4148	150	158
Ni II	1562.329	18		Mn II	1566.47	40	
Ar II	1562.442	200		B I	1566.675	20	
Si II	1562.451	10	11	Zn II?	1566.736	10	
Ca III	1562.473	900		Mn III	1566.762	20	
Mn III	1562.493	0		Ar II	1566.811	100	
Se I	1562.50	40		Fe II	1566.819	400	44
Zn III	1562.538	75		Zn	1566.822	10	
Mn II	1562.57	1		Ni II	1566.890	1	
Si II	1562.845	15	11	Zn III	1566.955	12	
As I	1562.95	10	4	F II	1566.961	100	
V II	1562.98	100	20	Mn II	1567.06	2	
Zn	1563.035	10		Ni II	1567.069	15	
Ar II	1563.043	100		Co III	1567.173	2	
Ni II	1563.111	7		Si I	1567.21		41
Co III	1563.158	3		Ni II	1567.220	10	
Zn III	1563.163	10		Ni II	1567.298	3	
Cu II	1563.1937	5		Zn III	1567.310	25	
Se I	1563.28	40		Ni II	1567.323	10	
Si I	1563.3641 st	1	41.04	Ni II	1567.336	12	
Ni II	1563.376	50		Ni II	1567.370	3	
Al II	1563.5797	1		Mn IV	1567.380	0	
Ni II	1563.604	120		Cr III	1567.41	80	
Mn II	1563.61	6		F II	1567.435	40	
F III	1563.726	250		Ne II	1567.526	70	
Si II	1563.765	10	10.02	Co II	1567.592	50	
Fe II	1563.788	500	45	Fe III	1567.650	70h	
V II	1563.954	2		Si I	1567.7263 st	8	37.04
Si II	1564.066	5	10.02	Cu IV	1567.735	11	
Cr III	1564.07	10		Mn III	1567.772	15h	
Co III	1564.090	1		Cr III	1567.80	10	
Cr X	1564.1	1		Si I?	1567.8095	1	
Al IV	1564.14	50d		Zn	1567.840	25	
Ni II	1564.273	15		Ni II	1567.872	1	
Fe III	1564.281	20h		Co III	1567.917	0	
Cr III	1564.32	10		Ni II	1567.966	4	
Zn II	1564.369	6 -A		Ar II	1567.987	400	
Ni II	1564.389	8		Fe II	1568.016	160	45
Fe III	1564.512	150h		Kr II	1568.050	20	
Si I	1564.6138 st	8	41.01	Si I	1568.1963 st	10	40.01
Mn II	1564.897	30		As II	1568.225	225	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co III	1568.308	1		Ni II	1571.162	12	
Mn III	1568.325	10	19	Zn IV	1571.207	5	
Cr III	1568.48	20		Fe III	1571.255	70h	
Mn II	1568.51	20		Ni II	1571.257	10	
Cu III	1568.564	1	13	Ca III	1571.268	650	
Ni III	1568.569	5		Si I	1571.3226 st	1	37.04
Si I	1568.6182 st	3	40	Zn III	1571.377	12	
Cu III	1568.655	1		Cr III	1571.38	20	
Na II	1568.673	10		Cu III	1571.390	0	14
Ni II	1568.698	1		Ar II	1571.391	100	
Fe III	1568.7 P			Si I	1571.4058 st	10	40
Fe III	1568.820	200h		Se III	1571.5	300	
Zn	1568.913	10		Ni II	1571.532	2	
Ne II	1569.015	40		Ni II	1571.550	2	
Cu III	1569.027	0		V II	1571.74	20	20
Fe III	1569.066	70h		Si I?	1571.7956	6	
Cr III	1569.07	30		Mg IV	1571.83	1	
Mn II	1569.08	1		Kr II	1571.876	20	
Kr II	1569.135	40		Mn III	1571.920	20h	
Ni II	1569.172	16		Cr III	1571.98	50	
Cu II	1569.2123	4	96	Cr III	1572.13	20	73
Na II	1569.264	20		Mn II	1572.13	1	
Co III	1569.264	1		Zn II	1572.198	15b-A	
Ni IV	1569.276	30		Zn III	1572.198	15	
Mn III	1569.304	0		Fe II	1572.26	1	
Zn	1569.307	10		Co III	1572.266	1	
Si I	1569.3185 st	8	41.01	Kr II	1572.340	40	
Cr III	1569.36	20		Cr III	1572.54	10	
As II	1569.385	10		Ni II	1572.540	25	
Al II	1569.3853	100		Ge III	1572.55	10	
Ni II	1569.415	1		As II	1572.644	10	
Cu II	1569.4155	4	116	Ni II	1572.646	4	
Ge III	1569.49	10		Co II	1572.674	80	6
Cr III	1569.51	50		Zn	1572.703	20	
Mn III	1569.516	0		Mg III	1572.712	400	
Ni II	1569.624	13		Si I	1572.7173 st	2	37.04
Fe II	1569.674	240	44	Fe II	1572.750	20	45
Kr III	1569.89	40		Fe III	1572.776	206h	
Ni IV	1569.916	400		Fe III	1572.841	300h	
Ni II	1569.972	2		Cr III	1572.89	20	
Si I	1570.0275 st	2	40.01	Co II	1572.915	30	
Mn II	1570.05	7		Si I?	1572.9245	1	
Zn	1570.065	15		Fe III	1572.984	20h	
Mn III	1570.169	0		Zn II?	1572.991	40	
Cu III	1570.202	15		Ni II	1572.993	1	
Fe II	1570.242	400	45	Al II	1573.0028	3	
Ni II	1570.302	16		Zn	1573.011	90	
Cu II	1570.3153	2		Ni II	1573.071	10	
Ni II	1570.392	60		V X	1573.1	f	
Fe II	1570.50	0		Cu II	1573.1668	0	
Ni II	1570.512	3		B I	1573.301	30	
Si I	1570.5175 st	3	40	Cr III	1573.34	10	
Cu II	1570.5707	3		Si I?	1573.3483	1	
Cr III	1570.67	40	73	Kr II	1573.404	80	
Ni II	1570.701	1		Na II	1573.430	10	
Si I	1570.8104 st	1	41	Mn II	1573.53	30	
Zn III	1570.900	3		Si I	1573.6350 st	10	40.01
V III	1570.96	10		B I	1573.678	50	
As II	1570.993	500		V II	1573.78	5	20
Zn III	1571.008	3		Zn III	1573.809	25	
Fe II	1571.01	0		Fe II	1573.825	100	45
Cr III	1571.04	100		As I	1573.85	60	14
Mn III	1571.06	2h		Cr III	1573.87	70	73
Ni II	1571.14	12		Si I	1573.8840 st	25	40
Cu III	1571.154	2		Co III	1573.921	5h	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1574.00	40	73	Fe III	1577.084	200	
Kr II	1574.103	20		Ni II	1577.115	16	
Na II	1574.110	12		Cr III	1577.14	100	73
Fe II	1574.12	0		Fe II	1577.166	20	45
Si I	1574.1275 st	1	40	Mn IV	1577.185	350	
Cu IV	1574.186	12		Mn II	1577.22	3	
Ni II	1574.202	18		Cu II	1577.2670	0	
Mn II	1574.276	6		Zn III	1577.275	0	
Kr II	1574.340	20		Se II	1577.29	100	
Zn II	1574.381	6 -A		C III	1577.30	200	12.03
Fe II	1574.39	1		Cr III	1577.36	50	
Ar II	1574.401	100		Zn IV	1577.504	20	
Ni II	1574.423	100		Se I	1577.61	300	4
Co II	1574.568	100		F III	1577.652	1	
Si I	1574.63		37.04	Mn II	1577.774	10	
Cr III	1574.63	20		C III	1577.89	200	12.03
Na II	1574.664	7		Se I	1577.90	300	4
As I	1574.72	30	4	Fe III	1577.926	150h	
Kr II	1574.733	120		Ni II	1577.933	14	
Si I	1574.7456 st	1	37.04	Mn III	1577.939	100	19
Fe II	1574.768	10		Cr III	1578.01	10	
Zn IV	1574.833	20	44	Co III	1578.093	0	
Br I	1574.841	300	2	Si I	1578.25		37.04
Si I	1574.8435 st	30	40.01	Cr III	1578.39	10	
Mn X	1574.9	f		Zn	1578.395	10	
Fe II	1574.923	400		Mn III	1578.467	20	
Ni II	1574.942	20	45	Fe II	1578.497	30	
Ni II	1574.976	5		V II	1578.542	4	
Ar II	1574.993	600	14	Mg IV	1578.57	20	
Ni II	1575.003	16		Ge II	1578.598	3	
Ni II	1575.090	15		Cr III	1578.61	40	
Si I	1575.1268 st	10	37.03	Zn III	1578.642	15	
P I	1575.18	9		Fe III	1578.759	150h	
Se I	1575.26	300	5	Na II	1578.807	12	
Mn III	1575.33	1		Ar II	1578.812	300	
Cu II	1575.3533	5		Ni II	1578.865	20	
Kr II	1575.375	20		Mn II	1578.90	20	
P I	1575.47	3		Ni II	1578.990	60	
Ni II	1575.559	1		Mg	1579.05	10d	
Ni II	1575.597	9		Ni II	1579.073	18	
Mn II	1575.642	40		Fe II	1579.25	1	
Na II	1575.749	15		Cu III	1579.353	8	13
Mn II	1575.75	3		Ge I?	1579.405		
Fe II	1575.80	1		Zn	1579.446	15	
Zn	1575.810	10		Se I	1579.49	300	6
Ar II	1575.815	300		Cu II	1579.4918	6	117
As I	1575.87	20		Kr II	1579.513	40	
Mn II	1575.94	10		V II	1579.550	4	
Co III	1576.025	1		Ni II	1579.563	18	
Na II	1576.118	12		Mn III	1579.567	0	
Kr II	1576.155	20		Cu I	1579.658	5	
Cr III	1576.24	20	73	Cr V	1579.67	800	
Br I	1576.387	200	1	Zn III	1579.729	15	
C III	1576.48	300	12.03	Kr II	1579.731	240	
V II	1576.805	0		Ni II	1579.791	17	
Co II	1576.813	100		Ni II	1579.877	2	
Si I	1576.829 st	12	39	Ge I	1579.899		
Ge II	1576.8547 st	500	3	Ni II	1579.959	3	
Cu IV	1576.895	50		Ni III	1579.990	15	
Ar II	1576.898	300		Cu II	1580.0250	15	
Zn II?	1576.905	15		Se I	1580.04	400	6
Mn III	1576.924	10		Cr III	1580.20	10	
Ni II	1577.015	30		Zn	1580.220	20	
Si I	1577.0439 st	2	37.03	Fe III	1580.237	300h	
Co II	1577.058	100		V II	1580.261	5	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Si I	1580.3001 st	12	38	Zn II	1583.933	15 -A	
Cr III	1580.34	10		Si I	1583.95		37.02
Zn	1580.353	25		Fe III	1583.973	20h	
Cu IV	1580.354	11		Si I	1584.0207 st	8	37
Zn II?	1580.443	10		V II	1584.06	150	19
Ni II	1580.588	8		Cr III	1584.09	10	
Fe II	1580.625	500	44	Na II	1584.173	20	
Cu II	1580.6257	8	118	Ni IV	1584.297	190	
Si I	1580.68		37.03	Si I	1584.3455 st	12	38
Fe III	1580.690	150h		Mn II	1584.38	1	
Cr III	1580.73	200	73	O III	1584.45	400	
Co III	1580.735	0		Al IV	1584.45	100d	
Ar II	1580.770	1		Ni II	1584.530	10	
Al II	1580.9193	1		Ni II	1584.563	16	
Ar II	1580.960	100		Kr II	1584.563	20	
Ge I	1580.989			Cr III	1584.60	400	73
Fe III	1581.057	70h		Co III	1584.663	1	
Ge II	1581.0698 st	300	3	Al II	1584.7080	4	
Ni II	1581.085	6		Cr III	1584.84	30	
Na II	1581.108	25		Si I	1584.8540 st	2	35.03
Cr III	1581.15	100		Fe II	1584.949	300	44
Fe II	1581.174	160	44	Cr III	1585.01	30	
Ni II	1581.334	25		F II	1585.056	40	
Mn II	1581.39	3		Ni II	1585.117	200	
Cu II	1581.4066	0		Zn	1585.214	10	
Cu II	1581.4187	0		Mn II	1585.30	1	
Co III	1581.502	3		V II	1585.361	300	19
Zn III	1581.505	100		Zn II	1585.368	160	
Cr III	1581.57	20		F III	1585.593	3	
Ni II	1581.704	10		Ni II	1585.702	4	
Ni II	1581.826	6		Mn III	1585.714	150	
Na II	1581.835	20		Cu I	1585.871	5h	31
V II	1581.99	80	19	Zn III	1585.876	5	
Cu II	1581.9953	15		Si I	1585.9580 st	3	37
Zn III	1582.034	100		V III	1585.97	25	
Al IV	1582.04	150d		Fe II	1585.985	30	
Co III	1582.044	2		Zn III	1586.076	6	
Ni II	1582.135	2		Kr II	1586.093	20	
Mn II	1582.23	40		Ca III	1586.125	650	
Br I	1582.312	250	1	Si I	1586.1372 st	15	35.03
V II	1582.32	80	19	Kr II	1586.170	120	
Mn II	1582.35	10		Co III	1586.180	8	
Ni II	1582.373	0		Mg III	1586.237	200	
As II	1582.406	5		P I	1586.25	3	
Fe III	1582.419	20h		Cu IV	1586.252	12	
Ni IV	1582.531	500		Ar II	1586.261	200	
V II	1582.57	150	19	Cr III	1586.35	150	
Cr III	1582.62	250		V II	1586.58	400	19
Fe III	1582.621	20h		Kr II	1586.621	80	
Ni II	1582.689	10		Mn IV	1586.638	30	
V II	1582.80	80	19	Ni II	1586.677	4	
Cu II	1582.8458	3	183	Si I	1586.7913 st	20	35.03
Cr III	1582.93	200		P I	1586.88	2	
Ni II	1583.051	17		Si I	1586.8920 st	3	35.01
Fe III	1583.199	200h		Ni III	1586.909	1	
Ni II	1583.398	1		V III	1586.92	250	
Ni II	1583.436	10		Cu II	1587.0035	1	
Ni II	1583.509	15		Zn IV	1587.036	5	
Cu II	1583.6823	80	113	Cu II	1587.0596	1	
S I	1583.683	1		Mn II	1587.11	50	
Cr III	1583.70	20		Ni II	1587.138	3	
P I	1583.73	24		Mn II	1587.15	7	
Cu I	1583.799	15	32	Co III	1587.186	5	
Ar II	1583.833	100		Ni II	1587.207	8	
As I	1583.90	2		Cr III	1587.35	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1587.38	1		Zn III	1590.678	2	
V II	1587.40	500	19	Ni II	1590.703	1	
Ni II	1587.443	18		V III	1590.77	10	
Mn II	1587.46	15		Cr III	1590.77	10	
Se I	1587.46	300	19	Ni II	1591.041	50	
Cr III	1587.54	20		Ge I	1591.07		
Ge I?	1587.63			Cr III	1591.09	50	
Cu II	1587.7151	0		Ni II	1591.099	16	
Si I	1587.7620 st	15	37.01	Si I	1591.1232 st	20	35.02
Ni II	1587.845	35		Si I	1591.24		35.03
O III	1587.87	400		Na II	1591.321	15	
As I	1587.97	20		O III	1591.33	600	
Zn	1587.998	15		Ni II	1591.350	10	
Cr III	1588.00	20		Ni II	1591.415	80	
Ni II	1588.200	10		C III	1591.44	200	11.58
Fe I?	1588.286	200	44	Cu IV	1591.549	11	
Ni II	1588.369	15		Cr V	1591.70	700	
Cr III	1588.42	150		Na II	1591.712	7	
Ni II	1588.464	10		Zn II	1591.724	2	-A
Cu III	1588.551	2	14	Ni II	1591.732	2	
V III	1588.59	150		Fe III	1591.803	150h	
Co III	1588.642	5	59	Ge I?	1591.87		
Ni II	1588.715	9		Ar II	1591.939	1	
Zn II	1588.754	3	-A	Mn III	1591.942	5	
Ni II	1588.798	20		Ge I?	1591.98		
Cr III	1588.87	200	73	Si I	1592.0200 st	20	35.01
Si III	1588.950	40	59	Ni II	1592.080	200	
Na II	1588.983	7		Zn III	1592.128	3	
Zn	1588.989	15		Ni II	1592.144	15	
P IV	1589.02 P			Cu IV	1592.170	12	
Ni II	1589.061	40		Mn III	1592.187	5	
Ni II	1589.116	80		Ni II	1592.248	25	
Si I	1589.1733 st	15	35.02	Mg III	1592.360	60	
Ni II	1589.246	200		Cr III	1592.39	100	
Al IV	1589.27	50d		Si I	1592.4234 st	60	35.02
Kr II	1589.384	20		Zn III	1592.431	50	
Ar II	1589.465	500		Ni II	1592.479	50	
Ni II	1589.474	5		Ni II	1592.502	15	
V III	1589.53	15		Mn IV	1592.536	300	
Ni II	1589.547	1		Kr II	1592.565	20	
Zn I	1589.561	30	3	N I	1592.66	20	
Ni III	1589.625	2		Ni II	1592.662	1	
Si I	1589.6399 st	7	37	Fe III	1592.721	70h	
Ni II	1589.644	20		S I	1592.736	4	
Co II	1589.674	10		Mn II	1592.76	0	
Mn II	1589.74	1		Ge I	1592.842		
V II	1589.761	3		Fe III	1592.913	70h	
Ni II	1589.772	80		Cu IV	1593.090	20	
Zn II	1589.777	50		Br I?	1593.1	150	
Ni II	1589.903	8		Ni II	1593.132	1	
Cr III	1589.91	20		Cr III	1593.16	40	
O III	1590.01	800		Se I	1593.19	300	6
Zn II	1590.133	25	-A	Ni II	1593.200	15	
Cu II	1590.1549	80	139	Mn II	1593.224	5	
F III	1590.180	10		Co II	1593.323	20	
Ar II	1590.233	200		Cu IV	1593.374	15	
Br III	1590.3	25		Cr III	1593.38	40	
Ni II	1590.422	0		Co III	1593.446	5	59
Si I	1590.4768 st	20	35.03	Ni II	1593.522	15	
Cr III	1590.49	20		Cu II	1593.5556	500	139
Ni II	1590.529	10		Ar II	1593.587	200	
Co II	1590.538	30		As I	1593.60	100r	4
Mn II	1590.509	20		Mn II	1593.61	0	
Si I	1590.5763 st	15	35.01	Ni II	1593.611	150	
O III	1590.61	400		Ni II	1593.698	40	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr I?	1593.71	10		Fe II	1596.64	2	
Fe III	1593.741	70h		B III	1596.66	1	
Ca III	1593.758	500	13	Ge I?	1596.711		
Fe III	1593.897	70h		Cu II	1596.7458	1	
Kr II	1593.946	240		Cr III	1596.76	10	
Ge I	1593.950			Fe II	1596.82	1	
Mn III	1593.97	3h		Ni II	1596.874	1	
Ni II	1594.019	1		Mn III	1596.948	300	
Cr III	1594.03	80		Ni II	1597.031	1	
V II	1594.029	1h		Ni III	1597.077	3	
Si I	1594.1455 st	3	35.01	Ni II	1597.101	25	
Co III	1594.182	0		Mn II	1597.18	2	
Ni II	1594.287	6		Zn	1597.183	25	
Mn III	1594.312	5h		Cu III	1597.418	5	13
Ni II	1594.346	35		Cr III	1597.46	120	
As I	1594.39	1		Ni II	1597.484	9	
Zn II	1594.448		-A	Zn II	1597.55c	15	-A
Cr III	1594.45	20		Zn IV	1597.563	50b	
Co IV	1594.52	80		Fe III	1597.631	70h	
Si I	1594.5655 st	70	35.02	Mn IV	1597.656	0	
Ni II	1594.575	1		Si I	1597.721 st	25	33.01
Mn IV	1594.659	500		Si I?	1597.7357	20	
Ni II	1594.703	12		Mg IV	1597.78	6	
Ar II	1594.799	100		Zn II	1597.801	5	-A
Si I	1594.83		35.02	Cr III	1597.86	10	
Fe III	1594.844	20h		Ni II	1597.886	7	
Kr II	1594.895	120		Ni III	1597.899	3	
Si I	1594.9493 st	70	35.03	Si I	1597.9620 st	60	35
Co III	1594.953	5		P I	1597.97	3	
Zn II	1595.027	100	-A	Ne II	1597.971	80	
Zn	1595.044	40		Sc III	1598.002	160	1
Ge I	1595.046			Ce I	1598.020		
P I	1595.08	6		Cr III	1598.05	50	
Mn III	1595.081	100		Ni III	1598.073	15	
Mn IV	1595.081	300		Kr II	1598.082	160	
Fe III	1595.180	20h		Ni II	1598.282	40	
Ca III	1595.193	450		Ni II	1598.371	30	
Zn IV	1595.258	30		Cu II	1598.4023	200	139
Zn	1595.308	10		Cr III	1598.48	30	
Mn III	1595.35	80		Co II	1598.494	30	
Ni II	1595.519	8		Zn III	1598.517	80	
Fe III	1595.597	400h	119	Ar II	1598.575	100	
Ni II	1595.608	70		Mn III	1598.651	50	
P I	1595.72	1		Ar II	1598.722	200	
Zn II	1595.732	20	-A	P I?	1598.76	3	
Ar II	1595.737	100		Ni II	1598.860	13	
Si I	1595.7552 st	30	33.01	Ar II	1598.880	100	
Ni II	1595.768	70		Se II	1598.95	100	
Co II	1595.784	50	6	Cr III	1599.01	30	
Cr III	1595.86	20		Ar II	1599.130	100	
Ni II	1595.919	15		Zn II	1599.146	3b-A	
Al II	1596.0586	125		Zn III	1599.146	3	
P I	1596.06	3		P I	1599.25	15	
Cr III	1596.06	30		Ni II	1599.251	40	
Ni II	1596.074	60		Ni II	1599.282	12	
Zn	1596.076	10		Co II	1599.314	30	24
As I	1596.13	2		Al II	1599.4108	20	
Ar II	1596.151	100		Ni II	1599.439	1	
Mn III	1596.211	80h		Kr II	1599.492	20	
O V	1596.375	280		Mn III	1599.50	5	
Ne II	1596.397	30		Ni II	1599.549	10	
Ge I	1596.443			Ni II	1599.603	25	
Cr III	1596.52	150		Ar II	1599.607	100	
Co II	1596.521	10		Al III	1599.639		
V III	1596.58	15		Al III	1599.697		

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co II	1599.716	10	24	Ni II	1602.973	20	
F III	1599.926	10		Sc III	1603.067	360	1
Cr III	1600.02	70		Ar II	1603.075	400	
Fe II	1600.02	2		Zn IV	1603.088	6	
F III	1600.041	25		Cu III	1603.146	200	14
Zn III	1600.074	2		Cr V	1603.17	600	
Ne II	1600.080	40		Cr III	1603.19	300	
Ge III	1600.10	180		Mn III	1603.203	30h	18
V III	1600.11	10		Ni II	1603.224	1	
Ar II	1600.133	400		Zn II	1603.315	100 -A	
Cu III	1600.194	250	13	Ni II	1603.410	20	
Zn III	1600.206	1		Ar II	1603.442	400	
Cr III	1600.21	50		Zn III	1603.470	0	
Ni II	1600.268	10		Zn II	1603.508	3 -A	
Ni III	1600.294	10		Ni II	1603.555	25	
B I	1600.455	70		Co III	1603.563	8	
Mn IV	1600.549	550		Mn III	1603.598	2	
Ni II	1600.565	18		Mn IV	1603.604	700	
Al III	1600.642			Kr II	1603.721	20	
Ar II	1600.694	600		Ni II	1603.728	16	
B I	1600.727	120		Mn II	1603.87	5	
Ni II	1600.753	3		Zn III	1603.873	5	
Mn III	1600.770	10h		Ni II	1603.917	5	
Ge I	1600.824			Cr III	1603.93	10	
Zn III	1600.858	80		Ne II	1604.004	80	
Mn III	1601.045	5h		Mn IV	1604.038	0	
Ni II	1601.045	16		Ar II	1604.082	500	
Cu II	1601.2097	1	113	Ne II	1604.091	70	
Fe III	1601.211	650h	118	Mn II	1604.19	0	
Co IV	1601.22	150		Ge I?	1604.28		
Ni II	1601.240	10		Cr III	1604.34	10	
Co II	1601.282	5	24	Zn II	1604.347	20 -A	
Ni I	1601.288	8		Ni II	1604.394	2	
Fe III	1601.289	500h	118	Mn III	1604.407	2h	
Mn III	1601.42	5h		Na III	1604.47	120	
Si I	1601.46		33.01	Ni II	1604.482	18	
Ni II	1601.518	1		Zn	1604.500	12	
Mn IV	1601.550	80		Ni III	1604.537	300	
Cr III	1601.57	40		Ni II	1604.570	5	
Zn	1601.695	15		O IV	1604.620	5	
Ni II	1601.742	4		Ni II	1604.696	3	
Mn II	1601.84	5		Se I	1604.70	80	
V IV	1601.915	80		Cr III	1604.82	20	
Si II	1601.928	10		Cu II	1604.8475	50	169
Fe III	1602.000	300h	119	Cu IV	1604.898	12	
Mn II	1602.10	30		O IV	1604.901	10	
Mn IV	1602.138	100		V III	1604.99	50	
Cr III	1602.17	100		Ni II	1605.027	9	
Mn III	1602.17	20	18	Mn III	1605.107	4h	
Ni II	1602.209	12		Cr III	1605.18	20	
Fe II	1602.228	1d		Zn II	1605.196	10 -A	
Cu II	1602.2729	6		Mn IV	1605.202	40	
Mn III	1602.38	20		Ni II	1605.217	4	
Cu II	1602.3880	150	170	Mn III	1605.22	3h	
Ge II	1602.4863 st	500	2	Cu II	1605.2813	200	112
Ni III	1602.505	15		Fe II	1605.318	20	
Zn III	1602.511	1		Mn II	1605.33	0	
Ar II	1602.554	200		Ni IV	1605.357	70	
Fe II	1602.588	240	316	Fe II	1605.44	1	
Ni II	1602.679	1		Mn II	1605.467	60	
Cr III	1602.79	100		Mn III	1605.545	40h	18
Ar II	1602.891	200		Mn III	1605.67	20	18
Na III	1602.91	100		Ni II	1605.744	35	
Cu IV	1602.960	39		Al III	1605.766	700	
C I	1602.9715 st	200	63	Si I	1605.8370 st	20	33

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ni II	1605.910	60		Zn	1608.680	30	
Cu III	1605.969	150	25	Ni II	1608.708	1	
Co II	1605.987	30	6	Co III	1608.777	3	
Fe III	1606.014	200h	119	Zn II?	1608.819	70	
Kr II	1606.026	40		Zn III	1608.829	40	
Zn II?	1606.082	60		Co III	1608.864	3	
Mn IV	1606.108	150		Kr II	1608.902	40	
V III	1606.17	25		Si I	1608.9157 st	25	33
Cr III	1606.19	10		Co III	1608.950	3	
Ar II	1606.197	300		Cr III	1609.01	30	
Zn	1606.255	20		Mn III	1609.02	20h	18
Ni II	1606.280	12		Zn III	1609.043	20	
Ge II	1606.29	2h		Mn III	1609.172	500h	18
Se I	1606.46	500	3	Ni II	1609.343	1	
Ni II	1606.46 ^a	30		Cr III	1609.35	200	
Cr III	1606.53	80		Zn II	1609.390	10	-A
Cr III	1606.67	20		Ni II	1609.474	12	
V II	1606.685	6		Mn II	1609.50	30	
Ni II	1606.695	8		Cu III	1609.599	25	25
Ni II	1606.729	15		Zn	1609.725	15	
Cu III	1606.730	150	13	Cu III	1609.757	50	25
Mn III	1606.755	1		Cr III	1609.79	150	
Cu II	1606.8341	300	139	F II	1609.798	10	
Cu III	1606.837	5		Ni II	1609.876	100	
Ni II	1606.902	18		Cr III	1609.91	200	
Zn IV	1606.907	12		Mn III	1610.05	3h	
Ar II	1606.926	400		Cr III	1610.10	10	
C I	1606.960	50	62.04	Ni II	1610.102	20	
Mn III	1607.003	20h		Sc III	1610.194	300	1
Cr V	1607.04	5		Mn III	1610.228	20h	
V II	1607.046	4		Cu I	1610.2964	5	139
Mg IV	1607.109	300		B I	1610.36	1	
Ar II	1607.180	100		V II	1610.487	2	
V II	1607.294	5		Ni II	1610.532	18	
Cu IV	1607.300	23		Ni III	1610.534	20	
Mn II	1607.37	2		P V	1610.5 ^a	20	
Co III	1607.410	3		Cr III	1610.56	40	
Mg IV	1607.517	30		Cu III	1610.571	40	25
Cu III	1607.542	50	25	Zn IV	1610.574	3	
Cr III	1607.57	10		V II	1610.615	2	
Mn II	1607.67	5		Ge II	1610.640	3h	
Fe III	1607.723	600h	118	Zn III	1610.713	3	
B II	1607.76	10		Se I	1610.72	200	17
Cr III	1607.78	20		Zn II	1610.743	30	-A
Ni II	1607.849	20		B I	1610.75	1	
Mn III	1607.884	30h		Ge I	1610.774		
Cr III	1607.92	30		Mg IV	1610.80	10	
Zn III	1607.950	10		Si I	1610.82		32
Ni II	1607.987	3		Zn III	1610.832	30	
As I	1608.07	3		Ge I	1610.866		
Ni II	1608.134	60		Cr III	1610.88	10	
Ni II	1608.177	80		Fe II	1610.921	300h	43
Mn III	1608.18	3h		Zn III	1610.968	40	
Cr III	1608.19	10		Na III	1610.97	80	
Ni II	1608.358	30		Ni II	1611.061	8	
V III	1608.39	60		Ni II	1611.079	6	
Zn III	1608.424	20		Cr III	1611.08	100	
C I	1608.438	70	62.03	Mn IV	1611.105	700	
Ni II	1608.442	25		Cu II	1611.1181	2	181
Cu IV	1608.451	13		Cu IV	1611.130	14	
Fe II	1608.456	700	8	Fe II	1611.21	1	
Ge I?	1608.500			Mg IV	1611.219	200	
Ne II	1608.512	30		Se I	1611.26	200	18
Zn II	1608.555	10	-A	Cr V	1611.27	5	
Cu II	1608.6393	70	182	Al II?	1611.2871	15	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
P I	1611.29	30		Zn II	1614.364	10	-A
Zn	1611.340	12		Zn II?	1614.432	8	
Ni II	1611.390	25		Zn	1614.468	30	
Zn II?	1611.501	5		Ni II	1614.495	10	
Cr III	1611.57	10		Mn II	1614.56	5	
Mn II	1611.61	5		Si I	1614.5665 st	30	30
Fe III	1611.723	450h	118	Fe III	1614.611	70	
Fe III	1611.763	450h	118	Zn	1614.629	10	
Al III	1611.814	100		Si I	1614.6309 st	25	32
Zn II?	1611.866	25		P I?	1614.67	3	
Al III	1611.874	800		Ge I	1614.792		
V IV	1611.879	80		As I	1614.82	5	
Ni II	1611.927	2		Ni II	1614.824	30	
As II	1611.927	225		P I	1614.87	9	
Cr III	1612.07	30		V II	1614.871	5	
Mn II	1612.15	10		Zn III	1614.895	8	
Co IV	1612.16	200		Ni II	1614.911	90	
Ni II	1612.163	1		Mn II	1615.050	2	
Ni III	1612.165	30		Cr III	1615.21	10	
Ni II	1612.450	20		Mn II	1615.22	1	
Ni III	1612.474	10	17	Ge I	1615.234		
P IV	1612.53	P		Ge II	1615.332	3h	
Cr III	1612.57	10		Zn IV	1615.345	8	
Zn III	1612.688	10b		Ni II	1615.459	120	
Zn IV	1612.688	10b		Ge I	1615.571	3	
Ni III	1612.730	30		Ni III	1615.597	2	
Mn III	1612.78	2h		Ge I	1615.715	2	
Fe II	1612.802	400	43	P I	1615.79	36	
Zn	1612.937	15		Mn II	1615.79	60	
Ni III	1612.966	1		Ar II	1615.807	50	
Ge I	1612.974			Si I	1615.9488 st	50	30
V II	1613.016	0		Zn II	1615.949	1	-A
Cr III	1613.02	10		Si I	1615.99		31
Sc	1613.11	300		Cu III	1616.160	8	25
Cu IV	1613.127	11		P I	1616.20	120	
Ni II	1613.132	2		N V	1616.3	150w	50
Cr III	1613.14	20		Zn II	1616.364	30	-A
Fe II	1613.183	2		Ni II	1616.387	15	
F III	1613.186	50		Al II	1616.4148	10	
V II	1613.20	150	99	As I	1616.44	6	
Zn III	1613.201	15		Ni II	1616.456	2	
Ni II	1613.216	60		Ge I?	1616.509		
Fe II	1613.25	1		Ni II	1616.536	25	
Ge III	1613.27	20		Si I	1616.5794 st	70	30
V II	1613.40	5		Cu III	1616.607	150	13
Mn II	1613.50	1		Fe II	1616.65	0	
Ge I	1613.557			Mn II	1616.79	5	
Mn II	1613.62	3		Ni II	1616.917	25	
Mn III	1613.656	20	18	Cu I	1616.940	20h	31
Zn III	1613.728	20		Ar II	1616.972	100	
Na III	1613.77	160		Ni II	1616.993	2	
Ge I?	1613.818			Ni II	1617.088	50	
Ni II	1613.820	20		Ni II	1617.144	40	
Kr II	1613.853	40		Mn III	1617.163	5	18
Kr II	1613.898	80		Fe III	1617.174	50	
Zn II?	1613.938	25		Cr III	1617.23	20	
Ni II	1613.949	1		Ge I?	1617.29		
Mn V	1614.01	120	P	Ni II	1617.299	40	
Cr III	1614.04	100		Mn II	1617.34	4	
Mn III	1614.144	800	18	V II	1617.35	160	99
Cu II	1614.1608	1		Se I	1617.35	400	3
Cr III	1614.17	80		Cu IV	1617.373	13	
P I	1614.19	30		Cl IV	1617.43	100	
Zn	1614.235	25		Cr III	1617.49	10	
Kr II	1614.274	200		Mg IV	1617.65	12	

H, He; Li, Be, B, C, N, O, F, Ne, Na, Mg, Al, Si, P, S, Cl, Ar, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, Br, Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Zn II	1617.675	40 -A		Cr III	1621.10	30	
Cr III	1617.72	5		Se I	1621.21	300	3
Mn III	1617.760	200		Se II	1621.23	400	
Cr III	1617.90	10		Mn III	1621.284	1b	
Cu II	1617.9154	8	157	Cu I	1621.316	20	32
Si I	1618.0054 st	8	31	P I	1621.33	9	
P I	1618.11	45		Cu II	1621.4256	300	157
Ni III	1618.127	15		Ni II	1621.460	40	
Mn II	1618.34	2h		Zn II	1621.552	40b -A	
Al II	1618.3990	50		Zr III	1621.552	40b	
Cu III	1618.408	3		Cr III	1621.60	10	
Fe II	1618.470	500	8	Fe II	1621.685	600	8
P III	1618.66	600		Cu III	1621.723	2	
Mn III	1618.689	1		Ni III	1621.830	50	
Ni III	1618.801	20		Si I	1621.8380 st	2	31
P I	1618.93	36		Cr III	1621.87	30	
P III	1618.94	600		Ni II	1621.880	6	
Ni II	1618.950	20		N V	1621.92	35	52
Zn II	1618.968	40		Ni II	1621.926	18	
Si I	1619.0458 st	8	30	Na II	1621.940	12	
Ge III	1619.09	5		Na III	1621.94	100	
V II	1619.18	100	99	Ni III	1621.942	50	17
Ni II	1619.193	1		Zn II	1621.951	15 -A	
Zn II	1619.269	80 -A		P I?	1622.08	3	
Cu IV	1619.313	19		Ni II	1622.106	80	
Ni II	1619.395	6		Na II	1622.347	12	
Ni III	1619.414	20		Cu II	1622.4278	100	112
Fe II	1619.52	1		V II	1622.432	3	
Si I	1619.5266 st	15	29	V III	1622.45	10	
Ni II	1619.607	7		Zn II	1622.505	100	
Zn III	1619.616	80		Cr V	1622.53	20	
Mn III	1619.62	40h	18	Cr III	1622.61	20	
Ni III	1619.642	30		Co II	1622.661	0	
N V	1619.7	250w	53	Se I	1622.73	200	17
Cu IV	1619.735	16		Ni II	1622.796	20	
Ge II	1619.74	1		Zn	1622.879	15	
C V	1619.80		38	Cl IV	1622.86	200	
Ni II	1619.857	20		Si I	1622.8806 st	90	30
Ge III	1619.88	10f		Si III	1622.892 P		45
B V	1619.92 P			Si III	1622.913 P		45
Cr III	1619.94	100		Ni II	1622.981	1	
V III	1619.95	5		Cr III	1623.01	10	
Ni II	1619.964	6		Si III	1623.055 P		45
Co III	1620.051	1		Fe II	1623.091	160	43
C III	1620.07	300	11.72	Mn III	1623.122	10	
Fe II	1620.15	0		Mn II	1623.14	40	
Zn IV	1620.165	40		Cu II	1623.1732	20	110
Co III	1620.254	1		As I	1623.26	2	
C III	1620.33	200	11.72	O VII	1623.29		
Ni II	1620.331	18		F III	1623.294	150	
Si I	1620.4049 st	60	30	Si I	1623.3663 st	8	29
Ni II	1620.428	1		F III	1623.402	250	
Cr III	1620.44	10		Zn II	1623.479	40 -A	
Ni III	1620.443	100		Si I	1623.4971 st	10	29
C III	1620.59	10	11.72	Cu IV	1623.508	12	
Mn III	1620.602	1000	18	B II	1623.582	450	3
Ge III	1620.62	10		S IV	1623.62	50	
C III	1620.68	100	11.72	Ni III	1623.622	35	
Cr III	1620.76	10		Fe II	1623.715	1d	
Cu III	1620.776	0	12	V	1623.73	15	
Ni II	1620.946	1		B II	1623.771	300	3
Mn V	1621.00 P	160		P I	1623.83	75	
V III	1621.01	40		Se I	1623.90	100	
Ge II	1621.03	100h		Mn III	1623.911	300	
Ge III	1621.08	10		Kr II	1623.948	120	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
P I	1623.99	30		Mn III	1627.200	3h	
S IV	1624.00	200		Cr III	1627.25	30	
B II	1624.018	600	3	Mg I	1627.3	P	
Zn II	1624.020	30	-A	N II	1627.349	P	
Na III	1624.07	240		N II	1627.376	P	100
Ni II	1624.084	60		Ni II	1627.396		12
Ge I	1624.1300	2	st	Fe II	1627.401		4
Mg IV	1624.155	15		Co II	1627.506		10
B II	1624.16	400	3	Mg I	1627.53	P	
Ni II	1624.172	20		Ni II	1627.656		4
Fe III	1624.206	150		V III	1627.67	150	
Ni III	1624.220	20	17	Mn III	1627.743	20	
B II	1624.340	450	3	Si I	1627.7459	st	30
P I	1624.43	2		Ni III	1627.751		5
V III	1624.53	0		Mg I	1627.8	P	
P I	1624.67	3		Cr III	1627.80		20
Ni II	1624.773	16		P I	1627.86		9
Ge I	1624.78			Cu III	1628.086		25
As I	1625.17	1		Mg I	1628.12	P	
Se I	1625.19	140		Ni II	1628.126		15
Mg I	1625.22	P		Cu III	1628.295	150	13
Ni II	1625.233	25		Fe III	1628.304	200	
Mn II	1625.28	10	76	Cr III	1628.39	120	
Ni II	1625.298	2		Zn	1628.470	20	
Cr III	1625.32	30		Ni II	1628.497	10	
Mn II	1625.35	20	76	Mg I	1628.5	P	
P I	1625.40	30		Cr III	1628.58		10
Se I	1625.45	120		Ni II	1628.726		15
Ge I	1625.46			Mg I	1628.80	P	
Mg I	1625.50	P		Ni II	1628.810		20
Cu III	1625.500	0		Ar II	1628.825	100	
Fe II	1625.520	400	43	Se I	1628.85	160	4
Si I	1625.5320	35	29	N II	1628.896	P	
Al II	1625.6271	150	9	N II	1628.922	P	
Si I	1625.7051	70	27	Cr III	1628.98		100
Cr III	1625.78	10		Ni III	1629.000	25	
P I	1625.80	75		Se I	1629.06	120	4
Mg I	1625.81	P		N II	1629.079	P	100
Mn II	1625.89	10		Mn III	1629.117	400	
Fe II	1625.909	300	8	Fe II	1629.154	600	8
V	1625.92	50		Zn III	1629.157	100	
Zn III	1626.009	1		P I	1629.17	60	
Mg III	1626.093	4		Mg I	1629.2	P	
Ni III	1626.096	100		S IV	1629.20	200	
Cu III	1626.139	100	13	Ni II	1629.282	100	
Mg I	1626.16	P		Cu III	1629.301	0	12
Ni II	1626.161	12		Fe II	1629.376	40	
Zn II	1626.200	3	-A	Si I	1629.403	st	20
Se I	1626.25	240	5	Si I	1629.438	st	100
Ni II	1626.309	20		Ni II	1629.445		11
Ni II	1626.320	15		Cr III	1629.56	100	
Cr III	1626.33	100d		As II	1629.565	0	
Ni II	1626.366	6		Mg I	1629.59	P	
Na II	1626.372	20		P I	1629.59		15
Mg I	1626.4	P		Ni II	1629.591		70
Cu III	1626.411	100	13	Ge I	1629.600		
Mg I	1626.56	P		V III	1629.64	125	
Mg I	1626.8	P		Co III	1629.666	1	
Cr III	1626.85	50		Mg I	1629.7	P	
Mn III	1626.885	0		Mn III	1629.715	20	
Ni II	1626.961	12		Ni II	1629.718	1	
Mn III	1626.99	6	18	N II	1629.832	P	10
Mg I	1627.02	P		Ar II	1629.834	100	
Si I	1627.0498	20	29	Mn II	1629.84	20	76
Ar II	1627.085	20		Kr II	1629.867	220	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1629.94	10	76	Ge I	1633.312		
Si I	1629.9477 st	100	27	Si I	1633.3277 st	40	27
Mn II	1630.00	7	76	Co II	1633.370	0	
Zn II	1630.110	25 -A		Br I	1633.404	250	
Ni III	1630.120	3		Ge I	1633.468	2	
Ni II	1630.130	20		V II	1633.51	250	18
Ge I	1630.1733 st	2		Mn III	1633.51	20h	
Fe II	1630.19	1		Ni IV	1633.549	20h	
Cu II	1630.2681	20		Cr III	1633.60	20	
Ni II	1630.356	10		Ni II	1633.625	10	
Mn III	1630.362	0		Na III	1633.64	80	
As I	1630.48	4		P I	1633.69	2	
Mg I	1630.52 P			As I	1633.71	5	
Zn III	1630.546	5		Mn III	1633.800	500	
Mg I	1630.6 P			Fe II	1633.908	300	43
Ni III	1630.602	5		Si I	1633.9851 st	90	28
V II	1630.717	5		Ni II	1633.988	35	
V III	1630.72	10		P I	1634.10	21	
Mn III	1630.768	0		Cr III	1634.12	120	
V II	1630.82	200	18	As II	1634.298	4	
Cr V	1630.91	100		Fe II	1634.345	400	8
Ni II	1631.024	25		Kr II	1634.396	160	
Fe II	1631.120	600	8	Mg I	1634.52 P		
Si I	1631.1676 st	70	26	Si IV	1634.607	70	28
Ni II	1631.182	12		Cr III	1634.61	10	
Zn II	1631.364	20 -A		Mg I	1634.7 P		
Ni IV	1631.376	100h		V II	1634.783	6	
Ni III	1631.479	2		V II	1634.98	0	
Cr III	1631.49	20		Ni II	1635.070	30	
Zn II	1631.539	12 -A		Cr III	1635.10	100	
Mg I	1631.62 P			Zn II	1635.180	20 -A	
Si I	1631.62		27	Ge I	1635.2590 st	2	
Mn III	1631.638	0		Zn II	1635.277	20 -A	
Zn III	1631.653	8		Ni II	1635.340	100	
Cr III	1631.68	20		Fe II	1635.398	700	68
Mg I	1631.7 P			Cr III	1635.48	100	
As II	1631.725	0		Co III	1635.521	1	
Ni III	1631.754	2		Ni IV	1635.707	300	
Cr III	1631.89	20		P I	1635.79	9	
Zn I	1632.001	10	2	P III	1635.80	200	
Kr II	1632.037	40		Sc I?	1635.80	20	
Mn II	1632.10	2		V II	1635.86	200	18
V II	1632.135	0		Mg III	1635.946	4	
Ni II	1632.152	15		V II	1636.02	400	18
Ni III	1632.166	100	17	Ge I	1636.062		
Ni II	1632.171	30		P I	1636.20	9	
Zn III	1632.171	2		Ni II	1636.231	4	
Cu I	1632.326	5		Ge I	1636.312	5	
V II	1632.343	5		Fe II	1636.321	600	8
Co II	1632.347	10		Cr III	1636.35	200	
Zn II	1632.390	15 -A		V III	1636.45	50	
Ni II	1632.488	6		Mg I	1636.48 P		
Cr III	1632.62	100		Ni II	1636.488	3	
Zn III	1632.626	10		Mn III	1636.559	3	
Fe II	1632.668	20	43	Mg I	1636.6 P		
Cr III	1632.85	20		Cu II	1636.6050	10	112
Mg I	1632.93 P			Cr III	1636.69	10	
Cu IV	1632.948	12		V III	1636.72	25	
Ni II	1632.960	2		Mn II	1636.75	25	76
Mg I	1633.0 P			V III	1636.77	5	
Cr III	1633.17	20		Mn II	1636.87	15	76
Cu III	1633.192	0		Mn II	1636.96	6	76
Si I	1633.2230 st	45	26	Si III	1636.990	20	47
Cu IV	1633.257	121		Si I	1637.0106 st	4 -A	104
V IX	1633.3	f		As II	1637.033	0	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V III	1637.05	10		Ar II	1640.343	100	
Ni II	1637.072	20		Ge I	1640.394		
Ni II	1637.140	2		He II	1640.474	P	12
Ni II	1637.267	10		Cu I	1640.474	5r	13
Co II	1637.302	10		He II	1640.490	P	12
P I	1637.38	100		As II	1640.491	1	
Fe II	1637.397	300	42	P IV	1640.58	120	
V II	1637.439	10		Ni II	1640.769	7	
Ni II	1637.439	100		V II	1640.85	300	18
As II	1637.470	10		Mg IV	1640.91	10	
Ni II	1637.509	20		Cr III	1640.94	190	
Zn	1637.529	25		S I	1641.085	7	
Cr III	1637.53	100h		Cr III	1641.09	50	
V II	1637.55	50		Zn II	1641.257	2b-A	
Ni II	1637.589	300		Zn III	1641.257	2b	
Ge I	1637.74			S I	1641.296	10	
V II	1637.77	500	18	Ni II	1641.418	10	
Cr III	1637.90	100		Cr III	1641.56	100	
V II	1637.93	190	18	V III	1641.64	50	
O VII	1637.96			Fe II	1641.759	500	68
Mn III	1637.974	2h		Cr III	1641.83	10	
Kr II	1637.981	40		Mg I	1641.97	P	
Cr III	1638.10	10		Mn III	1642.054	10	
Ge I	1638.138			Cr III	1642.16	100	
Zn II	1638.239	20 -A		Fe II	1642.187	100	274
Si I	1638.2823	2 -A	104	Mg I	1642.2	P	
Cr V	1638.42	700		Cr III	1642.208	1000	12
Mg IV	1638.54	8		Mn IV	1642.249	40	
P I	1638.68	3		Ni II	1642.299	20	
Cr III	1638.78	10		Ni II	1642.324	40	
Kr II	1638.807	200		Ni II	1642.351	15	
Co II	1638.815	20		Fe II	1642.43	2	
Kr III	1638.82	60		Co II	1642.485	30	
V II	1638.858	3h		Fe II	1642.50	2	
P I	1638.89	15		Cu IV	1642.614	19	
Mg I	1638.90	P		Ni II	1642.670	5	
Cl IV	1638.93	10		Ni II	1642.739	2	
Cu III	1638.956	150	22	Mn III	1642.78	30	21
Ge I	1638.958	3		Ni II	1642.792	2	
Ni I	1638.963	4		Ca II	1642.802	40	5
Al IV	1639.00	100		Mg III	1642.826	20	
P I	1639.09	24		Mn II	1642.90	1	
Mg I	1639.1	P		V II	1643.03	300b	18
V II	1639.13	400	18	V III	1643.03	1000b	
Co II	1639.276	40		Cr III	1643.07	70	
Zn III	1639.318	100b		Ma II	1643.08	2	
Zn IV	1639.318	100b		Ge I	1643.1931	st	4
Cr V	1639.35	500		Cr III	1643.20	100	
Fe II	1639.403	600	8	Ni II	1643.271	80	
O IV	1639.430	15		Ni II	1643.334	20	
Cr III	1639.46	10		Cr III	1643.34	80	
O VII	1639.58			Se I	1643.39	300	4
Fe II	1639.62	2		Cl IV	1643.40	100	
Ge I	1639.641	2		V II	1643.43	300	18
Ge I	1639.7300	st	6	Fe II	1643.576	300	42
O IV	1639.842	10		As II	1643.610	5	
Cr III	1639.90	20		O V	1643.68	560w	
Cu III	1639.960	5		Mn III	1643.702	30h	21
As II	1639.979	5		Ca II	1643.770	200	5
Ni III	1639.996	25		As I	1643.79	2	
Co II	1640.127	20		Cr III	1643.86	50	
V II	1640.15	350	18	Cr V	1644.00	400	
Fe II	1640.150	240	43	Ni II	1644.040	14	
Si I	1640.267	st	104	Ni II	1644.137	6	
Ile II	1640.332	P	12	Al II	1644.2348	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
As I	1644.33	5		Ge II	1649.1942 st	500	2
V II	1644.334	4		Co III	1649.265	40d	36
Ca II	1644.442	360	5	Co II	1649.302	100	
Ni III	1644.466	1		Ni II	1649.396	13	
Ge I	1644.52			Fe II	1649.423	300	42
Cr IV	1644.63	50		Cu II	1649.4575	25	139
V II	1644.665	5		Mn III	1649.50	150w	
Fe II	1644.76	1		Cr III	1649.51	150	
Al II	1644.8089	100		Mn II	1649.52	1	
Zn III	1644.829	100		Fe II	1649.572	400	68
Se III	1644.87	100		Ni III	1649.771	100	17
Mn II	1644.96	0h	21	Ca II	1649.858	600	1
C III	1645.03	100	11.64	Ni II	1649.905	3	
Mn III	1645.03	15h		Cr III	1649.93	40	
Mg IV	1645.06	5		Cu I	1649.93	5r	12
Ge I	1645.1146 st	1		V III	1650.14	1000	
Cr III	1645.16	50		F II	1650.200	1	
Mn II	1645.32	10		Zn II	1650.211	20	-A
Zn II	1645.389	30	-A	Ge I	1650.2945 st	4	
As II	1645.590	1		Cu I	1650.301	5r	12
Ni II	1645.654	0		As II	1650.319	1	
P III	1645.91	200		V III	1650.40	75	
Mg I	1645.930	0		Ni II	1650.412	14	
Co III	1645.986	6	36	Ar II	1650.535	100	
Cr III	1646.15	70		Mn IV	1650.573	300	
Fe II	1646.182	400	68	Kr IV	1650.630	120	
Zn IV	1646.290	8		Fe I	1650.704	400	68
Mg I	1646.3	P		F III	1650.764	250	
Cr III	1646.56	20		Ni II	1650.835	10	
Mn III	1646.59	2h	21	As II	1650.842	0	
V III	1646.69	200		Na III	1650.91	20	
Cu I	1647.030	0h		F III	1650.974	20	
Mn II	1647.07	1		Mn II	1651.02	30	
Co III	1647.100	0	36	Si I	1651.0279 st	25	25
Ge I	1647.1222 st	2		Mg I	1651.165	10	
Fe II	1647.159	500	68	Cl IV	1651.21	100	
Zn IV	1647.161	2		Cr III	1651.32	10	
Kr III	1647.36	40		Mn III	1651.35	80	21
Mn III	1647.46	250	21	Ge I	1651.5288 st	3	
As II	1647.527	10		Cr III	1651.56	100	
Ge I	1647.5310 st	3		Fe II	1651.61	4	
P III	1647.55	300		Mn IV	1651.685	350	
Fe II	1647.55	2		Mg I	1651.7	P	
Zn II	1647.571	8	-A	Cu I	1651.721	20r	30
Ni II	1647.637	10		Zn III	1651.739	100	
Cr III	1647.71	5		Cu III	1651.758	8	
Zn II	1647.754	5	-A	Co III	1651.783	0	36
Co II	1647.758	20		Mg IV	1651.87	1	
Fe II	1647.76	2		Cr III	1651.92	20	
Mn IV	1647.773	300		Ge I	1651.9547 st	6	
Mn III	1647.827	30	21	Ca II	1651.991	320	1
Cl IV	1648.04	10		Cu III	1652.010	150	12
V III	1648.10	75		Co III	1652.024	1	
Ge IV	1648.14	60f		Cr III	1652.08	50	
C- III	1648.36	50		Co III	1652.182	1	
Mn III	1648.375	100h	25	Mg III	1652.218	12	
Ni II	1648.381	1		Zn II	1652.241	10	-A
Zn III	1648.406	2		Ni II	1652.270	13	
Cr III	1648.58	10		F III	1652.288	3	
F III	1648.608	6		Ge I	1652.347	1	
Mg III	1648.822	4		Ni II	1652.355	3	
V III	1648.99	100		F III	1652.416	60	
Zn	1649.055	15		Fe II	1652.44	0	
Cr III	1649.13	50		Cr III	1652.46	150h	
Co III	1649.153	1		Fe II	1652.489	10	42

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr V	1652.52	200		Fe III	1656.831	150	
Zn III	1652.541	3		Ni II	1656.846	3	
Ni II	1652.726	10		C I	1656.9282 st	300	2
Co III	1652.791	2	36	Co II	1656.948	60	
Ni II	1652.839	15		C I	1657.0078 st	1000	2
Ni III	1652.866	300		Co II	1657.028	80	
Mn II	1652.91	10		Fe II	1657.049	4	42
Na II	1652.921	20		Cr III	1657.18	10	
Zn II	1652.931	5 -A		Mn III	1657.20	10	
P I	1652.97	30		Ni II	1657.313	10	
Mn II	1653.00	2		C I	1657.3797 st	300	2
Cr III	1653.06	10		Co II	1657.400	20	
Li II	1653.076	60		Cr III	1657.45	20	
Ni III	1653.119	200		Fe II	1657.531	30	
Li II	1653.132	100		Cr III	1657.71	40	
Li II	1653.212	20		Zn IV	1657.790	5	
Ar II	1653.322	100		Ni IV	1657.878	200	
Ni II	1653.369	18		C I	1657.9070 st	300	2
Si I	1653.3760 st	40	25	Co II	1657.933	30	
Cu III	1653.399	5		C I	1658.1222 st	350	2
Fe II	1653.40	0		Co II	1658.145	40	
V III	1653.41	25		Zn II	1658.245	60 -A	
Mn III	1653.57	400	25	Cr III	1658.30	20	
P I	1653.68	24		Mg I	1658.311	20	
Ni II	1653.687	10		Kr II	1658.358	40	
Zn III	1653.697	60		Mn II	1658.37	3	
Ni II	1653.779	10		Ge I	1658.3752 st	3	
Mn III	1653.823	50		Co II	1658.377	20	
Mn IV	1653.833	750		V III	1658.42	200	
As I	1653.92	4		Cu III	1658.472	120	12
Fe I	1654.06	1		Cr III	1658.63	20	
Fe II	1654.111	100	68	Mn III	1658.68	6w	25
V III	1654.14	25		Na III	1658.71	40	
Cr III	1654.23	10		Fe II	1658.771	300	41
Ge II	1654.46	75h		Mg IV	1658.868	100	
Fe II	1654.476	100	42	Cr III	1658.93	120h	
Cu III	1654.574	150	12	Mg I	1659.0 P		
Cu IV	1654.655	190		Co II	1659.062	30	
Cr III	1654.79	10		Ge II	1659.22	3h	
Fe II	1654.91	0		Mg III	1659.244	12	
Zn III	1654.950	5		Mn IV	1659.249	700	
Si I	1655.012	1h	25	Cr III	1659.26	100	
Zn II	1655.020	30 -A		V III	1659.27	50	
Mn II	1655.04	1		Ni III	1659.438	10	
Fe II	1655.042	20	68	Fe II	1659.483	400	40
Co II	1655.089	20		Mn II	1659.50	0	
Cu I	1655.318	30r	29	Mn III	1659.602	100	24
Cr III	1655.48	70		Co III	1659.757	2	58
Fe II	1655.50	3		Kr III	1659.81	40	
Cr V	1655.55	250		Cr III	1659.82	30	
Ni IV	1655.643	80		V III	1659.94	25	
Ni II	1655.749	1		Cu II	1660.0009	25	169
N V	1655.88	40	49	Mn II	1660.06	10	
Ni II	1655.903	0		Cr III	1660.24	80	
As II	1656.004	5		Zn II	1660.247	4 -A	
Mn IV	1656.046	450		V III	1660.25	50	
Ni III	1656.126	250		Cr III	1660.44	10	
Mn IV	1656.166	550		Si I	1660.4748 st	15	24
C I	1656.2665 st	350	2	Mn II	1660.516	10	
Cu II	1656.3219	20	169	V II	1660.53	80	109
Mn IV	1656.388	700		As II	1660.554	500	
Mn VI	1656.510	3		Cr III	1660.70	150	
Co II	1656.669	30		Ge I	1660.7955 st	2	
As II	1656.704	50		O III	1660.803	20	
Fe II	1656.73	4		Fe II	1660.88	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cu III	1660.887	15		Mn IV	1664.733	750	
Ni II	1661.018	20		Co II	1664.824	10	
Cr III	1661.02	10		V II	1664.87	5	
F III	1661.025	1		Cr III	1664.90	10	
Si II	1661.059	3b -A	28	Zn	1665.072	20	
Cu IV	1661.259	10		Cr III	1665.18	20	
V II?	1661.27	600		Co III	1665.269	10	23
Co II	1661.281	50		Ge I	1665.2751 st	5	
Zn II	1661.306	2 -A		Zn III	1665.352	6	
Mn IV	1661.324	350		V III	1665.40	200	
Ge I	1661.3453 st	5		Ni II	1665.477	4	
Fe II	1661.347	1	41	Cr III	1665.53	70	
Co III	1661.422	2	58	Cr III	1665.62	50	
Be I	1661.478	1000		Mn III	1665.701	15	24
Zn II	1661.495	4 -A		V III	1665.71	250	
F III	1661.595			Ni III	1665.859	20	
Mn II	1661.576	0		Cr III	1665.98	20	
Cr III	1661.58	20		Ni II	1666.045	0	
V III	1661.62	15		Fe II	1666.06	0	
Si II	1661.633	1h -A	28	Ni III	1666.102	20	
V III	1661.73	15		O III	1666.153	250	
Ni III	1661.786	200		Mn III	1666.255	10h	
Cr III	1661.93	40h		Co II	1666.316	40	
Ar II	1662.253	100		Si I	1666.3762 st	60	23
Zn III	1662.279	2		Co II	1666.406	40	
V II	1662.28	5	34	F III	1666.652	150	
Ni III	1662.374	1		Cr III	1666.66	100	
Fe II	1662.369	10	42	S I	1666.6875	500	11
V III	1662.41	15		V	1666.76	10	
Ni II	1662.423	20		Zn IV	1666.760	60	
Fe II	1662.43	1		Ni II	1666.828	4b	
Mn III	1662.533	3		Ni III	1666.828	20h	
B I	1662.605	50		B I	1666.869	150	
Zn II	1662.695	15 -A		Mn IV	1666.995	800w	
As I	1662.76	2		v II	1667.084	1	
Mn III	1662.827	0		Se II	1667.15	200	
Ni II	1662.892	25		Si II	1667.267	0 -A	28
Mn III	1662.943	0		B I	1667.291	200	
Ge I	1662.9860 st	3		Cr III	1667.32	20	
Cu II	1663.0020	60	181	Cr III	1667.44	30	
Cr III	1663.05	20		Co II	1667.534	10h	
B I	1663.035	100		Si I	1667.6288 st	70	23
V III	1663.07	200		Cr III	1667.63	120	
Fe II	1663.221	300	40	Mn IV	1667.651	100	
Mg III	1663.287	4		V II	1667.66	100	109
V II	1663.34	30	34	Mn III	1667.698	20h	24
Zn III	1663.344	40		Ge I	1667.8015 st	6	
Co III	1663.500	1		V II	1667.88	50	34
Ge I	1663.5393 st	10		Fe II	1667.91	1	
Ni II	1663.563	16		Zn II	1667.911	5 -A	
V II	1663.60	150	109	Cr III	1667.92	20	
Mn II	1663.653	3		Ni II	1667.930	4	
Cr III	1663.75	40		V II	1668.03	300b	17
Fe II	1663.79	2		V III	1668.03	300b	
V III	1663.82	150		Co III	1668.032	1	23
Cr III	1663.94	30		Mn III	1668.047	1h	
Zn	1664.265	50		Ne II	1668.057	50	
Cu I	1664.303	10r	11	Ni II	1668.122	1	
Ni II	1664.316	10		Cr III	1668.24	100	
Zn II	1664.326	0 -A		Cr III	1668.33	50	
Cr III	1664.35	150		Kr II	1668.416	20	
Ni II	1664.382	2		Mg I	1668.431	50	
Ni II	1664.459	8		Si I	1668.5204 st	70	23
Si I	1664.5177 st	35	24	Na II	1668.569	35	
Cu I	1664.708	10r	11	Zn II	1668.585	1 -A	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co II	1668.655			Mn III	1672.009	10	
V III	1668.72	50		Cr III	1672.03	10	
Mn III	1668.799	0		P I	1672.05	105	
Cl VII	1668.8			Zn III	1672.120	5	
Cr III	1668.96	70		Co III	1672.133	0	
V III	1668.98	100		Ni III	1672.213	50	
Fe II	1668.99	2		F III	1672.341	3	
Mn III	1669.032	200		V II	1672.44	150	17
Ar II?	1669.10	50	6	P I	1672.48	270	
V III	1669.20	15		Si I	1672.5961 st	80	23
Cu III	1669.273	5		Si IV	1672.612 P		27
Zn III	1669.297	2		Cr III	1672.64	200	
Ar III	1669.30	250	6	Cu II	1672.7757	10	110
Ga II	1669.38	150		Mn III	1672.974	200	
Mn III	1669.404	200		Cr III	1673.00	20	
Zn II	1669.453	2 -A		Zn III	1673.049	100	
Mg I	1669.51 P			Ar III	1673.14	50	6
Na III	1669.52	60d		Co II	1673.199	10	
Na III	1669.52	60d		V III	1673.23	10	
Cr III	1669.58	20		Ar III	1673.24	150	6
Mg IV	1669.588	50		Si III	1673.315	140	58
Ar III	1669.67	350	6	Co III	1673.325	2	
Mn III	1669.691	2		Ar III	1673.43	350	6
Zn III	1669.699	2		Cu I	1673.440	5	29
Co II	1669.915	25		Fe II	1673.462	300	102
Cr III	1669.97	150		Cr III	1673.58	50	
V II	1670.01	100	109	Na II	1673.649	15	
Mn IV	1670.078	700		Mn IV	1673.653	10	
Cu III	1670.140	250	19	Ni III	1673.659	10	
Cr III	1670.27	50		Co III	1673.679	4	
Mn III	1670.315	3		P IV	1673.76	20	
F III	1670.388	500		Cr III	1673.77	100d	
Cr III	1670.45	150		Ge I	1673.850	1	
Zn III	1670.456	20		Ca II	1673.860	120	
Ge I	1670.6085 st	9		V III	1673.91	150	
Zn II	1670.617	2b -A		P I?	1673.94	3	
Zn III	1670.617	2b		Co II	1673.956	20	
V II?	1670.66	300		Ni II	1674.000	10	
Ne II	1670.737	20		V II?	1674.09	80	
Fe II	1670.742	500	40	Fe II	1674.254	40	41
Al II	1670.7867	1000	2	P III	1674.26	1	
Cr III	1670.80	20		Ge I	1674.2703 st	9	
V II	1670.90	50	34	Ne II	1674.290	60	
Ni II	1670.935	7		Zn III	1674.291	12	
Ge I	1670.9490 st	2		Mn III	1674.408	3h	
Ge I	1671.0096 st	3		Kr II	1674.577	80	
Fe II	1671.010	20	40	Cu III	1674.602	250	18
Mn III	1671.015	200		P I	1674.61	690	2
P I	1671.07	210		Fe II	1674.716	80	40
Si I	1671.1168 st	40	23	Cr III	1674.73	150	
Se I	1671.15	500	3	Li I	1674.76		-A
Zn II	1671.313	20 -A		V III	1674.85	10	
Cr III	1671.40	10		Co II	1674.953	30	
Mn III	1671.474	30		Zn III	1675.059	3	
Cu I	1671.484	3	28	Si I	1675.2053 st	200	23
P I	1671.49	105		Se I	1675.27	500	3
Ni II	1671.514	12		Mn III	1675.329	3	
Ni IV	1671.645	70		Mn IV	1675.472	250	
P I	1671.68	540	2	Mn III	1675.52	200	
Zn III	1671.779	3		Ge I	1675.5605 st	7	
Cr III	1671.85	30		Ar III	1675.58	350	6
F III	1671.870	50		Ar III	1675.64	200	6
Na II	1671.886	35		Mg III	1675.710	2	
Cu III	1671.886	250	18	Cr III	1675.72	200	
Mn IV	1671.995	600		N II	1675.726 P	150	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V	1675.75	100		Sc III	1679.824	10	
N II	1675.755 P	300		Cr III	1679.83	100	
Mn IV	1675.776	300		Ge I	1679.9868 st	2	
Zn III	1675.788	3		Mg IV	1679.987	300	
N II	1675.920	100		Ca II	1680.051	200	
Ni III	1676.054	1		Ca II	1680.129	20	
V III	1676.08	5		Co II	1680.187	20	
Mn III	1676.147	3		V V	1680.199	100	
Cr III	1676.20	150		Cu II	1680.3118	1	110
Ge II	1676.26	0		Mn II	1680.401	40	39
Ni II	1676.317	3		Fe II	1680.41	1	
Zn III	1676.443	20b		V III	1680.44	250	
Cu III	1676.469	8		Ni III	1680.532	10	
Zn II	1676.692	2b -A		Co III	1680.734	0	
Zn III	1676.692	2b		Ne II	1681.035	50	
Si I	1676.8207 st	15	2;	V III	1681.05	5	
Fe II	1676.853	20	41	Co III	1681.074	2	23
Mn III	1676.95	30		Sc III	1681.105	14	
Cr III	1676.96	100		Fe II	1681.12	1	
Kr II	1677.058	160		F III	1681.182	150	
V III	1677.18	25d		V II	1681.22	50	
Zn III	1677.216	5		Ge I	1681.3426 st	7	
Ni II	1677.297	1		F III	1681.478	10	
Cu III	1677.373	100	31	Cu III	1681.481	150	18
F III	1677.397	600		V III	1681.56	5	
Zn IV	1677.399	2		Li II	1681.667	400	
Cr III	1677.54	10		Ne II	1681.683	120	7
Cr III	1677.68	10		Al II	1681.808	80	
Fe II	1677.847	10		Zn III	1681.858	1	
V II	1677.88	30	17	V	1681.91	10	
Co III	1677.901	3	23	Ni III	1682.029	10	16
Cu IV	1677.908	21		Cu III	1682.044	5	24
Ge II	1677.99	5		Co II	1682.124	20	
Mn IV	1678.018	30		V II	1682.17	5	
Mn III	1678.08	1h		Co II	1682.355	100	
P III	1678.12	10		Cr III	1682.36	60	
Cr III	1678.41	100		Ni III	1682.443	1	16
Ni II	1678.447	5		Kr II	1682.622	120	
Ni II	1678.476	10		Zn III	1682.656	1	
Mn II	1678.63	2		Si I	1682.6734 st	70	21
Zn III	1678.728	2		Cu III	1682.695	15	26
Na III	1678.74	20		Zn II	1682.698	5 -A	
Mn IV	1678.827	0		V II	1682.997	2	
Ni II	1678.941	1		Mg IV	1683.016	500	
Si I	1678.992		22	Mn IV	1683.115	450	
O III	1679.06	400		Si I	1683.1189 st	3	22
Ni II	1679.068	7		Cu II	1683.1549	40	
Cu III	1679.151	200	12	Cu II	1683.1585	40	
Zn III	1679.180	0		Cl III	1683.18	10	
V III	1679.19	300		Cu II	1683.1884	40	
Cr III	1679.25	300	72	V II	1683.392	1	
Zn III	1679.321	2		Mg I	1683.412	100	
Ge II	1679.335	2		Ni III	1683.471	2	
Cr III	1679.38	150		Cr III	1683.50	40	
Fe II	1679.381	300	102	Co II	1683.513	70	
Co II	1679.423	40		V II	1683.548	2	
Mg III	1679.470	4		Ni III	1683.688	30	
Ni IV	1679.478	150		Co II	1683.765	60	
Co III	1679.481	1		F III	1683.991	6	
Cr III	1679.53	120		Fe II	1684.005	2	
Mn II	1679.55	60		Cr III	1684.02	150	
Co III	1679.578	4	23	Cr III	1684.14	100	
V III	1679.61	5		Zn III	1684.381	6	
Zn II	1679.667	5 -A		Ca III	1684.392	25	
P I	1679.71	900	2	Ni III	1684.515	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1684.58	10	75	Mn II	1688.13	2	
Mn IV	1684.604	0		Cr III	1688.15	10	
Cu III	1684.642	250	12	Zn II	1688.240	15b-A	
Cu I	1684.674	20h	28	Zn III	1688.240	15b	
Mn II	1684.71	10		Fe II	1688.280	2	102
Zn II	1684.802	3 -A		Co II	1688.338	2C	
Mn IV	1684.809	0		Ne II	1688.356	180	7
Kr II	1684.845	20		Cr III	1688.39	40	
Ni II	1684.952	70		Fe II	1688.401	8	41
V II	1685.014	5		Zn III	1688.589	100	
Cr IV	1685.02	40		Cu III	1688.618	50	27
Ni III	1685.085	5		P I	1688.64	9	
Mg I	1685.13	P		Ca III	1688.770	450	
Zn III	1685.196	4		Se I?	1688.79	60	
Ge I	1685.2221	st	3	Cu I	1688.865	15	27
Cr III	1685.38	10		Al III	1688.958		
Ni II	1685.465	8		V III	1689.04	150	
V III	1685.47	50		Cu III	1689.051	100	24
Cu I	1685.687	25r	10	Ni III	1689.121	5	
Cr III	1685.85	150		Cr III	1689.14	10	
Co II	1685.882	20		P I	1689.25	105	
Zn II	1685.942	5b A		Mn II	1689.25	2	
Zn III	1685.942	5b		Co III	1689.283	1	
Fe II	1685.954	100	41	Si I	1689.2902	st	21
Ni II	1685.955	9		Cr III	1689.46	100	
Mn IV	1685.967	300		Ar II	1689.470	50	
Ni III	1685.977	5		Mn II	1689.48	50	39
P I	1685.99	360	6	Cl III	1689.50	100	
Zn III	1686.039	6		Mn II	1689.611	15	75
Ar II	1686.076	50		Cr III	1689.77	80	
V II	1686.19	10	33	Zn II	1689.818	25b-A	
Cu III	1686.214	150	22	Zn III	1689.818	25b	
Ni III	1686.216	75		Fe II	1689.828	200w	85
Al II	1686.2505	100		Mn II	1689.84	4	102
Cr III	1686.44	40		Co III	1689.858	20	22
Fe II	1686.455	160	40	Si I?	1689.921	1	
Cl VII	1686.5			Cr III	1690.00	30	
Zn II	1686.502	25 -A		Ge I	1690.0349	st	10
V II	1686.550	10		Zn III	1690.111	3	
Al III	1686.676			Mn IV	1690.125	500	
Fe II	1686.692	40	39	P I	1690.17	30	
V III	1686.74	50		Cr III	1690.28	300	71
V II	1686.748	15		Mn II	1690.32	0	39
Si I	1686.8185	st	21	V III	1690.35	15	
Co II	1686.934	70		Ni III	1690.372	20	
V III	1686.95	150		Fe II	1690.45	0	
Mg IV	1687.03			Cr III	1690.52	20	
Cr III	1687.03	150		Ni III	1690.634	5	
Cu I	1687.043	20r	10	Se I	1690.70	500	3
Co II	1687.069	60		Cr III	1690.72	10	
Mg III	1687.091	250		Fe II	1690.759	100	85
Si I	1687.0973	st	21	Si I	1690.7889	st	21
Cu III	1687.134	300	12	Ni II	1690.814	12	
V II	1687.40	25b	33	P I	1690.90	9	
V III	1687.40	25b		Ge I	1690.9030	st	4
Kr II	1687.456	80		Ni III	1690.974	15	
S I	1687.5305	450		Cu I	1691.076	30	27
Cr III	1687.56	70		Ge I	1691.0897	st	20
N IV	1687.60	50	20	Cr III	1691.09	50	
N IV	1687.82	100	20	Ni II	1691.231	11	
Co II	1687.868	10		Mn II	1691.248	40	39
V III	1687.87	200		Fe II	1691.271	160	41
Ni III	1687.897	400	25	Co II	1691.339	30	
Cu I	1688.093	20	28	Mn II	1691.45	1	
N IV	1688.11	150	20	Zn II	1691.470	1 -A	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Zn II	1691.592	1	-A	Ni II	1695.594	8	
Ge I	1691.6254 st	7		Ni III	1695.599	30	
Cr III	1691.64	50		Cr III	1695.77	70	
Mn IV	1691.684	750		Ga II	1695.81	250	
Na III	1691.70	20		Ge I	1695.8597 st	8	
P I	1691.75	60		Ni III	1695.910	5	16
Cr III	1691.76	40		Co III	1696.008	200	22
Ca II	1691.779	80		Ni III	1696.195	5	
P IV	1691.81	40		Cu III	1696.202	8	
Ge I	1691.8556 st	7		Si I	1696.2065 st	200	18
As I	1691.87	7		Cr III	1696.27	70	
V III	1691.90	75		Fe II	1696.463	10	84
V II	1692.11	100	33	Mn II	1696.51	60	
Ni III	1692.219	3h		N III	1696.54	150	
Cr III	1692.31	30		Cr III	1696.64	600	71
Mn II	1692.34	2		Ge I	1696.7160 st	8	
Mn II	1692.46	10	102	Fe II	1696.794	160	38
P I	1692.48	15		Cr III	1696.85	20	
Ni III	1692.514	1000	16	N IV	1696.86	150	18.91
Fe II	1692.516	1	38	P III	1696.92	100	
Zn III	1692.554	8		Co III	1696.980	1	
Cr III	1692.63	20		N III	1697.06 P	10	
Cu I	1692.654	5h		Fe II	1697.13	0	
Mg IV	1692.704	200		Kr II	1697.189	20	
Cu III	1692.706	150	17	Mn II	1697.19	80b	75
V III	1692.82	10		Mn II	1697.19	80b	39
Mn IV	1692.829	0		Mg III	1697.282	250	
Cr III	1692.89	600	71	Cr III	1697.43	60	
P III	1693.03	100		Fe II	1697.43	1	
V II	1693.09	100	33	Zn III	1697.433	1	
Mn IV	1693.150	750		Mn II	1697.53	12	102
Ni II	1693.177	10		Cr III	1697.84	40	71
Si I	1693.2934 st	125	18	V II	1697.90	20	33
Cr III	1693.43	30		Si I	1697.9409 st	250	18
Si I	1693.4681 st	60	21	Co III	1697.988	160	22
Fe II	1693.477	10	85	Cr III	1698.03	40	
V II	1693.49	120	33	N III	1698.08 P	100	
Ni III	1693.559	3	16	Mn II	1698.127	10	39
Fe II	1693.61	0		Ni III	1698.176	50	25
Cr III	1693.72	20		Ca II	1698.183	160	
V II	1693.756	15		Fe II	1698.190	10	40
V III	1693.76	75		V III	1698.24	50	
Co II	1693.786	20		Mn IV	1698.298	800	
Co II	1693.846	20		Ni III	1698.381	5	
Fe II	1693.936	10	41	Ni II	1698.400	4	
P I	1694.06	300	6	Fe II	1698.43	0	
Mn II	1694.24	50		Ge II	1698.43	0	
Ni III	1694.307	5		Cr III	1698.55	30	
Ge I	1694.3424 st	4		V III	1698.68	10	
Ni II	1694.384	2		Mn IV	1698.695	750	
Cr IX	1694.4	f		Cr III	1698.75	200	
Ne II	1694.481	40		Mg IV	1698.806	400	
P I	1694.50	120	6	N III	1698.87 P	100	
Cr III	1694.53	70		Mn IV	1698.911	400	
Ni III	1694.582	2		Ca III	1698.939	450	
Ne II	1694.600	80		Ni III	1699.024	10	
N III	1694.72 P	10		N IV	1699.03	200	18.91
V III	1694.78	1000b		Zn III	1699.036	2	
Ne II	1694.786	90		Mn IV	1699.062	700	
Ne II	1694.878	60		Cu II	1699.0953	60	
Cr III	1694.92	70		Cu II	1699.1023	30	
Fe III	1695.036	150		Fe II	1699.193	40	85
P I	1695.35	45		Kr II	1699.297	160	
Zn III	1695.407	100		N III	1699.32	250	
Si I	1695.5074 st	90	18	Ni III	1699.349	8	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1699.35	10		Co III	1702.790	100	22
Zn II	1699.471	3	-A	Fe II	1702.81	3	
Cu III	1699.581	0		Zn II	1702.836	2	-A
Mg IV	1699.686	100		Si I	1702.8694 st	70	16
Si I	1699.7162 st	10	18	Cr III	1702.89	80	71
V III	1699.75	5		As I	1702.94	3	
Ni II	1699.772	2		Cu III	1702.994	250	13
Cr III	1699.84	20		Mg III	1703.108	7	
N III	1699.88 P	200		V III	1703.12	5	
Co III	1699.880	0		N V	1703.218	60	45
Se I?	1699.90	80		Mn II	1703.37	5	191
Zn III	1700.053	5		Mg IV	1703.387	150	
Cr III	1700.12	20		Ni II	1703.408	25	5
F II	1700.185	10		Ni III	1703.467	50	16
Cr III	1700.29	200	34	V III	1703.70	50	
Mn II	1700.34	100		Cr III	1703.73	40	
Si I	1700.4193 st	90	18	Mg III	1703.751	20	
V II	1700.47	30	33	Cu I	1703.843	30r	8
Mn II	1700.60	1		Ni III	1703.925	3	
Si I	1700.6360 st	80	16	Cu III	1704.072	5	
Ni II	1700.665	1		Ni III	1704.128	10	
Mn II	1700.69	3	101	V III	1704.17	100d	
F II	1700.691	10		Zn II	1704.178	2b	-A
F II	1700.767	10		Zn III	1704.178	2b	
Zn IV	1700.788	2		Mg III	1704.368	4	
F II	1700.831	40		Si I	1704.4416 st	100	17
Zn III	1700.976	1		Zn III	1704.475	0	
Cu III	1701.023	200	31	Cr IV	1704.48	10	
Cr III	1701.05	30		Cr IV	1704.57	10	
Ni III	1701.081	10		Zn II	1704.577	0	-A
As I	1701.16	15		Ni III	1704.641	60	
As I	1701.22	15		Fe II	1704.652	10	39
Cu I	1701.292	10	30	V III	1704.68	50	
Cr III	1701.32	20	34	F II	1704.696	10	
Ar II	1701.358	100		Cr III	1704.79	10	
Zn II	1701.398	4	-A	Co III	1704.817	1	
Cr III	1701.48	600	71	F II	1704.834	40	
Ni II	1701.504	2		Mn II	1704.87	15	102
Ni III	1701.599	60	30	Si II	1704.967	2h	10.01
Zn II	1701.766	12	-A	Zn III	1704.971	10b	
Co III	1701.770	0		Zn IV	1704.971	10b	
V III	1701.86	50		S I	1704.986	5	
Fe II	1701.952	40	85	Mn IV?	1705.11	100	
F II	1701.993	40		S I	1705.115	3	
N IV	1702.006	250	18.91	Zn III	1705.115	2	
V	1702.01	10		V III	1705.19	40	
Fe II	1702.043	500	38	Cu III	1705.333	150	21
Cu III	1702.102	200	11	Cr III	1705.36	10	
F II	1702.130	200		Mn III	1705.497	3	
Ni II	1702.150	1		Ni II	1705.581	11	
Ar II	1702.188	100		Mn IV	1705.631	20	
Cu III	1702.190	150	26	Cu III	1705.633	200	30
Ge II	1702.20	0h		As I	1705.74	4	
Zn II	1702.210	10b	-A	Cr III	1705.76	10h	
Zn III	1702.210	10b		Zn	1705.833	10	
Cu IV	1702.253	20		Mn IV	1705.931	10	
Ni II	1702.265	7		Cr III	1705.96	80	
N V	1702.30 P	50	45	Ar II	1705.980	100	
Cu III	1702.349	15	26	Zn III	1705.997	15b	
Ge I	1702.3873 st	4		Zn IV	1705.997	15b	
Co III	1702.506	1		Ni III	1706.041	10	
Zn III	1702.540	7		Co II	1706.088	20	
Ni III	1702.591	10		Fe II	1706.142	20	38
Si I?	1702.6978	;		Cr III	1706.15	50	
Fe II	1702.74	5		Ni II	1706.170	2	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V III	1706.22	100		Ni II	1710.032	3	
Ni III	1706.246	15		Zn II	1710.052	10	-A
S I	1706.360	10	10	Mg I	1710.07	P	
P I	1706.41	180		Cr III	1710.10	30	
Mn II	1706.57	10		Mn III	1710.138	2	
Cr IV	1706.65	30h		V II	1710.147	2	
Zn III	1706.659	100		As I	1710.16	7	
Se I?	1706.70	40		Fe III	1710.374	200	
Co II	1706.823	80		Cr III	1710.60	20	34
Co II	1706.937	20		Si I?	1710.744	1	
Mg I	1707.064	150		Si II	1710.826	10h	10
Si I	1707.1148	8	16	Ar II	1710.909	50	
S I	1707.132	8	10	Cr III	1711.02	200	
Mn III	1707.157	2		Cr III	1711.12	P	34
Zn II	1707.191	20b -A		Co II	1711.127	10	
Zn III	1707.191	20b		Cu III	1711.257	15	
Ni III	1707.242	10	25	Si II	1711.296	20h	10
Cr III	1707.27	30		Cu III	1711.437	15	
Ni III	1707.346	200	25	Co III	1711.531	1	
Co III	1707.348	200	22	V III	1711.61	100	
Cu I	1707.391	5f		Cr III	1711.63	200	34
Fe II	1707.399	40	84	Fe II	1711.658	1	
Ni III	1707.426	200	30	Ni III	1711.779	10	16
Mn IV	1707.428	750		Mn II	1711.83	100	
V III	1707.43	150		Zn III	1711.982	1	
Cr III	1707.43	800	71	Mn II?	1712.134	1	
Zn	1707.449	10		Cr III	1712.24	20	
Cu III	1707.500	3		As I	1712.32	10	
P I	1707.57	120		Cr III	1712.52	10	
Co II	1707.602	80		Mn IV	1712.776	200	
Cr III	1707.78	400		Cr III	1712.85	10	
Co II	1707.822	50		Ni III	1712.893	5	
V III	1707.89	150		Fe II	1712.997	400	38
Co III	1707.951	100	22	Ge I	1713.0806	st	10
Mn III	1707.995	2		Fe II	1713.20	1	
O V	1707.996	400		Ar II	1713.218	200	
P I	1708.03	3		Zn II	1713.251	50	-A
Se I?	1708.04	60		Ni II	1713.285	2	
Fe II	1708.250	20	84	Cu III	1713.346	3	16
Zn III	1708.259	3		Cu I	1713.364	50r	7
Mn II	1708.267	100		V	1713.40	50	
Ni II	1708.386	25		Si I	1713.412		81.05
P I	1708.45	12		Cr III	1713.43	50	
Cr III	1708.51	10		Kr II	1713.509	40	
Mn II	1708.55	4	101	Cr IV	1713.69	50	
Ni III	1708.552	50	25	Si I	1713.85		81.05
Fe II	1708.621	160	38	Ni III	1713.864	10	
Mn II	1708.65	6	101	Cr III	1714.01	150	
Mn III	1708.804	0		V III	1714.04	50	
Zn III	1708.896	0		As II	1714.069	0	
P I	1708.90	3		Cr III	1714.26	10	
Cu III	1708.958	100	21	Zn II	1714.270	0	-A
Cr III	1708.98	60	71	Mn II	1714.38	100	102
Cu III	1709.036	350	11	Zn II	1714.457	15b -A	
Zn II	1709.243	0	-A	Zn IV	1714.457	15b	
Co III	1709.395	1		Cr III	1714.63	40	
Cu I	1709.396	2		Cu II	1714.6633	0	
Ge III	1709.40	5		Ni III	1714.698	100	
Zn III	1709.401	4		Ge I	1714.7497	st	1
Fe II	1709.560	10	37	Mg III	1714.783	12	
Ni II	1709.598	200	4	Zn III	1714.800	0	
Fe II	1709.670	300	84	Fe II	1715.032	10	34
Cr IV	1709.89	50		Cr IV	1715.04	30	
Fe III	1709.892	250		Co II	1715.114	0	
Ni III	1709.901	800	16	Cr III	1715.17	30	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ti III	1715.24	5		Ge I	1718.6883 st	10	
Mn II	1715.25	1		Mn II	1718.79	15	
Ni III	1715.303	650	16	Ni III	1718.873	20	30
V III	1715.32	15		Co III	1718.887	0	
Zn II	1715.388	1 -A		Fe II	1718.986	20	
Fe II	1715.503	240	84	P I	1719.00	30	
V II	1715.57	20		Ni III	1719.008	20	
Cr III	1715.65	20h		Zn II	1719.136	2 -A	
Mn II	1715.69	10		P I	1719.31	90	
Zn II	1715.763	60 -A		Ar II	1719.346	200	
Co III	1715.768	0		Co III	1719.383	1	
V III	1715.79	25		Al II	1719.4400	800	6
Ge I	1715.8355 st	15		Ni III	1719.458	500	16
Ni III	1715.931	100	15	Na III	1719.60	10	
Mn II	1715.98	12	101	Kr II	1719.638	240	
Zn III	1716.090	4		V III	1719.77	100	
Mn II	1716.14	12	101	Cr III	1719.78	5	
Cu III?	1716.189	0		As II	1719.802	50	
Cr III	1716.21	40	71	Ni II	1719.892	50	15
Co III	1716.251	40	22	Ni II	1719.906	5	
Cr III	1716.33	40		Kr II	1719.908	120	
Cu III	1716.400	5		Cr III	1720.00	80	34
Zn III	1716.467	1		Fe II	1720.042	200	84
V III	1716.47	50		Co III	1720.068	4	
Cr III	1716.50	40		Co II	1720.182	0	
Mn III	1716.569	5		Kr II	1720.208	360	
Fe II	1716.577	40	39	Cr III	1720.25	80	
Kr II	1716.582	40		Ca III	1720.334	300	
Zn III	1716.589	2		Zn III	1720.339	2	
Kr II	1716.657	80		C II	1720.456	10	14.02
V V	1716.722	50		Cr III	1720.51	20h	34
Mn II	1716.78	80		Mn IV	1720.521	750w	
Ge I	1716.7844 st	40		Fe II	1720.616	400	38
Ni III	1716.886	75	15	Ni III	1720.708	20	25
Zn II	1716.935	1 -A		Mn IV	1720.735	750	
As II	1716.962	1		Ge I	1720.7464 st	8	
F III	1716.990	250		C II	1721.012	100	14.02
V III	1717.01	150		Ni II	1721.092	15	
Mn IV	1717.043	100		Co III	1721.151	2	
Mn III	1717.053	3		Zn III	1721.151	2	
Cu III?	1717.134	3		Cr III	1721.18	150	
Zn III	1717.212	1		Al II	1721.2435	500	6
Fe III	1717.414	150		Ni III	1721.256	200	30
Cr III	1717.43	200		Al II	1721.2714	900	6
V III	1717.47	100		Mn IV	1721.406	750	
Cr III	1717.65	40		V II	1721.422	3	
Ni II	1717.700	3		Cr III	1721.43	10	
Cu II	1717.7214	15	110	Mn III	1721.61	2	
Zn III	1717.880	1		Kr II	1721.632	120	
Cr III	1717.92	40		Kr III	1721.64	20	
Fe II	1718.123	40	38	Cr III	1721.67	200	
Cr III	1718.16	40		Co III	1721.678	1	
Zn II	1718.182	1 -A		C II	1721.682	200	14.0
Ni III	1718.184	20		Ni III	1721.799	0	
Mn IV?	1718.29	400b		Cr III	1721.84	70h	
Ni III	1718.365	150	15	V III	1721.98	400	
Kr II	1718.431	40		Ni III	1722.038	15	
Na III	1718.48	10		Mg III	1722.081	100	
Ge I	1718.4933 st	6		Ni II	1722.113	1	
P I	1718.55	50		Cr III	1722.19	70	
As I	1718.55	1		C II	1722.238	10	14.02
N IV	1718.551	1000	7	Ni III	1722.283	400	16
Mn II	1718.56	2		Cu III	1722.379	500	11
Mn IV	1718.669	650		Cr III	1722.38	70	
Ar II	1718.680	100		Fe II	1722.425	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V III	1722.46	150		V III	1726.11	10	
Si IV	1722.534	400	10	Co III	1726.134	20	35
Si I	1722.562 st	4	81.04	Cu III	1726.275	3	
V II	1722.62	200b	129	Mn II	1726.29	10	
V III	1722.62	200b		Ni II	1726.324	4	
Ni II	1722.646	2		Fe II	1726.391	240	38
As II	1722.680	2		Mn II	1726.47	200	13
Fe II	1722.70	1		Cr III	1726.61	20	
Kr II	1722.701	20		P III	1726.665	200	
Ni III	1722.799	20	39	Co III	1726.726	3	
Fe III	1722.837	250		Mn II	1726.81	30	
Cr IV	1722.84	100	14	Cr IV	1726.82	30	
Co III	1722.911	0		Fe II	1726.900	1	
Kr II	1722.936	200		Cr III	1727.11	70	
Mn IV	1722.944	650		Si IV	1727.377	290	10
Co II	1723.048	30		As I	1727.38	4	
Zn III	1723.111	6		Si I	1727.444 st	2	81.02
Cr III	1723.16	100		Cr III	1727.51	10	
Ne II	1723.389	20		Ni III	1727.640	20	
Cr III	1723.50	100		Cr III	1727.78	10	
Co III	1723.536	0		Co II	1727.823	20	
Ni III	1723.793	150		P I	1727.85	15	
Cr III	1723.83	10	71	Kr II	1727.854	20	
As II	1723.852	0		Cr III	1727.97	10	
Ni II	1723.859	20		Ni II	1728.022	1	
Zn II	1723.901	2 -A		Co III	1728.091	1	
Ni II	1723.957	1		Mn II	1728.12	1	
Co III	1723.970	100	22	Cu III	1728.139	100	18
Si I	1724.242 st	6	81.03	Cr III	1728.24	20	
Ni III	1724.291	75	28	Fe II	1728.275	1	
Ge I	1724.3082 st	10		Cr III	1728.34	80	
Cr III	1724.32	120		V III	1728.66	15	
Zn II	1724.364	2 -A		Ni III	1728.738	20	
Ni III	1724.523	50	15	Fe II	1728.845	4	
Zn III	1724.558	2		V III	1728.87	50	
Fe II	1724.572	20		Ar II	1729.075	100	
V III	1724.63	300		Ni III	1729.219	2	
As I	1724.77	7		Ar II	1729.259	100	
Cu III	1724.810	5		Ni III	1729.384	20	
Mn IV	1724.857	750		Ge II	1729.385	2	
Fe II	1724.854	160	39	Mn II	1729.57	5	
Kr II	1724.854	200		F II	1729.669	1	
Al II	1724.9519	500	6	Co III	1729.724	1	
Fe II	1724.956	160	37	V II	1729.74	100b	182
Al II	1724.9838	290	6	V III	1729.74	100b	
N II	1725.028 P			Zn IV	1729.760	10	
Cr III	1725.12	100		Cr III	1729.79	40	
Ar II	1725.147	100		As I	1729.80	30	12
Zn III	1725.230	0		Zn III	1729.918	3	
Co II	1725.258	20		Cr IV	1729.93	50	
Cr III	1725.29	150		N III	1730.04	400 -A	
Mn II	1725.29	15	101	F II	1730.119	10	
V III	1725.37	200		Ni III	1730.255	10	
Fe II	1725.402	100	346	Cr III	1730.34	10	
Mn II	1725.441	20		V III	1730.40	100	
Ar II	1725.549	50		Ni III	1730.483	75	15
V II	1725.597	3		Mn IV	1730.553	600	
Cr III	1725.60	40		Cu I	1730.576	10	28
Mn II	1725.61	10	101	Zn II	1730.619	2 -A	
Cu I	1725.664	50r	9	Ne II	1730.645	80	
V III	1725.78	15		Co III	1730.669	50	57
As II	1725.846	1		Mg III	1730.733	40	
Kr II	1725.982	120		Mg III	1730.778	7	
Cr III	1726.00	20		Fe III	1730.842	250	
Kr II	1726.078	280		Cr III	1730.92	5	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe II	1731.038	200	110	Mg II	1734.8525 P	406	
F II	1731.647	40		P II	1734.88	1	
Na III	1731.08	10		Ni II	1734.904	8	
Fe II	1731.18	1		Mn III	1735.073	3 $\frac{1}{2}$	
Cr IV	1731.22	100	14	As II	1735.081	0	
Cu I	1731.32	2h		Ni II	1735.135	5	
Mn II	1731.36	40		Cr III	1735.20	70	
Fe II	1731.373	20		Ar II	1735.378	50	
Cr III	1731.53	20		Co III	1735.400	10	35
V III	1731.54	15		F III	1735.417	35	
As II	1731.671	0		Fe II	1735.505	10	
Mn IV	1731.684	200		Zn II	1735.607	8 $\frac{1}{2}$ -A	
Mn II	1731.73	0		Cr III	1735.61	1J	
Ni III	1731.733	2		Ni III	1735.628	2	
Cr III	1731.76	90b		As i	1735.70	3	
Mg III	1731.786	20		Ni III	1735.713	5	
Al III	1731.836			Cr III	1735.76	10	
Fe II	1731.891	10		Zn II	1735.847	15 -A	
V II	1732.035	3		Ni III	1736.011	50	
Cr III?	1732.06	200		Ni III	1736.051	50	
As II	1732.236	0		Mg IV	1736.098	70	
Fe II	1732.253	300	420	Zn III	1736.138	0	
Co III	1732.358	6		Co III	1736.312	50	22
N II	1732.428 P			Cr III	1736.49	30	
As i	1732.44	30	13	V II	1736.498	0	
Co III	1732.545	40	35	Mn IV	1736.516	300	
Cu I	1732.674	20	29	Si I	1736.538 st	3	81
Mn II	1732.702	300	13	Cu II	1736.5514	10	
V III	1732.75	150		Fe II	1736.60	2	
Co II	1732.807	0		Cr III	1736.63	200	
Cr III	1732.85	50		Zn II	1736.825	0h -A	
As I	1732.86	30	12	Ar II	1736.834	100	
F III	1732.945	100		Co III	1736.856	1	
Zn II	1732.953	25 -A		Zn II	1736.889	60 -A	
Ge I	1732.9586 st	2		V III	1736.99	40	
Cu III	1732.998	3		V II	1737.02	5h	
Cr III	1733.00	200		Fe II	1737.192	6	37
Ni III	1733.129	250	15	Ne II	1737.341	50	
Cr III	1733.13	150		Mn II	1737.43	5	
F III	1733.260	6		Cr III	1737.47	30	
Si I	1733.346 st	1	81.01	Zn III	1737.473	10	
Ar II	1733.372	100		V II	1737.479	10	
Fe II	1733.375	4	110	Co III	1737.523	1	
Mn II	1733.55	500	13	V II	1737.577	10	
Co III	1733.635	2		Mg II	1737.6283 P	500	
Kr II	1733.649	20		Fe I	1737.63	0	
Kr II	1733.681	20		Cu III	1737.893	15	16
Ni III	1733.762	50		Zn II	1737.895	50 -A	
Mn II	1733.87	30		Mn II	1737.929	300	13
Fe II	1733.87	4		Fe II	1737.943	1d	
Cr IV	1733.93	200	14	V III	1738.00	25	
Mn IV	1734.041	100		F III	1738.041	200	
Cr IV	1734.12 P	100		Ni II	1738.059	3	
Co II	1734.156	40		Ge I	1738.1185 st	15	
Cu II	1734.2272	3		Cu III	1738.145	15	
Al III	1734.243			Cr III	1738.25	120	
Al III	1734.253			Ni III	1738.252	500	15
Mn II	1734.49	400	13	Ni II	1738.311	12	
F II	1734.494	10		V III	1738.33	25	
Kr II	1734.507	80		Mn II	1738.347	100	13
V III	1734.52	50		Fe III	1738.468	200	
Cr IV	1734.68	60		Ge I	1738.4791 st	30	
Si I	1734.718 st	8	81.01	Mn II	1738.51	10	
Mn II	1734.72	30		Ni II	1738.549	1	
Cr III	1734.83	70		Cu III	1738.648	5	30

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co III	1738.653	0		As I	1742.59	10	12
Ne II	1738.736	80		Sc III	1742.69	4h	
Ni III	1738.785	360	28	N I	1742.7189	50	9
Ni II	1738.793	4		V	1742.72	150	
Kr II	1738.804	160		N I	1742.7306	350	9
Mg III	1738.835	600		Se I?	1742.75	80	
Cu III	1738.861	0		Ne II	1742.869	70	
Kr II	1738.861	40		Cr III	1742.96	70	
Co II	1738.870	60		Co II	1743.021	0h	
Cr III	1738.90	10		N II	1743.197 P	200	
Zn II	1738.915	1	A	N II	1743.228 P		
V III	1738.93	25		Na II	1743.309	15	
S IV	1739.03	50		Co III	1743.311	6	63
Ge I	1739.1024 st	25		Mn II	1743.347	100	13
Fe III	1739.201	20		Co II	1743.439	0	
Cr IV	1739.22	250	14	Cr III	1743.44	100	
V II	1739.25	150b	128	Cr III	1743.65	30	
V III	1739.25	150b		Zn IV	1743.734	15	
Mg III	1739.475	7		Cr III	1743.87	30	
As I	1739.49	60	12	Si I	1743.8941 st	20	79
Cu III	1739.508	150	30	Ni III	1743.903	1	15
Al II	1739.7382	50		Mg III	1743.947	4	
Co III	1739.833	6	35	Mn III	1743.96	3h	
Mn IV	1740.022	250		Ge I	1744.0537 st	15	
V II?	1740.024	10h		Cr III	1744.07	20	
Cr III	1740.06	10		Fe III	1744.233	200	
Mn II	1740.156	200	13	Ge I	1744.2546 st	15	
V II	1740.291	3h		Ne II	1744.277	50	
Si I	1740.2988 st	20	80	Mn III	1744.35	2h	
V	1740.30	100		Ne II	1744.416	80	
N II	1740.310 P	400		Zn IV	1744.502	12	
Cr III	1740.31	20		Cu II	1744.5158	20	
Zn II	1740.536	1	A	Fe II	1744.52	3	
Co II	1740.593	9		Cu I	1744.5265	20	
Ni II	1740.619	30		Co III	1744.529	0	
Ni III	1740.671	15		Mn II	1744.54	2	91
Ni III	1740.718	10		Mn II	1744.69	20	
V II	1740.741	4		Mg IV	1744.692	60	
Cr III	1740.78	60		F II	1744.745	200	
Ni III	1740.944	30		Cr III	1744.81	30	
Co III	1741.057	1	35	Mn II	1744.86	10	91
Cr IV	1741.10	75	13	Fe II	1744.99	0	
Cu III	1741.135	15		Mg III	1745.009	2	
As I	1741.28	10		Cr III	1745.04	40	
Na III	1741.33	20		N II	1745.046 P		
Cu III	1741.378	250	17	N II	1745.076 P		
Mn II	1741.50	40	17	N I	1745.2482	150	9
Ni II	1741.547	1000	5	N II	1745.256 P		
Cu I	1741.571	50	9	N I	1745.2600	50	9
Mn II	1741.65	50	13	V II	1745.264		
Cr IV	1741.93	30		Se I?	1745.30	60	
Zn II	1741.930	18	A	Si I	1745.3475 st	25	15
Ni III	1741.963	50	21	S IV	1745.42	100	
Mn II	1742.00	200	13	F II	1745.550	300	
Kr II	1742.093	240		Cr III	1745.55	80h	
Mn IV	1742.105	850w		Mn III	1745.625	5	
V III	1742.15	25		Fe III	1745.638	250	
Mn III	1742.15	50w		Si I	1745.647 st	1	77.03
Cr III	1742.19	150		Co III	1745.674	80	57
Ge I	1742.1951 st	25		Zn IV	1745.998	25	
Zn II?	1742.285	20		Ge I	1746.0651 st	30	
V II	1742.334	4h		Co II	1746.215	10	
V III	1742.35	150		V III	1746.36	25	
Co III	1742.372	0		Co III	1746.369	4	
Cr III	1742.52	20		Na III	1746.39	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr III	1746.48	10		Mn II	1749.93	40	
F III	1746.545	1		Ge I	1750.0432 st	30	
Cr III	1746.77	205		V III	1750.17	50	
Fe II	1746.818	300	101	Mn II	1750.18	8h	91
N III	1746.82 P			Cr III	1750.27	20	
Co III	1746.853	1		V III	1750.34	100	
Cr IV	1746.94	350	13	Cu III	1750.391	250	17
Ni II	1746.989	1		Al II	1750.6124	60	
Mn II	1746.99	10		F III	1750.640	10	
Na II	1746.996	0		Mg II	1750.6637 P	400	
Ni III	1747.011	550	15	Ar II	1750.694	50	
F III	1747.114	150		Zn III	1750.770	10	
Zn II	1747.118	75		Ge II	1750.85	19	
Cr III	1747.14	300		Se I?	1750.89	12	
Fe III	1747.260	70		As II	1750.945		
Cr III	1747.30	70		Cr III	1750.98		
V III	1747.31	10		Co III	1751.037		
Mn II [†]	1747.38	5		Ne II	1751.216		
F II	1747.389	450		N III	1751.24	0	19
Si I	1747.4141 st	40	15	Mn III	1751.253	0	
Mg III	1747.561	200		F III	1751.276	6	
V II	1747.640	2		Cr III	1751.34	100	
Ni III	1747.680	50		Zn IV	1751.463	8	
Mg I	1747.795	200		Mn IV	1751.587	850	
V	1747.84	400		Mn II	1751.60	20b	
N III	1747.86	450	19	Ar II	1751.679	200	
Zn III	1747.872	0		V III	1751.68	500d	
F III	1747.881	10		Ne II	1751.698	80	
Co II	1747.897	40		N III	1751.75	500	19
Mn II	1747.92	2h	91	C I	1751.8277 st	800	62
Mg II	1747.995	2h	91	Co III	1751.854	40	29
F III	1748.023	3		Se I?	1751.88	60	
Mn II	1748.13	10h	91	Ni II	1751.911	300	4
Fe III	1748.177	150		Na III	1752.06	20	
Ni II	1748.285	500	5	N III	1752.16 P		
Co II	1748.350	10		Na II	1752.185	12	
V III	1748.39	150		V III	1752.19	50	
N III	1748.61	3		Zn II	1752.358	3 -A	
Cr III	1748.74	80		Mn II	1752.40	8	
Co II	1748.772	0		Ni III	1752.427	300	21
F III	1748.806	3		Cr III	1752.47	80	
Ge I	1748.8572 st	20		V III	1752.62	10	
Cr III	1748.87	40		Si I	1752.634 st	3	77.02
Mn II [†]	1748.888	10		Na III	1752.65	60	
Fe II	1748.910	6		F III	1752.694	1	
Mg III	1748.932	500		Mn II	1752.92	0	
V II	1748.99	50	32	Se I	1752.94	120	
Fe III	1749.052	70		Ni III	1753.011	400	
Fe II	1749.136	20		Si I	1753.101 st	15	77.02
Mn III	1749.17	1h		Ni III	1753.150	3	
Cu I	1749.202	2		Cr III	1753.23	30	
Ni III	1749.203	1		Cu II	1753.2811	15	
V III	1749.39	5		Ni III	1753.377	10	29
Mg IV	1749.503	20		Fe III	1753.455	20	
Fe II	1749.60	2		Mg II	1753.4744 P	500	
Zn III	1749.629	200		F III	1753.518	60	
Cr III	1749.67	70		Ca III	1753.60	30	
N III	1749.674	3		V II	1753.665	8	
Kr II	1749.687	40		Zn III	1753.824	100	
As I	1749.72	1		Mg I	1753.84 P		
Co III	1749.728	5	28	V II	1753.852	8	
F III	1749.766	35		N III	1753.986	1	
Fe I	1749.77	1		V III	1754.11	50	
Si I	1749.8076 st	3	15	Mn II	1754.12	1	
Cr III	1749.88	10		Ca III	1754.153	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
As I	1754.21	10		Kr II	1758.265	80	
Co II	1754.228	20		Ge I	1758.2792 st	40	
Mn II	1754.34	5		Co III	1758.454	0	
Cr III	1754.36	20		Ni III	1758.468	10	
P I	1754.40	90		Cr IV	1758.47	100	13
Zn III	1754.498	0		V III	1758.50	10	
Cr IV	1754.51	250	13	Ne II	1758.555	80	
Mn II	1754.65	0		Ne II	1758.590	20	
Cr III	1754.76	300		As I	1758.60	100	3
Co III	1754.761	0		Co II	1758.648	20	
Zn III	1754.777	0		F III	1758.956	150	
Ni II	1754.808	50	4	V III	1758.96	50	
Mn II	1754.81	8		Co III	1759.144	1	
Kr II	1754.821	20		Cr III	1759.19	30	
Cr III	1754.94	20		Se I?	1759.24	160	
Na III	1754.97	10		Ge I	1759.2712 st	15	
Cu III	1755.012	10		Cr III	1759.34	20	
Mn II	1755.04	0		V III	1759.46	100	
Cr III	1755.24	150		Cr III	1759.50	50	
V	1755.30	100		Cu II	1759.5045	1	
Li II	1755.331	100		Na II	1759.572	30	
Cr III	1755.46	200		Si I	1759.5831 st	10	77
Cr IV	1755.65	100		F III	1759.792	3	
Ni III	1755.757	1	13	Mn IV	1759.815	750	
Zn	1755.761	10		P I	1759.91	30	
Cr III	1755.78	100		V III	1760.07	1000	
Ar II	1755.819	100		Al II	1760.1044	350	5
Zn II	1755.847	10	-A	O III	1760.12	700	
P I	1755.86	9		Zn III	1760.192	2	
Co III	1755.979	100	21	Ni III	1760.260	20	
V III	1756.02	25		Cr III	1760.31	10	
Ni III	1756.151	1		Fe II	1760.350	10	d
Cr III	1756.29	30		Co III	1760.354	1000	21
Mn II	1756.30	10		C II	1760.3954 ST	450	10
As I	1756.51	2		P I	1760.40	45	
V	1756.57	10		V III	1760.41	10	
Cr III	1756.58	10		Fe II	1760.415	400	100
P I	1756.65	9		O III	1760.42	500	
Zn II	1756.665	2	-A	C II	1760.4735 ST	100	10
Mn II	1756.80	1		Ni III	1760.560	150	21
Ni III	1756.801	2		Cu III	1760.586	5	
Na II	1756.817	10		Mn II	1760.678	100	
P III	1756.82	10		C II	1760.8191 ST	300	10
Ni II	1756.829	2		Mn II	1760.96	5	
Ne II	1756.835	80		V III	1761.04	50	
Co III	1756.851	6		Ne III	1761.05	20	
Cr III	1756.97	10		Fe I	1761.08	0	
Ni III	1757.034	25		Cu III	1761.155	10	16
Mg III	1757.176	4		Co III	1761.367	2	69
Si I	1757.2827 st	3	77.0i	Fe II	1761.379	500	101
Kr I	1757.384	40		Cr III	1761.38	40h	
Mn I	1757.44	2		F III	1761.444	6	
Cr III	1757.45	10		V III	1761.63	50	
P I	1757.47	60		P I	1761.67	30	
As I	1757.47	4		Co II	1761.67	0	
Co III	1757.531	3		Cr III	1761.73	20	
P III	1757.68	100		Mg III	1761.74		
V III	1757.73	500		V III	1761.84	50	
Co II	1757.770	0		Al II	1761.9751	300	5
Mg III	1757.888	20		Na III	1762.13	10	
P I	1757.95	60		Zn II?	1762.151	20	
Cr III	1757.95	10		Mn IV	1762.168	700	
Kr II	1758.077	120		Zn II	1762.191	10	-A
Ne II	1758.105	70		Zn II?	1762.223	10	
Cr III	1758.20	50		Zn II?	1762.243	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ca III	1762.259	500		V III	1765.92	15	
V III	1762.27	75		Cr III	1765.93	10	
Ni III	1762.394	20		Si I	1765.9452 st	8	76
Zn II	1762.395	25 -A		Si I	1766.0627 st	100	14
Cr III	1762.52	30b		Ge I	1766.0648 st	25	
Cu III	1762.557	15		N II	1766.079 P	100	
Cr IV	1762.61	250	13	Cr III	1766.08	10	
Kr II	1762.686	120		V III	1766.16	50	
Mn II	1762.75	10		Cu III	1766.219	1	
V III	1762.78	10		Mn IV	1766.273	850	
Cr III	1762.81	450		O III	1766.34	400	
Al I	1762.892	100 -A		Mn IV	1766.344	400	
Mn IV	1762.942	750		Si I	1766.3541 st	50	14
V III	1762.99	25		Al I	1766.381	200 -A	
Zn III	1763.032	6		Ge I	1766.4330 st	30	
Ni II	1763.097	1		Mn II	1766.50	50	
Cr III	1763.13	70		Cr III	1766.58	60	
V II	1763.20	5		Cr III	1766.92	500	
F III	1763.206	150		V II	1767.02	5	
O III	1763.22	700		Co III	1767.084	6	21
Na II	1763.325	7		Mn IV	1767.087	750	
Co III	1763.465	20		Cr III	1767.18	10	
Co III	1763.533	3	53	Na III	1767.21	10	
V III	1763.59	10d		Cl II	1767.24	100	
Ni III	1763.607	20		Co III	1767.308	10	
N II	1763.639 P	100		Si I	1767.54		76
Si I	1763.6607 st	80	14	Mn II	1767.67	60	
Ar II	1763.669	50		Zn III	1767.684	90	
Co II	1763.673	20		Cl VI	1767.7		
Ne II	1763.727	20		Fe II	1767.71	1	
Cr III	1763.77	150		Al II	1767.7308	400	5
Mg III	1763.805	30		O III	1767.7E	1000	
Na III	1763.84	60		Ne II	1767.900	10	
Na II	1763.841	30		Ni III	1767.938	500	14
Al II	1763.8692	500	5	As I	1767.97	6	
C I	1763.909	120	61.06	Co III	1768.003	1h	
Cu III	1763.935	0		F III	1768.038	200	
Mn II	1763.94	15		Ar II	1768.043	100	
Al II	1763.9521	700	5	Ne II	1768.085	10	
Fe II	1764.117	20		V III	1768.09	100	
Cr III	1764.16	10		V II	1768.175	2	
Ge I	1764.1852 st	30		Co III	1768.238	40	
V III	1764.23	250		O III	1768.24	900	
Co II	1764.289	0		Cr III	1768.32	40	
O III	1764.48	700		V II	1768.334	3	
Cu I	1764.540	10f		P I	1768.45	60	
Ni III	1764.688	800	14	Co III	1768.471	20	
Mn III	1764.841	3		Cr III	1768.50	40	
V II	1764.916	4		Mn II	1768.596	80	
Ne II	1765.015	30		Na II	1768.603	7	
Si I	1765.0296 st	90	14	V III	1768.66	5	
Cr III	1765.06	120		Cr III	1768.78	50	
N II	1765.140 P	50		Cu III	1768.869	100	16
Ni III	1765.229	1		P I	1768.94	45	
V III	1765.28	15		As I	1768.97	5	
Ge I	1765.2843 st	30		As II	1768.985	225	
Fe II	1765.325	10		Cr III	1769.03	100	
C I	1765.366	50	61.05	Mn II	1769.08	8	
Co III	1765.414	0		V	1769.13	15	
Mn II	1765.502	100		Al I	1769.133	200 -A	
Cr III	1765.53	10		Cr III	1769.17	300	
Si I	1765.6215 st	50	76	V III	1769.22	10	
Al I	1765.632	200 -A		O III	1769.32	400	
Al II	1765.8150	300	5	Ge II	1769.377	5	
Ne II	1765.898	70		Si I	1769.4609 st	2	75.01

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co III	1769.495	2		F III	1772.925	300	
F III	1769.529	6		Mg III	1772.982	350	
Kr II	1769.546	20		V III	1772.99	50	
V III	1769.60	25		O III	1773.00	500	
Ni III	1769.643	1000	14	Na III	1773.00	10	
Fe II	1769.667	20	100	Co II	1773.042	10	
Si I	1769.7859 st	76	75	Mn IV	1773.065	300	
Ni II	1769.940	2		Fe III	1773.098	70	
Co III	1769.957	100	21	Fe I	1773.17	2	
V III	1770.06	25		Co III	1773.215	100	73
F III	1770.092	400		Ca III	1773.241	400	
Cr III	1770.10	30		Cr III	1773.32	20h	
Ni III	1770.153	1		F III	1773.363	600	
Ga II	1770.2	500		V III	1773.43	300	
Fe III	1770.247	200		F III	1773.496	35	
Cr III	1770.35	20		Mn IV	1773.509	750	
Mn II	1770.444	10		Co III	1773.568	1000	21
Co III	1770.500	2		Cu III	1773.697	0	
Fe III	1770.524	400		Cr III	1773.70	10	
Si I	1770.6295 st	125	14	Mn II	1773.70	2	
Ar II	1770.658	100		Ni III	1773.788	40	27
Cr III	1770.66	20		O III	1773.85	500	
F III	1770.668	700		Ni II	1773.949	25	3
V II	1770.698	3		Mg III	1773.959	2	
Si I	1770.9223 st	300	14	V II	1773.985	2	
Cr III	1770.96	30h		V III	1774.02	10	
F III	1770.963	10		Zn II	1774.040	75	-A
Mn IV	1771.244	450		Si I	1774.08		73.01
Co III	1771.259	20		F III	1774.104	150	
V III	1771.35	75		Ge I	1774.1755 st	40	
Ni III	1771.492	100	14	V II	1774.209	3h	
G III	1771.67	900		Mn II	1774.21	50	
III	1771.67	50		V III	1774.25	25	
Ar II	1771.829	200		Co III	1774.418	100	73
As I	1771.84	2		Cr III	1774.51	20	
Co III	1771.854	40		Co III	1774.577	2	73
Ni II	1771.865	4		Ni III	1774.640	10	
Fe II	1771.93	0		Ge II	1774.703	10	
Fe III	1771.975	150		Mn II	1774.75	15	
Zn	1771.987	10		Cu I	1774.820	200r	7
Cl VI	1772.0			Cr III	1774.89	10	
Mn II	1772.00	2		P I	1774.99	750	1
Cl II	1772.01	300		Zn II	1775.024	3	-A
Mn IV	1772.112	650		Cr III	1775.06	30	
Ni II	1772.197	1		F III	1775.079	60	
Si I	1772.2254 st	12	13	Mn II	1775.21	50d	
Co III	1772.233	60		Fe III	1775.267	70	
P II	1772.30	30		Na III	1775.32	10	
O III	1772.31	400		Mn II	1775.52	0	
V III	1772.31	200		Fe III	1775.590	20	
Mn II	1772.35	30		Mn II	1775.69	6	
Co III	1772.438	40		V III	1775.72	75	
Mn II	1772.45	5		Ni III	1775.750	150	
Cr III	1772.46	40		Co II	1775.878	0	
Cu III	1772.478	1		Cr IV	1775.90	70	
Fe II	1772.509	300	99	Mg III	1775.942	4	
As I	1772.54	8		Fe III	1775.983	400	
Co III	1772.549	10		Mn II	1776.06	20	
Cr III	1772.60	50		Ni III	1776.068	450	
V III	1772.63	100		Be II	1776.100	500	3
Se I	1772.64	100		V II	1776.104	3	
Co III	1772.671	20		Cu III	1776.136	10	
N II	1772.735 P			Al II	1776.27	0	
Mn III	1772.824	5		Be II	1776.307	1000	3
Zn IV	1772.843	1		V II	1776.48	0	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Na II	1776.571	90		Fe II	1781.336	4	
Mn IV	1776.593	600		Cr III	1781.45	20	
Co III	1776.630	0		As I	1781.48	50	9
Fe II	1776.661	20	99	Fe II	1781.529	20	
Ar II	1776.672	100		V III	1781.61	200	
Ni III	1776.802	30		Fe II	1781.702	10	67
Si I	1776.8241 st	150	13	Cr III	1781.73	10	
Mn IV	1777.023	300		Mn II	1781.82	1	
Co III	1777.145	200	43	Kr II	1781.888	200	
V III	1777.18	50		Mn II	1781.93	1	
Ni III	1777.227	10		V III	1782.04	5	
Mn II	1777.23	0		Cr III	1782.07	100	
Cr III	1777.27	40		Mn IV	1782.212	750	
F I	1777.358	60		Si I	1782.2626	50	13
Zn III	1777.404	40b		V II	1782.454	3	
Zn IV	1777.404	40b		Kr II	1782.594	80	
Fe II	1777.45	0		Ar II	1782.596	100	
Cr III	1777.49	10		Mn II	1782.626	8	
Fe III	1777.737	70		Ni III	1782.747	60	14
F III	1777.846	35		P I	1782.87	600	1
Fe II	1777.900	4		Na III	1782.92	240	
Zn III	1777.911	3		Co III	1782.966	600	21
Mn II	1778.01	10		Cr III	1782.99	250	
V III	1778.02	400		Na II	1783.043	60	
Mn II	1778.09	6		Mn II	1783.06	1	
Co III	1778.091	20	21	Si III	1783.079 P		35
Na II	1778.243	40		Si III	1783.146 P		35
Ne II	1778.282	30		V III	1783.16	20	
Co II	1778.321	10		Mn II	1783.18	0	
Ni III	1778.583	10		Si I	1783.2315 st	25	73
Mn II	1778.59	20	100	Mg III	1783.253	550	
Mn II	1778.692	100		Cl VI	1783.3		
Si III	1778.715 P		35	Ni II	1783.317	1	
Ni III	1778.730	30		Mn II	1783.38	2	
Ne II	1778.747	30		V III	1783.41	200	
Na II	1778.905	0		Na II	1783.475	15	
Cr III	1778.93	200		Mn II	1783.51	15	
C III	1779.09	10	16	Ti III	1783.58	20	
Ni III	1779.127	20		Mn II	1783.63	10	
Ge I	1779.15	15		Mn II	1783.72	20	100
O III	1779.16	700		V II	1783.744	10	
Mn II	1779.308	20		V III	1783.77	50	
Ni III	1779.442	30	21	Ne II	1783.783	30	
Co III	1779.536	4	28	Cu III	1783.799	10	
Mn II	1779.59	1		Ca III	1783.929	500	
V III	1779.72	500		Cu III	1783.935	3	
F III	1779.778	6		Mn II	1783.94	10	
Co III	1779.896	1		Cr III	1783.95	200	
Na	1779.906	0		Kr II	1783.997	80	
Cr III	1779.91	40		Co II	1784.055	100	43
Mn IV	1779.976	450		Si I	1784.0884 st	8	73
Cr III	1779.99	40		V II	1784.128	8	
Co III	1780.045	400	21	Cr IV	1784.18 P	150	
Cu III	1780.062	3		Na II	1784.24	15	100
Cr III	1780.14	50		Ti III	1784.36	20	
Mn II	1780.25	8		Mn III	1784.394	20	
V III	1780.48	100b		Cr III	1784.43	150	
V II	1780.52	100b		V III	1784.44	400	
As I	1780.52	50	26	Mn II	1784.46	10	
N II	1780.551 P			Mn IV	1784.636	600	
V II	1780.829	2		Cr III	1784.72	50	
Fe II	1780.99	2		Co III	1784.790	6	
O III	1781.03	600		O III	1784.85	600	
Ni III	1781.088	15		Ni III	1784.882	75	
Ni III	1781.279	50	21	Mn IV	1784.889	200	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1785.032	20		Ni III	1788.301	200	27
Ge I	1785.0460 s	50		Mn II	1788.43	40h	
Cl II	1785.06	100		Ni II	1788.455	100	5
V II	1785.07	50	175	Ni III	1788.502	150b	
Co III	1785.116	4		Mn IV	1788.641	750	
Fe II	1785.262	800	191	Mn II	1788.786	40h	
Mn II	1785.31	1h		Ca III	1788.827	200	
V III	1785.33	50		Na II	1788.845	45	
Mn I	1785.355	7h		Ti III	1788.86	20	
Kr II	1785.419	40		Co III	1789.070	200	21
Mn I	1785.465	5		As I	1789.15	15	
Cr III	1785.53	10		Mn IV	1789.226	300	
Mn II	1785.618	20		Cr III	1789.24	30	
Ar II	1785.672	100		Co III	1789.373	20	43
Co III	1785.705	i	69	V III	1789.47	200	
Mn II	1785.73	i		Zn II	1789.509	8 -A	
Mn I	1785.829	6b		Co III	1789.549	20	
As I	1785.84	3		Ne II	1789.613	20	
Co III	1785.965	10	21	Mn IV	1789.619	10	
V III	1785.97	150		V II	1789.62	75b	
Na II	1785.989	12		V III	1789.62	100b	
Mn IV	1786.025	750		Mn II	1789.63	8	
Ge I	1786.0686 st	40		Ni II	1789.640	1	
Cr II	1786.07	40	224	As II	1789.643	5	
Mn II	1786.31	20		O III	1789.66	700	
Co III	1786.342	40	43	Cr III	1789.77	40	
Si III	1786.371 P	i	35	Fe II	1789.83	2	
F III	1786.436	i		As I	1789.85	50	10
Si III	1786.438 P	i	35	Ni III	1789.888	3	
Fe II	1786.448	20		Ni III	1789.983	5	
Si III	1786.515 P	i	35	Si I	1790.2548 st	25	72
Co III	1786.679	10		Co III	1790.258	100	49
Fe II	1786.738	800	191	Co III	1790.389	10	
Si II	1786.817	4 -A	18.05	Ni III	1790.402	250	27
Mn II	1786.86	10		Mn IV	1790.442	750	
V II	1786.91	5		Cr III	1790.48	40	
Ni III	1786.927	60	14	Se I?	1790.48	60	
Mn II	1786.97	3		Na II	1790.562	2	
Mn IV	1787.040	750		Mn II	1790.60	80	
As I	1787.07	6		Cu II	1790.6603	5	
Co III	1787.082	200	21	Cr III	1790.71	10	
V III	1787.15	15		Zn II	1790.759	80 -A	
Cr III	1787.18	120b		Mn II	1790.79	20	100
Na II	1787.189	80		Co III	1790.892	5	
Cl II	1787.20	300		Ni III	1790.934	200	
Mn II	1787.23	2		Cr IV	1791.04	200	
Ti III	1787.32	40		Mn IV	1791.096	10	
Mn II	1787.36	3		Co III	1791.153	60	72
Mn IV	1787.375	750		Zn III	1791.180	1	
Zn II	1787.384	0 -A		Ni II	1791.219	1	
Ni III	1787.456	2		Na II	1791.224	35	
Mn II	1787.48	2		Na III	1791.23	200	
Co III	1787.502	10		V III	1791.23	50	
Si II	1787.538	8 -A	18.05	Co III	1791.277	100	21
Co III	1787.575	6		Fe III	1791.345	20	
P I	1787.68	540	i	Mg III	1791.375	20	
As II	1787.885	0		Mg III	1791.40		
Cl III	1787.902	0		F III	1791.445	3	
Mg III	1787.927	12		Cu IV	1791.457	10	
Zn IV	1788.015	0		Cr II	1791.51	40	224
Fe II	1788.072	100	191	Mn II	1791.54	1	
Ar II	1788.104	300		Ar II	1791.561	100	
F III	1788.110	1		Mn IV	1791.584	350	
Mn I	1788.152	2h		Ni III	1791.644	200	14
V III	1788.26	1000		F III	1791.648	800	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1791.67	2		Zn II?	1796.701	15	
As I	1791.77	40		V III	1796.77	300	
Na III	1791.80	60		Mn III	1796.864	100	
Na II	1791.862	30		Cr III	1796.89	10	
Mn II	1791.83	25	100	Fe II	1796.931	40	
Cl II	1792.10	400		Kr II	1797.020	40	
Co III	1792.144	20	34	Co III	1797.095	2	
Mn III	1792.38	5		Ti III	1797.10	10	
Co III	1792.410	60	21	Ne II	1797.198	30	
V II	1792.49	50	176	V III	1797.28	100	
Ni III	1792.513	25		Mg IV	1797.296	30	
Mn II	1792.52	0		Mn II	1797.35	2	
Zn III	1792.523	1		Si I	1797.3560 st	6	70
Ti III	1792.56	40		V III	1797.44	25	
Cr III	1792.73	80		Si IV	1797.496 P		23
Ni III	1792.994	100		Kr II	1797.515	40	
Ge I	1793.0711 st	40		P II	1797.54	10	
V II	1793.13	30	175	V III	1797.63	100	
Mg III	1793.207	4		Zn II	1797.643	100	-A
Mn III	1793.242	10		Ti III	1797.69	20	
Se I	1793.29	500	16	Mn II	1797.76	20	
Fe II	1793.367	200	99	Fe III	1797.769	20	
Ar II	1793.435	50		Cl II	1797.91	10	
Mn IV	1793.537	80w		Mn III	1797.919	25	
Mn III	1793.560	10		Cr IV	1797.92	20	
Cr III	1793.60	10		Cl III	1797.98	200	7
Cr III	1793.75	50		Co III	1798.064	100	28
Mn II	1793.753	30		Mn III	1798.130	80	
Fe III	1793.785	70		V III	1798.15	500	
V III	1793.82	500		Fe II	1798.156	200	142
Mn II	1793.89	1		Ca III	1798.246	450	
Co III	1793.924	40	28	Ne II	1798.281	80	
Cr III	1793.95	80		Cr III	1798.33	50	
V III	1794.00	250		Ni III	1798.366	10	
Mn III	1794.09	5		P II	1798.37	5	
Ca III	1794.223	500		Na II	1798.410	60	
Kr II	1794.421	40		Mn III	1798.545	1	
Cr III	1794.47	10		As I	1798.61	9	
Se I	1794.55	100	16	Cu III	1798.761	3	
As II	1794.567	0		Ce III	1798.876	1	
Mg III	1794.582	300		C. III	1798.97	20	
V III	1794.60	1000		Cu III	1799.000	0	
Fe II	1794.77	1		Ni III	1799.023	5	
Co III	1794.804	20	72	P II	1799.10	50	
Ni III	1794.904	200	14	Si I	1799.1133 st	30	71
Ar II	1795.10	30		Mn III	1799.346	2	
Fe II	1795.11	2		Cr III	1799.40	10	
Ni III	1795.192	20		Ga II	1799.42	250	4
Se I	1795.28	600	16	V II	1799.47	120	98
V II	1795.38	5	175	As I	1799.51	2	
Co III	1795.426	0		Mn III	1799.56	2	
Cr III	1795.58	30		Mn II	1799.81	40	
Mn IV	1795.650	800		P II	1799.91	20	
Na II	1795.772	1		V II	1799.97	30	
Mn IV	1795.786	800		Ni III	1800.031	20	
Se I?	1796.04	120		Na II	1800.048	25	
Cr IV	1796.09	50		V III	1800.07	100	
Si IV	1796.162 P		23	Zn III	1800.147	15b	
Si IV	1796.166 P		23	Zn IV	1800.147	15b	
Co III	1796.200	2	72	Mg IV	1800.180	200	
V II	1796.26	5	98	Ca III	1800.208	600	
Cr III	1796.37	10		P II	1800.27	20	
Ne II	1796.516	70		Si I	1800.404 st	1	70
V II	1796.52	30h		Fe II	1800.45	0	
Co III	1796.664	1		Co III	1800.469	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
F III	1800.505	100		V II	1804.979	2	
Mg III	1800.662	350		Fe II	1804.98	1	
Ne II	1800.733	70		Zr II	1805.11	30	
Cr III	1800.84	10		Ge I	1805.135	15	
Cu II	1800.9526	2		V III	1805.23	150	
Mn II	1800.959	2		Fe III	1805.337	150	
V II	1800.962	0		N III	1805.5	350	22
Co III	1800.974	5		Co III	1805.535	100	49
Si I	1801.000		69	Zn III	1805.599	3	
Co	1801.030	5		F III	1805.896	900	
Mn I.	1801.04	1		V II	1805.932	20	
Fe II	1801.13	1		Na II	1805.998	12	
Mn II	1801.23	10		Na II	1806.061	10	
Na II	1801.256	15		Co III	1806.096	2	48
Na III	1801.27	140		P II	1806.12	150	
Mn II	1801.27	50	100	As I	1806.15	200	3
Ge I	1801.4323 st	50		V IV	1806.184	80	
Cr III	1801.46	10		Co III	1806.356	2	
Ni III	1801.506	50	20	Ni III	1806.457	30	
V II	1801.61	5		Mn III	1806.473	300	
Mn II	1801.63	8		V II	1806.49	80h	98
Zn IV	1801.704	80		V III	1806.55	10	
Fe III	1801.766	206		Ni III	1806.550	30	
As I	1801.92	5		P II	1806.67	50	
Mn IV	1802.090	150		Ne II	1806.671	5	
F III	1802.19	60		V III	1806.71	25	
Cr IV	1802.30	30		Ni III	1807.056	50	
Mn III	1802.450	1		Na II	1807.092	90	
V III	1802.55	300		V II	1807.15	10	76
Cr III	1802.60	120		Ni III	1807.245	300	
Ge I	1802.6246 st	40	7	S I	1807.3108	550	2
Mn IV	1802.632	10		Ca II	1807.337	200	11
Co III	1802.917	0		Mn II	1807.34	30	
Mn II	1803.00	10		V III	1807.35	50	
Si III	1802.023	60	51	Al II	1807.4168	70	
F III	1803.027	306		Cr III	1807.45	10	
As II	1803.028	0		Zn III	1807.566	1	
Mg III	1803.087	4		Al II	1807.5851	20	
Ne II	1803.114	30		Al II	1807.6510	1	
V III	1803.15	25		V	1807.74	50	
V II	1803.279	1		Fe II	1807.746	10	66
Fe III	1803.330	70		Mg IV	1807.80	2	
V II	1803.401	4		Cu II	1807.8410	15	
Mn II	1803.43	20		Ca III	1807.885	650	
As I	1803.46	10		Mn III	1807.926	3	
Cr III	1803.47	10h		Si II	1808.0117	150	1
Ne II	1803.732	70		V II	1808.097	3h	
V	1803.76	75		Fe III	1808.203	20	
Na II	1803.833	15		Mg IV	1808.308	100	
Mn III	1804.065	400		Ni II	1808.330	2	
Kr II	1804.070	40		Na II	1808.375	60	
F III	1804.073	200		Co III	1808.384	60	68
V III	1804.13	500		Si I	1808.4301 st	20	69
Fe II	1804.17	2		Cl III	1808.51	400	7
N III	1804.3	300	22	V III	1808.51	100	
Ni III	1804.394	30		V II	1808.66	5	31
Mn II	1804.446			Cr II	1808.66	60	18
Ge I	1804.4523 st	50		Kr II	1808.713	40	
Ni II	1804.473	30	2	Mn II	1808.72	40	
V III	1804.52	75		Zn II?	1808.915	10	
Fe II	1804.65	1		Mn II	1808.96	40	
F III	1804.698	250		Si I	1809.1047 st	100	67
V III	1804.76	75		Ni III	1809.200	5	
Cr III	1804.85	10		Co III	1809.233	8	
Co II	1804.954	60		Zn III	1809.253	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe II	1809.316	200	142	Zn II	1813.170	1 -A	
Ni III	1809.335	15		Co III	1813.186	60	49
V III	1809.36	150		Si I	1813.27	1h	68.91
Mn II	1809.43	30		Mn II	1813.283	8	99
Kr II	1809.454	20		Cr II	1813.30	20	
Zn IV	1809.521	20		Ca III	1813.585	550	
Cr III	1809.58	10h		Cu IV	1813.608	30	
V II	1809.81	80d	76	Cl II	1813.75	10	
V IV	1809.854	60		Ar II	1813.766	100	
Co III	1809.904	1		Mn II	1813.865	30	99
Mn II	1809.97	30		V II	1813.87	80	31
Cr II	1810.08	100		Ge I	1813.908 / st	15	
Ge I	1810.1006 st	4		Ga II	1813.98	500	4
Mn II	1810.12	2		Fe II	1813.99	;	
Cr III	1810.14	30		V	1814.05	5	
C III	1810.26	100	7	Si I	1814.0794 st	250	68
V III	1810.31	0		Ni III	1814.082	1	
Cr IV	1810.46 P	150	12	Co III	1814.084	2	
Co III	1810.464	3		Co I	1814.20	120	47
Ni III	1810.489	150		Co III	1814.219	20	48
Fe II	1810.53	3		Zn IV	1814.222	75	
V IV	1810.566	30		Na III	1814.35	60	
V II	1810.60	60b	174	Cl II	1814.43	10	
V III	1810.71	250		Mn II	1814.47	25	
Na III	1810.74	80		Na II	1814.474	25	
Mn III	1810.767	200		Ca II	1814.495	400	11
Cr III	1810.77	30		Ca II	1814.647	40	11
Ge II	1810.83	1		As II	1814.660	0	
Cr III	1810.92	40		Co III	1814.683	20	48
Zn II	1811.008	80 -A		Co III	1814.865	20	
Mn III	1811.025	300		V II	1814.900	10	
N V	1811.08	30	58	V III	1814.95	250	
Ti III	1811.09	40		Cr IV	1815.05 P	150	12
Zn II	1811.105	15 -A		Co III	1815.063	4	56
Mn IV	1811.284	0		Ge II	1815.09	10h	
Co III	1811.317	20	28	V III	1815.11	50	
V V	1811.388	40b		Cl II	1815.16	10	
Co III	1811.466	80	49	Mn II	1815.24	40	99
V II	1811.51	0		Ni III	1815.307	20	
Mn IV	1811.613	0		Cr II	1815.32	60	
N V	1811.62	35	58	V III	1815.35	100	
Kr II	1811.674	40		Ni III	1815.398	15	
Ni III	1811.689	200		Fe II	1815.406	10	
Co III	1811.694	1		Cr III	1815.49	80	
Na III	1811.70	100		Mn II	1815.57	5h	
Mn II	1811.89	10		Co III	1815.596	40	42
Fe III	1811.924	200		Cl II	1815.61	10	
Mn II	1812.04	2		Ni III	1815.650	2h	
Ni II	1812.065	30	24	Co III	1815.686	40	42
Ca III	1812.153	700		Fe II	1815.761	4	66
V III	1812.19	1000b		Fe II	1815.87	0	
V II	1812.195	100b		Ar II	1815.98	15	
Cr III	1812.24	40		Co III	1816.084	1	
Co III	1812.336	1		Cr III	1816.09	10	
As II	1812.350	5		Ar II	1816.14	50	
Ar II	1812.475	50		Co III	1816.250	2	
Ni III	1812.539	3		Mn II	1816.284	25	99
Co III	1812.550	10		V III	1816.30	150	
Ni III	1812.769	20		Zn II?	1816.480	80	
Cr II	1812.95	20		Mn II	1816.52	25	
Fe III	1812.974	150		Co III	1816.617	4	33
Ar II	1813.014	100		As I	1816.72	10	
Mn II	1813.03	10		Na III	1816.83	40	
Co III	1813.044	10	48	Mn II	1816.87	10	90
V IV	1813.050	50		Mn II	1816.91	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Si II	1816.9278	200	1	Cr IV	1821.56 P	100	12
Ni III	1816.990	1		Cr II	1821.58	160	
V II	1817.09	6	31	Zn III	1821.676	35	
Cr III	1817.16	100		Na III	1821.68	240	
Cu I	1817.265	20	6	Co III	1821.688	80	43
Si II	1817.4511	10	1	Na II	1821.695	50	
Co III	1817.518	20	78	Co III	1821.766	80	68
Mn II	1817.53	150d	99	Fe III	1821.865	26	
Ni III	1817.598	15		V III	1821.99	10	
Kr II	1817.602	200		Cu IV	1822.024	10	
Co III	1817.626	20	48	Co III	1822.046	20	56
V IV	1817.676	100		Fe II	1822.150	20	66
Cl III	1817.73	400	7	Se I?	1822.15	160	
Cr III	1817.79	20		Fe III	1822.183	70	
B I	1817.858	150		V III	1822.21	15	
Si I	1817.9562 st	10	66	Mn II	1822.210	30	99
Cr III	1818.28	40		Co III	1822.215	0	
B I	1818.373	200		Cr III	1822.26	20	
Mn II	1818.38	100		V III	1822.31	25	
Na II	1818.473	5		Si I	1822.4553 st	30	12
Fe II	1818.509	40	66	Cr IV	1822.49	20	
Al IV	1818.75	50d		Cl III	1822.50	600	7
Co II	1818.784	10		Na II	1822.568	5	
As I	1818.59	5		Ca III	1822.592	25	
Na II	1818.628	7		V II	1822.593	10	
Co III	1818.684	60	42	V III	1822.61	50	
Cr II	1818.89	20		Mn II	1822.71	10	
Cr IV	1818.90	100		Ni III	1822.918	25	
Co III	1819.009	0		Mn II	1823.06	8	90
Na III	1819.01	40		Ni III	1823.061	800	20
Na II	1819.024	20		Cr II	1823.07	20	
Co III	1819.070	0		Co III	1823.079	200	
Cr IV	1819.18	300	16	Ar II	1823.205	100	
Co III	1819.261	6	33	Mn II	1823.22	1	
Ni III	1819.275	300		Co III	1823.414	20	
Ni III	1819.325	3		Mn III	1823.477	40	
Co III	1819.330	0	56	V III	1823.57	200d	
Mn III	1819.410	5		Co III	1823.622	30	
Fe III	1819.480	150		Mn II	1823.69	30	99
Mn II	1819.62	15		Fe II	1823.888	20	
Fe II	1819.65	0		Ni III	1823.936	1	
Fe III	1819.718	70		Co II	1824.060	10	
Mn II	1819.75	9	99	Na II	1824.098	0	
Cr III	1819.79	30		Ge I	1824.3023 st	70	7
Cr II	1819.81	100		V II	1824.328	6	
Mg III	1819.954	2		V III	1824.34	50	
As II	1820.009	0		Na III	1824.52	10	
Co III	1820.064	20	42	Cl III	1824.59	300	7
Mn II	1820.22	50		Fe III	1824.659	70	
Cr V?	1820.28	600		Ar II	1824.842	50	
Cu III?	1820.339	3		Co III	1824.874	20	42
S I	1820.3426	500	2	V III	1824.88	75	
Co I	1820.42	120	46	Fe II	1824.98	0	
Mg III	1820.421	20		Zn III	1825.020	1	
Fe III	1820.496	70		Si I	1825.021 st	1	12
V III	1820.65	250		Ni II	1825.068	1	
Mn II	1820.65	9	90	Ni III	1825.084	20	
Cr II	1820.84	80	18	Co I	1825.17	10	
Mg III	1820.896	2		Mn II	1825.22	3	
Ni II	1820.916	1		Ti III	1825.30	10	
Co III	1821.004	0		Fe II	1825.316	8	66
Cr III	1821.08	20		Cr II	1825.34	60	4
Co III	1821.262	80	78	Ne II	1825.343	80	
As I	1821.32	2		Cu I	1825.348	100r	6
V	1821.33	10		Co III	1825.365	80	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Na III	1825.44	200		F III	1830.567	3	
Co III	1825.464	60	33	Co III	1830.581	60	32
V I ^a	1825.57	8		V VIII	1830.6	f	
V III	1825.60	25		V III	1830.61	50	
Cr III	1825.66	10		Cr II	1830.61	100	4
Na II	1825.730	7		Fe III	1830.623	200	117
V IV	1825.836	200		Ar II	1830.777	500	
B I	1825.911	300		Co III	1830.780	4	
Co III	1825.947	150	48	Kr II	1830.842	40	
Fe III	1826.156	70		Ni III	1830.859	15	
Cr IV	1826.16	150	12	Fe II	1830.861	4	66
S I	1826.2451	450	2	Co III	1830.870	30	
Fe III	1826.267	20		Mn II	1831.05	10h	
Cu III	1826.339	5		V III	1831.15	400	
B I	1826.413	300		Cr III	1831.15	100	
Mn II	1826.59	20		Na II	1831.172	12	
Ne II	1826.667	5		Fe II	1831.261	20	
Mg III	1826.750	2		As i	1831.30	50	2
Cr IV	1826.81	150	16	Ti III	1831.31	10	
Ne II	1826.829	90		V II	1831.349	2	
Fe II	1826.991	20	65	Zn II	1831.376	80	A
Mn II	1827.076	100	99	Na II	1831.402	1	
Co III	1827.094	60	42	Co III	1831.439	400	32
Cr III	1827.26	300	46	Ne II	1831.481	10	
Cr IV	1827.39	50	12	Ar II	1831.527	500	
Fe II	1827.736	4	66	N II	1831.586	P	10
Mg I	1827.934	300		Cr III	1831.60	10	
V III	1827.96	200		V III	1831.64	400	
Ti III	1828.14	20		Mn II	1831.66	40	
Mn II	1828.251	10	99	Fe II	1831.724	10	66
Ni III	1828.279	15		V III	1831.74	15	
Co I	1828.35	120	51	As I	1831.74	30	
Cl III	1828.40	500	7	Co III	1831.916	150	26
Al II	1828.5876	600		Cl III	1832.08	400	7
Cr II	1828.62	60		Ni II	1832.144	1	
P II	1828.63	10		Mn II	1832.19	50	
Mn III	1828.647	40		Co III	1832.201	80	47
Se I ^a	1828.65	60		Ti III	1832.21	10	
Ni III	1828.672	15		V III	1832.29	25	
V II	1828.84	500b		Cr III	1832	10	
V III	1828.84	500b		F III	1832.361	6	
Fe III	1828.857	70		Mn II	1832.47	1	
Zn	1828.925	75		Co I	1832.47	150	48
Mg III	1828.974	2		Fe II	1832.494	6	65
Fe III	1829.172	150		Ni II	1832.566	1	2
Cr III	1829.39	20		Co III	1832.784	0	
Co III	1829.392	1		Al II	1832.8374	400	
Ti III	1829.42	10		Cr III	1832.87	40	
Mn II	1829.43	60		V III	1832.99	150	
Ni IV	1829.497	200		Cr III	1833.00	10	
Se III	1829.6	100		Mn III	1833.019	20	
Co III	1829.674	40	55	Fe II	1833.071	10	96
Cr III	1829.72	100	46	Fe II	1833.27	1	
Mn II	1829.75	20		Mn II	1833.30	20	
Si I	1829.8975 st	10	12	Cl III	1833.31	400	7
Ni II	1830.006	400	20	F III	1833.322	3	
Ca III	1830.059	600		Ni II	1833.403	5	
Ni III	1830.075	200	20	V III	1833.42	25	
Co III	1830.093	400	26	Mn II	1833.47	1	
Na II	1830.124	20		Zn II	1833.481	40	
Mn II	1830.15	10		Zn II	1833.573	50	A
Cr IV	1830.29	50	12	V II	1833.58	100	75
Se I ^a	1830.41	80		Fe II	1833.64	6	
Fe II	1830.47	3		Ni III	1833.669	20	
N II	1830.527 P	1		Cr IV	1833.79	75	12

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
F III	1833.791	3		Fe III	1837.588	250	
Kr II	1833.847	40		Co III	1837.630	200	32
Na II	1833.873	45		Mn II	1837.65	10	
Ce III	1833.876	10		Zn IV	1837.680	1	
Ne II	1833.910	80		Ni II	1837.744	1	
Mn II	1833.91	15		V II	1837.76	0	75
P I	1833.98	30		F III	1837.815	1	
Ar II	1834.038	200		Co I	1837.82	80	
Fe III	1834.096	70		Co III	1837.840	20	47
V II	1834.165	0		Mn II	1837.86	1	
Zn II	1834.268	40	-A	F III	1837.880	100	
Co I	1834.34	100	50	Na II	1837.890	45	
V II	1834.371	0		Ni II	1837.985	2	
Ni III	1834.381	15		Ca II	1838.008	400	4
Mn II	1834.47	15		Si I	1838.0120 st	40	65
Mn II	1834.7	30		Mn II	1838.05	10	98
Cr III	1834.68	10		V	1838.10	10	
Al II	1834.807	250		Na III	1838.11	120	
P I	1834.83	60		Mn II	1838.25	2	
Co III	1834.840	15	47	Co I	1838.28	150	44
Ni III	1834.890	70		Fe III	1838.309	450	117
Zn IV	1834.966	30		Ge I	1838.321	2	
Co I	1834.99	100	45	Mg III	1838.336	12	
F III	1834.997	100		Cr III	1838.34	30h	
Co III	1835.000	1000	32	Si III	1838.466 P		65
V III	1835.01	200		F III	1838.568	20	
Ca III	1835.072	200		Mn II	1838.604	20	98
Zn IV	1835.124	50		V II	1838.606	0	
Na II	1835.217	80		Fe III	1838.621	70	
Na III	1835.22	300		Fe III	1838.698	70	
Co III	1835.255	20	26	V II	1838.86	250	117
Fe II	1835.42	2		Mn III	1839.21	2	
N III	1835.51	150		Ni III	1839.092	1	
V III	1835.56	25		Na II	1839.270	20	
Co III	1835.617	30	42	F III	1839.301	300	
Co III	1835.687	4	55	Zn III	1839.334	150	
F III	1835.712	200		Co II	1839.367	100	
Fe II	1835.874	300	98	N III	1839.44	100	
Mn II	1835.91	100		Co III	1839.535	10	77
Zn II	1836.097	70	-A	V II	1839.54	200	75
V III	1836.17	10		Si III	1839.585 P		65
N II	1836.172	100		Mn II	1839.59	15	98
Co III	1836.200	60		Ge II	1839.634	20	
Cr II	1836.23	240	18	Co III	1839.636	4	39
Na II	1836.367	2		Fe I	1839.65	0	
P II	1836.47	10		Cr III	1839.72	10	
Cu IV	1836.484	10		Fe I	1839.80	3	
Mn II	1836.508	50		Na II	1839.835	25	
Si I	1836.5102 st	200	11	Mg III	1839.878	7	
Ge I	1836.649	2		N II	1839.931 P		
Zn II	1836.654	75		F III	1839.968	400	
N I	1836.712	4	8	As II	1839.978	5	
V III	1836.78	250		Na II	1840.032	20	
Ni III	1836.843	30		Si I	1840.0418 st	8	65
Mn II	1836.92	20		Ca II	1840.061	600	4
Al II	1836.9635	60		Cr IV	1840.10	500	11
Cr III	1837.05	100	46	F III	1840.140	300	
Mn II	1837.13	80		Co II	1840.220	30	
Mn II	1837.25	2		Mn II	1840.29	100	
Fe III	1837.422	70		Ni III	1840.421	40	
Ge II	1837.460	0		V II	1840.438	10h	
Mn II	1837.48	60		V III	1840.45	25	
P II	1837.51	20		Mn II	1840.45	2h	
Na II	1837.522	15		Cr III	1840.48	10	
Ge I	1837.583	2		As I	1840.48	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co I	1840.55	100	4c	Mn II	1843.505	100	
Mn II	1840.56	3h		Co III	1843.532	40	
Cr III	1840.69	10		Ni III	1843.689	1	
Co I	1840.79	100		Si I	1843.7700 st	200	
Mn II	1840.91	5		Mn II	1843.78	1	11 98
Cu III	1840.917	100	15	Ne II	1843.908	80	
F III	1840.930	10		Mn II	1843.94	20	
N II	1840.983 P	100		Zn III	1843.953	25	
Mn II	1841.12	30		Co III	1843.960	15	
Si I	1841.1520 st	125	11	Fe III	1843.999	200	
Ge I	1841.3275 st	70		Mn II	1844.927	6	98
Mn II	1841.33	10		P II	1844.06	5	
Fe III	1841.387	200	97	F III	1844.077	100	
Si I	1841.4490 st	400	11	Mn II	1844.086	50	
Co I	1841.47	100	47	Mg IV	1844.169	300	
Fe III	1841.536	300		N II	1844.259 P	10	
N III	1841.57 P	50		Fe III	1844.263	300	
Fe II	1841.60	0		P I	1844.33	60	
Mn II	1841.61	40		Cr IV	1844.34 P	30	16
Fe II	1841.701	200h	65	Na III	1844.36	400	
Mn II	1841.72	3	98	As I	1844.36	40	11
V II	1841.781	100b		O V	1844.4	80w	
V III	1841.80	250		Ge I	1844.4102 st	15	
Na I	1841.822	60		V III	1844.43	50	
Ni II	1841.866	15		Fe III	1844.547	400	117
Co I	1841.88	30		As I	1844.57	40	25
Co III	1841.924	3		Fe II	1844.590	100h	397
Mn II	1841.947	100		Co III	1844.684	6	
Fe II	1841.950	20w		Co III	1844.726	10	
Fe I	1842.05	0		Mn II	1844.794	20	
V III	1842.06	150		Zn IV	1844.909	75	
Si III	1842.064 P		65	Fe III	1844.942	200	97
Kr II	1842.091	120		Cr III	1844.99	100d	
Co III	1842.109	0		Se III?	1845.0	300	
Fe II	1842.256	10	65	Na II	1845.016	70	
N II	1842.284 P	10		V III	1845.07	300	
F III	1842.326	1		Co III	1845.074	20	47
Mn II	1842.33	10		Na III	1845.10	240	
Co I	1842.34	250	45	Ni III	1845.141	15	
Ne II	1842.341	70		P I	1845.19	30	
Ge I	1842.4098 st	70	7	Ga II	1845.26	750	4
Mn II	1842.49	1		V III	1845.29	250	
Si III	1842.547	180	20	Mn II	1845.29	30	
V III	1842.66	25		Fe III	1845.304	300	117
B II	1842.811	300		Ge II	1845.388	30	
Cr IV	1842.84 P	125	12	Mn II	1845.51	40	
Mn II	1842.863	50		Si I	1845.5203 st	200	10
Ni II	1842.889	1		Fe III	1845.521	450	97
Fe III	1842.927	300	97	V III	1845.60	25	
Ca II	1843.088	200	10	N II	1845.616 P	100	
Zn	1843.100	10		O V	1845.63	40w	
Mn II	1843.117	20		N III	1845.64	250 -A	
V III	1843.16	100		Fe III	1845.749	70w	
Mg I	1843.32 P			Ca III	1845.775	450	
Co III	1843.332	0		N III	1845.80	200 -A	
N II	1843.357 P	10		Ge I	1845.8723 st	70	
Cr III	1843.40	100d		Co II	1845.910	200	
Ni III	1843.406	50	34	Ne II	1845.996	30	
Fe III	1843.409	250		Mn III	1846.001	3	
Cr IV	1843.47 P	75	12	Co III	1846.050	4	
Na III	1843.43	40		Si I	1846.1118 st	200	11
V II	1843.47	50	75	Mg III	1846.121	7	
Co III	1843.443	40	26	Co III	1846.157	100	26
Co I	1843.45	80		V II	1846.268	1	
Fe III	1843.505	150	117	Fe II	1846.27	4	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn III	1846.278	3		V III	1849.55	250	
Cr III	1846.45	80		Se I?	1849.55	80	
V III	1846.51	75		Sc III	1849.58	700	
Co III	1846.514	10d	32	Mg III	1849.591	2	
Fe II	1846.573	240	98	Ge I	1849.6354 st	20	
Mn II	1846.66	10		Cr III	1849.64	10	
Mg III	1846.707	7		Fe III	1849.648	70	97
Cr III	1846.71	10		Cr III	1849.76	10	
P II	1846.78	20		Zn IV	1849.791	75	
Mn II	1846.78	4		P I	1849.84	105	
Mn II	846.93	10		Co III	1849.932	40	76
Co I	1846.94	40		Mn II	1849.94	3	97
Fe III	1846.943	200		Fe III	1849.960	300	53
Gc I	1846.9578 st	20	20	Cr III	1849.99	30h	
V II	1846.965	0		Mn II	1850.00	20	
P I	1847.19	300		Mg III	1850.060	7	
Ne II	1847.249	5		Kr II	1850.093	80	
Mn III	1847.268	30		Zn II	1850.140	10	-A
Ni III	1847.275	650	19	Fe III	1850.200	300	97
As I	1847.32	10		Na III	1850.24	400	
Fe III	1847.548	70		As I	1850.24	40	10
F III	1847.462	150		Na III	1850.39	360	
Si I	1847.4737 st	300	10	Mn II	1850.43	3	
Ca II	1847.54	200		Cr III	1850.45	10	
Mn III	1847.561	2		Co III	1850.503	60	
Zn II	1847.562	75	-A	Se I?	1850.51	60	
Fe III	1847.637	150		Mn II	1850.60	i	96
Mn II	1847.73	150		P II	1850.61	20	
Co III	1847.825	25		Fe III	1850.650	70	53
Co I	1847.89	300	46	Si I	1850.6719 st	400	10
Fe II	1847.893	10	65	V III	1850.69	300	
N II	1848.002 P	10		Ca II	1850.691	400	10
Fe III	1848.130	150		Kr II	1850.773	80	
Si I	1848.1504 st	200	10	Co III	1850.780	2	41
Mn II	1848.16	10	97	Mn II	1850.88	100	
Fe II	1848.231	100	7	F III	1850.889	3	
O III	1848.26	500		Zn	1850.894	60	
Mn II	1848.26	40	98	Ca III	1851.090	10	
Fe III	1848.428	20		Na II	1851.194	0	
F III	1848.431	200		P I	1851.22	240	
Co II	1848.466	10		Cu IV	1851.250	11	
Zn	1848.481	20		Fe III	1851.261	400	
Fe III	1848.492	70		V III	1851.32	150	
Mn II	1848.52	2		Fe I	1851.39	0	
Cr III	1848.56	100		Mn II	1851.44	60	
Cl II?	1848.74	10		Co I	1851.49	80	
Si I	1848.7480 st	250	11	Co III	1851.509	10	
Fe II	1848.771	240	141	Fe II	1851.517	20	65
V II	1848.80	5		Mn II	1851.61	10b	97
Ne II	1848.823	70		Mn II	1851.61	10b	96
Fe III	1848.883	70		Co II	1851.639	10	
Al II	1848.8876	1		Si I	1851.7829 st	70	64
Cr III	1848.96	30		N II	1851.810 P		
V III	1848.97	10		Cr IV	1851.82	250	11
Mn III	1849.049	15		Co III	1851.937	40	26
P I?	1849.05	3		V III	1852.01	400	
Fe III	1849.172	70		V II	1852.017	75b	
Co III	1849.299	30	76	Se I?	1852.02	60	
Ni III	1849.319	100		P I	1852.09	120	
Ne II	1849.381	90		Cl III	1852.11	200	
Fe III	1849.407	450	97	Mn II	1852.11	10	
N II	1849.414 P	100		Cr II	1852.13	500	33
Co III	1849.464	60		P II	1852.27	20	
Ni III	1849.473	50		Cr III	1852.31	30	
Ni III	1849.540	75	19	Fe III	1852.366	70	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Cr II	1852.37	60	33	Se I	1855.20	600	15
Fe II	1852.458	19d	65	Co III	1855.331	5	
Si I	1852.4717 st	250	10	As I	1855.39	10	11
Co I	1852.52	150	48	P I	1855.48	1	
Ni II	1852.522	2		Fe III	1855.510	200	
F III	1852.539	3		Mn II	1855.54	8	
Co II	1852.564	0		Fe I	1855.58	100	41
Mn III	1852.579	3		Zn	1855.670	10	
Kr II	1852.603	20		Al II	1855.8054	90	
Co III	1852.645	4	32	Na III	1855.91	300	
P II	1852.65	10		Al II	1855.9286	300	4
Fe III	1852.677	400		Mn II	1855.947	5h	96
F III	1852.683	3		Co III	1855.954	10	
V III	1852.70	25		Mg III	1855.99		
Co I	1852.71	300	45	Zn IV	1856.025	5	
N II	1852.721 P			Si III	1856.062	20	70
Mn II	1852.78	60	98	Al II	1856.0957	90	
Fe III	1852.812	150	97	Co I	1856.13	150	45
Ni II	1852.875	2		Cr III	1856.20	10	
Co III	1852.919	100		Fe I	1856.23	0	
Mn II	1853.05	2		As I	1856.24	2	
Mg IV	1853.107	60		Al II	1856.2741	30	
Ne II	1853.115	90		Mn III	1856.316	3	
V III	1853.12	15		Mn III	1856.580	1	
Ge I	1853.1336 st	80		O III	1856.62	500	
Si I	1853.1521 st	35	10	V III	1856.64	500	
Na II	1853.166	80		Fe III	1856.690	450	63
As I	1853.21	20		Mn II	1856.70	12	96
Co III	1853.266	2	55	Na III	1856.73	400	
Mn II	1853.272	300	12	Ge II	1856.81	10h	
Cr III	1853.36	10		Fe II	1856.828	1	
Ne II	1853.453	20		Cu II	1856.9291	0	
Ni III	1853.480	30		V III	1857.00	25	
Co II	1853.726	10		Mn II	1857.01	30h	
Fe II	1853.754	6		F III	1857.034	1	
Mn III	1853.77	1		P I	1857.04	45	
Co III	1853.841	2		Ni III	1857.158	0	
As I	1853.95	3		Na II	1857.265	25	
F III	1854.028	35		Zn II	1857.274	5 -A	
Ne II	1854.035	90		Ne II	1857.565	30	
V II	1854.064	2h		Na III	1857.57	100	
Mg III	1854.139	4		Na II	1857.576	40	
Ni III	1854.149	800	19	Cr III	1857.59	20	
Co III	1854.194	25		N V	1857.60	50	60
Mn II	1854.24	2	97	Co III	1857.657	10	
Co I	1854.28	80	49	N V	1857.78	50	60
Fe III	1854.384	200	97	N II	1857.870 P	300	
Co III	1854.393	80	67	Mn II	1857.923	200	12
V III	1854.42	500		Fe II	1857.935	240	7
Cr II	1854.46	20		Ne II	1857.952	70	
P II	1854.59	150		Al II	1858.0262	700	4
Cu IV	1854.679	26		Cr III	1858.03	10h	
Cr II	1854.68	60		Mg III	1858.186	250	
V III	1854.71	5		Co I	1858.26	30	45
Al III	1854.716	1000	1	V III	1858.32	75	
Co III	1854.763	80	53	Ne II	1858.408	80	
Fe III	1854.826	600w	63	Mg III	1858.451	7	
Mn II	1854.89	40	98	Co III	1858.487	10	
Fe III	1854.975	300	63	V II	1858.50	20	108
Ne II	1854.976	20		Cr II	1858.54	400	33
Ar II	1854.986	50		Fe III	1858.542	300	63
Co I	1855.05	400	45	N II	1858.545 P	200	
V III	1855.06	300		Cu III	1858.685	0	
Cr II	1855.14	400	33	Cr II	1858.72	300	33
Mn II	1855.14	8		Ni III	1858.750	300	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Se I	1858.84	500	14	Mn II	1862.515	80	12
P I	1858.91	450	5	N II	1862.588 P	200	
Ne II	1859.017	20		Co III	1862.660	20	55
Mn II	1859.11	10h	96	V II	1862.76	250	181
F III	1859.143	60		Fe II	1862.774	8	
Na III	1859.20	10		Al III	1862.790	600	1
N II	1859.260 P	500		Mn II	1862.80	20h	96
Fe I	1859.26	40		Cr IV	1862.99	500	11
V III	1859.29	50		Co III	1863.134	1	31
Ne II	1859.361	80		V III	1863.14	100	
P I	1859.43	450	5	Fe III	1863.317	250	62
Mn II	1859.44	8		V II	1863.44	5	
Mn III	1859.46	25		Co III	1863.467	40	71
Ni III	1859.480	2		Mn II	1863.48	20	
V III	1859.49	50		Fe I	1863.54	10	40
Co III	1859.510	10	41	Co III	1863.615	4	
Na III	1859.61	10		F III	1863.758	6	
Co II	1859.627	0		P I	1863.78	3	
N II	1859.636 P			Co IV	1863.80	100	
Mn III	1859.65	2		Co III	1863.826	400	31
Se I	1859.69	100		Co II	1863.86	40	
Fe II	1859.741	300	65	Na II	1863.898	15	
Fe III	1859.813	300		Mn III	1863.975	3	
Fe III	1859.955	200	63	Zn III	1864.065	50	
Al II	1859.9796	120		Zn II?	1864.117	100	
Fe II	1860.055	400	97	Zn	1864.164	100	
Ge I	1860.0865 st	50	19	Co III	1864.187	80	53
Cr II	1860.12	240	33	P II	1864.22	150	
Co II	1860.214	40		N II	1864.364 P		
V III	1860.22	75		P I	1864.37	105	
N V	1860.24	85	62	Mn II	1864.400	80	12
As II	1860.342	350		V III	1864.51	300	
As I	1860.40	80	25	Fe III	1864.534	70	
Mn II	1860.42	3	97	Ni II	1864.558	6	
Ca III	1860.432	500		Mn II	1864.615	40	97
As I	1860.46	80	9	P I	1864.64	3	
Mn II	1860.51	100		Fe II	1864.656	40	126
B V	1860.56 P			V III	1864.74	100	
P I	1860.63	45		Fe II	1864.743	400	126
Ni II	1860.689	1		Co I	1864.92	40	
Ni II	1860.796	1		Si I	1865.0278 st	2	63
As I	1860.87	5		Ge I	1865.0525 st	70	
Ge I	1861.0945 st	9		As I	1865.10	8	
Ne II	1861.137	50		Na II	1865.139	35	
Na III	1861.19	300		Mn II	1865.16	5	
Mn II	1861.44	1		Fe III	1865.202	450	
V IV	1861.558	300		Mn II	1865.30	2h	96
F III	1861.584	60		Fe I	1865.30	300	
Cu II	1861.6229	0		Mg III	1865.388	1	
Fe III	1861.665	200	63	V III	1865.41	10	
Mn II	1861.667	100	12	Co III	1865.424	20	31
Co III	1861.775	200	40	Fe III	1865.445	150	154
Si I	1861.7949 st	2	63	Co III	1865.456	20	40
F III	1861.814	35		Mn II	1865.52	10h	96
F III	1861.912	3		Fe III	1865.606	150	
Al II	1862.0813	5		Mg III	1865.636	12	
F III	1862.094	35		Ni II	1865.637	5	
Al II	1862.3111	1000	4	V II	1865.68	20h	
Co II	1862.313	250		F III	1865.701	1	
Fe I	1862.318	100	39	Cr II	1865.80	20	
Cu IV	1862.324	16		Mn II	1865.832	150	12
Co II	1862.360	10		V II	1865.99	30	97
V II	1862.37	300	108	Zn	1866.055	100	
Na III	1862.40	120		Fe I	1866.07	80	42
Fe III	1862.446	150		Zn II?	1866.077	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V II	1866.080	1		Ni II	1870.460	8	
Ar II	1866.089	100		Cu IV	1870.535	10	
Cr III	1866.12	10		Co III	1870.634	15	40
Ni III	1866.163	5		Kr II	1870.645	80	
Cr II	1866.22	300	156	Fe II	1870.72	1	
Mn II	1866.25	1		Si II	1870.782	3	9.02
Co I	1866.27	60		Cr III	1871.00	20	
Fe III	1866.305	600	52	V II	1871.08	120	30
Zn II	1866.366	10	A	Ne II	1871.097	70	
Co I	1866.45	30		Fe III	1871.152	600	5
Na II	1866.472	45		Fe III	1871.319	150	
N II	1866.457			Mn II	1871.39	20	
Co III	1866.497	4	26	Fe III	1871.448	20	
Ni II	1866.499	5		Pa II	1871.517	40	
Fe III	1866.554	300	52	V III	1871.58	200	
Co III	1866.615	20		Kr II	1871.619	80	
Cr III	1866.63	20		As I	1871.68	30	9
V II	1866.68	50	108	Co III	1871.870	100	31
Fe I	1866.815	40	39	F III	1871.923	10	
Mn III	1866.828	5h		Co III	1871.952	60	31
Fe III	1866.900	150		Zn II?	1872.125	100	
Co II	1867.028	50		Fe III	1872.214	400	
F III	1867.050	6		Ne II	1872.291	50	
Ni XIV	1867.1		f	Fe I	1872.359	160	39
F III	1867.310	100		P II	1872.36	1	
V II?	1867.47	200		Ca III	1872.367	700	
Co III	1867.490	10	31	Na III	1872.45	20	
Cr III	1867.52	10		Fe III	1872.515	250	
Cr III	1867.598	1		Co III	1872.532	40	71
Ni III	1867.700	3		Co III	1872.575	60	31
Cu III	1867.747	20	15	Ar II	1872.589	100	
Mn II	1867.880	80	12	Fe II	1872.65	2	
Kr II	1867.889	40		V I	1872.66	25	
Co III	1867.930	6		Ne II	1872.721	5	
Zn II	1867.994	40	A	O III	1872.78	800	
Ni III	1868.201	20		O III	1872.87	800	
Mg III	1868.225	40		Mg III	1872.956	4	
N II	1868.240	10		Ge I	1872.9745	st	6
Mn II	1868.28	0	97	V III	1873.01	5	
Cr IV	1868.29	50	11	Co III	1873.014	0	52
Mn II	1868.58	20	12	As I	1873.02	40	8
Ar II	1868.660	300		Fe I	1873.052	160	39
Kr II	1868.662	120		Mn II	1873.07	40	
F III	1868.690	10		Si I	1873.1036	st	25
Si II	1868.765	1	9.02	Ar II	1873.140	600	9
Mn II	1868.78	40		Fe I	1873.259	100	39
Co III	1868.796	6	41	Mg III	1873.268	1	
Mn II	1869.03	15	12	Ne III	1873.32	80	
Co I	1869.16	50		Na II	1873.369	45	
Mn III	1869.164	6h		V II	1873.39	100	108
Si II	1869.317	20	9.02	Ne II	1873.492	20	
F III	1869.380	3		Fe III	1873.534	150	
Na III	1869.43	20		Ne II	1873.677	5	
V II	1869.47	500	97	Kr II	1873.761	80	
Mn II	1869.55	1		Cr IV	1873.86	125	11
Fe II	1869.56	3		Ne II	1873.873	60	
Fe III	1869.828	650	52	Na II	1874.098	15	
Fe III	1869.925	250		Na III	1874.22	10	
As I	1869.94	15		Ge I	1874.2565	st	200
Co III	1870.012	6	55	Co III	1874.355	20	40
Si II	1870.227	15	9.02	V II	1874.45	120	97
Ca III	1870.263	700		Fe I	1874.58	3	
Fe I	1870.36	0		Mg IV	1874.598	70	
Co I	1870.45	50		Co III	1874.822	60	31
Cr II	1870.46	20		Si I	1874.8423	st	175

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe II	1874.931	10	65	Co I	1878.28	250	
O III	1874.94	800		Fe II	1878.39	0	
V II	1874.97	10	30	Al II	1878.5043	8	
Ni II	1875.069	3		Mn II	1878.52	3h	
Na II	1875.075	60		Fe III	1878.550	150	
Co III	1875.094	40	40	F III	1878.586	1	
Fe I	1875.14	0		N II	1878.624	P	200
Cr II	1875.22	60		V III	1878.65	300	
Kr II	1875.296	20		Cr III	1878.77	20	
Fe II	1875.43	0		Kr II	1878.830	160	
Cr III	1875.52	10		Fe I	1878.849	20	39
Fe II	1875.536	300	345	V II	1878.90	100	108
Mn II	1875.59	30		F III	1878.910	1	
V III	1875.62	250		Cr III	1878.99	20	
Mn I	1875.727	10r		Cr II	1879.05	200	156
Fe I	1875.8129	st	9	Ni III	1879.063	5	
V III	1875.88	250		Mn II	1879.09	5	
Kr II	1875.999	200		Kr II	1879.141	40	
Cr IV	1876.00	F	11	Co III	1879.170	2	
Ne II	1876.003	70		Na II	1879.240	30	
Co I	1876.01	100		Co III	1879.244	60	31
Ge I	1876.0104	st		Co III	1879.385	20	67
V II	1876.06	200	108	Ar II	1879.420	160	
Mn II	1876.11	1		Si I	1879.434		61
Ni II	1876.180	1		Mg III	1879.492	200	
Fe II	1876.181	160h	141	P II	1879.62	250	
F II	1876.343	1		Mn II	1879.66	1	
Ni II	1876.418	2		Co III	1879.753	10	
Fe I	1876.419	40	39	Ar II	1879.759	200	
Mn I	1876.445	15r		Mn II	1879.85	40	
V II	1876.47	100	30	Fe I	1879.86	2	
Co I	1876.48	70		Ne II	1879.884	50	
Kr II	1876.491	20		Fe II	1880.046	40	141
P II	1876.79	190		Cl III	1880.10	300	
Cu IV	1876.812	10		Fe I	1880.14	35	41
Fe II	1876.838	300	97	Co I	1880.34	40	
Co I	1876.88	80		Cr I	1880.39	50	
Ca III	1876.915	10		V III	1880.41	400	
As I	1876.98	2		Co III	1880.449	6	52
V II	1877.00	100	97	Ni III	1880.498	5	
Al II	1877.13	1		Fe III	1880.620	200	62
Mn II	1877.16	30		Fe III	1880.704	250	
Na II	1877.365	20		V II	1880.811	1h	
Ne II	1877.587	30		Mn III	1880.818	3	
Co I	1877.40	150		Co I	1880.82	150	
Co III	1877.464	10	39	Co III	1880.912	10	40
Fe II	1877.467	400	125	Si I	1880.9657	st	9
Mn I	1877.518	20r		Fe II	1880.976	400	126
Ar II	1877.523	400		Cr III	1881.02	20h	
Co III	1877.544	10	40	Cr II	1881.06	120	
Kr II	1877.613	40		Co III	1881.080	30	
Mn III	1877.616	400		Ni II	1881.155	25	24
Ne II	1877.679	40		Fe III	1881.178	300	
Ni II	1877.838	40		Al IV	1881.19	50	
V II	1877.85	0		V III	1881.28	25	
Cr III	1877.93	10		Cr III	1881.33	20	
Zn IV	1877.976	50		Kr II	1881.418	20	
Fe III	1877.989	800	63	Co III	1881.427	30	31
Mn III	1878.018	2		Fe III	1881.578	200	
Kr II	1878.041	240		Ge I	1881.6470	st	8
Fe I	1878.06	1		Ne II	1881.699	70	
Ni II	1878.103	2		Co III	1881.702	200b	40
V II	1878.19	5	30	Co III	1881.702	200b	30
Fe I	1878.20	0		Cr III	1881.73	20	
Kr II	1878.256	40		V III	1881.75	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Si I	1881.8538 st	30	8	F III	1885.587	3	
Zn IV	1881.861	90		Mn II	1885.70	20	
Co III	1881.867	60	30	Na II	1885.742	45	
Cr I	1881.87	250		Na III	1885.75	80	
Mn II	1881.90	30		Ni III	1885.864	10	
As I	1881.96	40	2	V II	1885.90	100	116
Fe III	1882.047	650	52	Fe III	1885.947	300	96
Cu II	1882.2085	1		Ni II	1886.043	12	23
Cu III	1882.250	1		F II	1886.147	100	
Co IV	1882.28	50		Cr I	1886.34	500	
Mg III	1882.308	7		Ar II	1886.386	400	
Co III	1882.323	30	40	Zn III	1886.405	1	
Fe III	1882.357	300		F III	1886.464	6	
N V	1882.36	30	57	Co III	1886.469	10	40
Mn I	1882.366	3		Fe III	1886.607	300	
Ne II	1882.478	60		Co III	1886.742	40	
Ni III	1882.686	25		Fe III	1886.757	800	52
Mn I	1882.900	1		Mg III	1886.764	2	
N V	1882.92	35	57	F III	1886.950	3	
Fe III	1882.979	250	62	Fe III	1887.085	70	62
Fe I	1883.06	0		Mn IV	1887.151	350	
Mn I	1883.085	0		Fe III	1887.197	550	53
Cr IV	1883.10 P	175	11	Mg III	1887.308	12	
Cr I	1883.11	50		Mn II	1887.31	2	
Cl II	1883.14	300		N II	1887.404 P	350	14
Ni II	1883.170	4		Ar II	1887.42	30	
Fe III	1883.185	150		Fe III	1887.471	550	52
Ge III	1883.27	120		Na III	1887.48	300	
Co III	1883.286	40	30	Cr I	1887.60	150	
Cr II	1883.35	200	40	Si I	1887.6928 st	45	51
Fe III	1883.394	70		Se IV?	1887.7	200	
Na II	1883.466	20		Fe III	1887.734	250	
V III	1883.57	250		Fe I	1887.761	300	39
Mn II	1883.78	10		V III	1887.79	100	
Ne II	1883.796	80		Cr III	1887.83	5	
Na II	1883.804	20		Cr I	1887.85	50	
Fe III	1883.816	200	62	Mn II	1887.87	10	11
Fe I	1883.91	40		Co I	1887.89	120	
F III	1883.925	6		Cl II	1887.90	10	
V II	1883.98	200	30	Cr II	1887.96	120	156
Mn II	1883.98	10		Ne II	1888.107	100	
Cr II	1884.17	20		Cr I	1888.17	150	
Fe III	1884.253	150w		Fe III	1888.260	150	
V II	1884.254	5h		Fe I	1888.32	80	40
Cr III	1884.30	5		Co III	1888.345	2	
Co I	1884.45	100	42	Mn III	1888.438	1	
Cr III	1884.49	5		Co III	1888.451	2	
Co III	1884.532	1		Mn IV	1888.454	40	
Co I	1884.56	100		F I?	1888.530	10	
Fe III	1884.596	550	62	P IV	1888.65	400	5
V III	1884.61	200		Fe II	1888.733	400	125
Fe I	1884.73	2		Ar II	1888.782	400	
F II	1885.047	10		Kr II	1888.783	160	
Mn II	1885.05	1		Cr III	1888.83	10	
Na II	1885.091	50		Zn III	1888.968	3	
Fe III	1885.125	600	96	Ar II	1889.029	600	
Mn III	1885.207	300		Mn II	1889.05	20	
N III	1885.25	500	24	Cl III	1889.06	10	
V III	1885.26	15		F III	1889.076	20	
Se IV?	1885.3	200		Co III	1889.090	2	
F II	1885.442	40		Cr I	1889.20	50	
Co III	1885.476	3h		V III	1889.22	40	
Cr III	1885.50	50		Na II	1889.317	30	
V II	1885.520	3		Co III	1889.321	4	
Ni II	1885.525	20		Fe III	1889.451	300	53

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co I	1889.60	60		Mn II	1893.70	50	
Kr II	1889.679	80		Ne II	1893.876	70	
Ne II	1889.710	100		Mg IV	1893.898	200	
F III	1889.711	1		Co III	1893.911	1	
Fe III	1889.735	250		Fe III	1893.981	700	83
Co I	1889.87	100		Fe II	1894.006	200w	125
Mn II	1889.88	8		Cr III	1894.05	20	
As I	1889.95	5		Co I	1894.07	50	
Ni III	1890.155	15		F III	1894.082	60	
Mn II	1890.17	5		Ca III	1894.124	500	
Mg III	1890.380	40		Mn II	1894.19	0	
Mn III	1890.42	2		Fe III	1894.252	300	
As I	1890.42	1000r	1	Zn II	1894.259	75	-A
V II	1890.50	20		C III	1894.29	200	11 63
Cr II	1890.55	600	40	Se III	1894.4	400	
Co III	1890.642	0		V I	1894.47	40	
Fe III	1890.669	900	52	Fe III	1894.509	200	
Na III	1890.75	240		Ca III	1894.582	250	
Cr I	1890.78	300		As II	1894.661	1	
V I	1890.82	15		F III	1894.779	1	
Fe III	1890.893	150	53	Fe III	1894.983	250	96
Mn I	1890.962	1		V III	1895.01	300	
Fe III	1891.070	250	96	Ne II	1895.072	10	
Mn II	1891.18	8		Ni II	1895.082	6	
Fe III	1891.186	200	96	Ge I	1895.1968 st	100	
As II	1891.278	50		Co III	1895.368	100	
Fe III	1891.379	70		Kr II	1895.408	20	
Ne II	1891.366	60		V	1895.44	5	
Mn I	1891.414	3		Sc III	1895.441	80	5
V III	1891.47	50		Fe III	1895.456	1000	34
As I	1891.47	5		Si I	1895.461 st	1	58
Fe III	1891.516	300w		Co II	1895.478	40	
Mn II	1891.55	30b		Ni III	1895.479	5	
V III	1891.71	10		Fe III	1895.635	P	96
Ne II	1891.730	5		Fe II	1895.675	200	124
Fe I	1891.77	200		Cr I	1895.78	50	
Mn III	1891.826	200		Ne II	1895.840	5	
Fe III	1891.865	200		Fe III	1895.912	70	
Mg III	1891.970	7		Co III	1896.031	0	
Cr I	1892.01	50		Zn II	1896.056	2	-A
Co III	1892.011	30	75	Cr III	1896.09	30	
Mn II	1892.02	50		Ni II	1896.147	2	1
Si III	1892.030	60	1	Mn III	1896.293	3	
Fe III	1892.073	300	96	Mg III	1896.306	50	
Fe III	1892.140	300	52	Fe III	1896.333	250	
Fe III	1892.247	300	96	Si I	1896.339 st	1	58
Fe III	1892.339	70		Cr III	1896.39	10	
Mn II	1892.40	10		Fe III	1896.734	250	
Fe III	1892.488	70		Fe III	1896.803	300	83
Fe III	1892.598	70		N VI	1896.82	300	5
Zn	1892.866	75		V III	1896.84	10	
Fe III	1892.890	300	96	Fe III	1897.028	250	
Co III	1893.095	4		Mn II	1897.06	20	
Fe II	1893.113	700		Se III	1897.2	400	
Se III	1893.2	500		Mg III	1897.226	7	
Si I	1893.252 st	175	58	Ti III	1897.27	10	
F III	1893.273	3		Mn III	1897.28	1	
Mn II	1893.288	60		Ar II	1897.352	50	
Cr III	1893.30	10		Fe III	1897.379	200	83
Co I	1893.43	30		Al II	1897.4014	9	
Mn III	1893.485	70		Kr II	1897.457	160	
Mn II	1893.49	30		Al II	1897.4605	3	
Se I	1893.50	120		Mn II	1897.48	100	
Cr I	1893.59	50		Co I	1897.48	100	
Ni II	1893.600	1		Al II	1897.4998	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co III	1897.560	1		Li I	1901.50	-A	
V II	1897.70	10		Zn II	1901.523	60	-A
Co I	1897.73	80		Fe III	1901.540	200	96
Ne II	1897.810	40		As I	1901.54	5	
Cl III	1897.85	300	8	Mg III	1901.572	20	
V I	1897.90	10		Cl III	1901.61	500	8
Kr II	1898.048	200		V III	1901.63	50	
Mn II	1898.12	30		Co I	1901.75	200	
Mn III	1898.301	200		Mn III	1901.754	1	
Ar II	1898.36	15		Mn II	1902.04	10	
V	1898.42	10		Mn III	1902.069	100	
Fe II	1898.538	200	140	Fe III	1902.076	300	94
Se I	1898.555	800	13	Co I	1902.15	100	
F III	1898.631	100		Cr III	1902.19	26h	
Kr II	1898.631	40		V III	1902.23	500	
Mn II	1898.64	30		As I	1902.31	5	
V I	1898.78	25		Ge I	1902.3955 st	2	
Fe III	1898.870	400		Fe II	1902.402	400	
Cr II	1898.92	700	40	Cr I	1902.43	150	
Mn III	1899.097	150		Si II	1902.459	100h-A	18 04
Cr III	1899.15	10		V III	1902.48	150	
Co III	1899.183	1		Cr III	1902.59	20h	
Al II	1899.1943	25		Ni III	1902.607	50	
Fe I	1899.21	20		P IV	1902.62	40	
Ar II	1899.287	100		Kr II	1902.778	40	
Fe III	1899.318	300	36	Fe III	1902.902	300	
F III	1899.373	1		Mn II	1902.948	500	
Mn IV	1899.483	350		Fe III	1903.159	70	
Kr II	1899.501	40		Kr II	1903.193	360	
Mn II	1899.51	10		Fe III	1903.257	200	
Na II	1899.523	30		Ni III	1903.262	15	
Cr III	1899.56	20h		Cr III	1903.29	5	
Kr II	1899.629	150		Cr I	1903.30	50	
Na III	1899.70	60		Fe I	1903.37	20b	38
Zn III	1899.793	12		Fe II	1903.370	20b	139
Co III	1899.795	10	75	Ge I	1903.5620 st	10	
Ne II	1899.802	40		Cr I	1903.57	50	
V III	1899.81	400		V III	1903.68	50	
Ar II	1899.87	100		Fe III	1903.706	70	
Mn IV	1899.878	0		V III	1903.83	15	
Fe III	1899.931	500		Na II	1903.831	15	
V I	1900.00	30		Cr III	1903.98	5	
Cr III	1900.02	20h		Fe III	1903.983	70	
Ni II	1900.025	4		V III	1904.01	75	
Mg VI	1900.04	100		F III	1904.247	60	
Mg III	1900.043	20		Fe III	1904.257	150	
Ne II	1900.189	40		Si II	1904.326	5h-A	31
S I	1900.2867	550	1	Al II	1904.3264	8	
Fe III	1900.575	70		Fe III	1904.402	250	
Ar II	1900.638	400		Ne II	1904.510	70	
Cr III	1900.66	30h		V II	1904.54	0	
Fe II	1900.667	10	362	Si I	1904.6647 st	40	56
Ne II	1900.695	5		Ne II	1904.691	5	
F III	1900.760	150		Ge I	1904.7015 st	400	6
Co III	1900.767	10	62	Co I	1904.75	50	
Ni II	1900.865	15		Fe II	1904.784	300	139
Ni II	1900.921	2		P IV	1904.80	40	
Ge I	1901.0607 st	8		F III	1904.834	75	
Fe III	1901.096	600	95	Cr III	1904.84	30h	
Fe III	1901.31	60		Fe III	1905.214	70	
Si I	1901.3377 st	400	57	Co III	1905.354	60	66
Co III	1901.357	60	75	Co I	1905.41	60	
Mg III	1901.360	5		P I	1905.48	90	
Fe III	1901.379	300		Co III	1905.674	4	
Kr II	1901.490	283		Cr III	1905.810	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe III	1905.818	150	96	Ni III	1909.091	5	
Co I	1905.87	200		Ti II	1909.33	200	3
Si II	1905.878	3h -A	31	V II	1909.36	400	80
Na II	1906.112	15		F III	1909.375	1	
Cr III	1906.12	40		Zn II	1909.424	6	
N III	1906.22	100 -A		Ar II	1909.5689 JT	50	
Co III	1906.265	6		Co III	1909.666	30	
Ti II	1906.30	300	3	Cr I	1909.72	100	
Mn II	1906.37	20		Ti II	1909.74	200	3
P I	1906.40	60		Fe III	1909.782	150	
Al II	1906.4082	25		Kr II	1909.788	20	
V II	1906.451	1		Mn II	1909.830	60	10
Fe III	1906.457	400	108	Kr II	1909.840	40	
Ne II	1906.502	60		Fe III	1909.846	150	
Kr II	1906.543	20		Cr IV	1909.86 P	50	
Al II	1906.5957	4		Fe II	1909.95	1	
V II	1906.618	1		Ca III	1910.097	550	
Cr I	1906.67	100		Fe II	1910.150	20	
Al II	1906.6743	8		Co III	1910.151	0	
Co I	1906.72	50		Fe III	1910.172	70	
Mg IV	1906.729	50		Zr IV	1910.18	40	
Fe III	1906.814	400		Mn IV	1910.251	750	
N III	1906.89	100 -A		Cr III	1910.33	50	
Mn IV	1907.028	600		Fe III	1910.401	400	57
Be I	1907.16	100		Kr II	1910.421	20	
Zn IV	1907.168	90		Fe I	1910.53	0	
N III	1907.28	400 -A		Kr II	1910.539	200	
Cr I	1907.28	100		Si II	1910.621	50h	18.04
N VI	1907.34	200	5	Mn III	1910.649	40	
Kr II	1907.356	160		Fe II	1910.669	160	124
Cr II	1907.36	60		V III	1910.68	200	
V II	1907.361	1d		Cl II	1910.76	10	
Ca III	1907.385	450		Al II	1910.8252	80	
Co III	1907.458	6		Co III	1910.840	60	66
Mn II	1907.49	20		Ti II	1911.01	50	3
Ne II	1907.493	200	9	Al II	1911.0132	12	
Fe III	1907.577	650	83	As II	1911.053	50	
Ni II	1907.612	1		V II	1911.198	4	
P I	1907.66	120		Co III	1911.174	4	
N VI	1907.67	200	5	Si II	1911.265	0h	18.04
Fe III	1907.741	250	83	Cr I	1911.30	350	
Kr II	1907.760	120		Fe III	1911.338	450	135
V II	1907.80	300b	80	Cr II	1911.36	140	155
V III	1907.80	300b		Mn II	1911.41	300	10
Mn III	1907.83	200b		Cr III	1911.66	80	
Mn II	1907.840	200	11	Ca III	1911.692	450	
Co II	1907.951	0		Fe III	1911.703	150	
Ar II	1907.988	400		Mn II	1911.76	2h	11
N III	1907.99 P	300 -A	27	Kr II	1911.797	80	
As I	1908.13	1		Al III	1911.817		
N III	1908.21 P	400 -A	27	V II	1911.88	400	80
Ti II	1908.29	300	3	Ni II	1912.146	2	
V II	1908.32	400h	80	Mn II	1912.15	1	
Ni II	1908.326	1		V III	1912.17	50	
Ge I	1908.4342 st	50		Ge II	1912.376	20	1
Zn III	1908.436	1		V II	1912.39	400	80
Cr I	1908.46	200		Ge I	1912.4087 st	100	1
Mn II	1908.47	20		Cr III	1912.50	40	
Mg III	1908.500	100		Be I	1912.53	100	
Co II	1908.517	30		F III	1912.543	10	
Mn II	1908.54	20		Fe II	1912.582	2	124
Mn III	1908.670	0		Sc III	1912.620	120	5
C III	1908.734 P	70	0.01	Cr I	1912.79	200	
Mn II	1908.91	100		Cl III	1912.90	400	8
N III	1908.96	100 -A	27	Fe III	1912.920	250	57

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
As II	1912.938	500		Fe III	1917.453	600	101
Co III	1912.952	6		Cr III	1917.52	10	
Mn II	1912.96	30		Ge III	1917.55	5	
V II	1913.10	200	80	Ge I	1917.5924 st	200	6
Al III	1913.166			Mn II	1917.61	100	
Na III	1913.17	160		Co II	1917.621	65	
Mn IV	1913.202 P	20		Fe III	1917.665	150	
Fe III	1913.386	70		F III	1917.766	1	
Zn IV	1913.521	1		Ar II	1917.79	50	
V III	1913.62	350b		V II	1917.79	150	80
Fe III	1913.522	250	57	Cl III	1917.87	400	8
V II	1913.70	350b	80	Fe III	1917.960	400	
Mn II	1913.73	20		Ar III	1918.06	50	7
Mn I	1913.752	15		Fe II	1918.114	40	138
Se I	1913.788	700	13	Mn III	1918.198	0	
Mn IV	1913.822	0		Cr III	1918.27	40	
Cr III	1913.85	20		Fe III	1918.284	450	57
Ni III	1913.890	30		Cr II	1918.30	80	
Fe III	1914.056	1000	34	Mn I	1918.323	15	
Ni III	1914.076	3		Ni II	1918.37 P		1
Cl III	1914.09	300	8	Na III	1918.46	120	
Kr III	1914.09	60		Fe III	1918.480	450	108
Ti II	1914.11	25	3	Cr III	1918.51	5	
V II	1914.295	1h		Kr II	1918.567	40	
Ti II	1914.32 P		3	Cr IV	1918.59	20	
Ar III	1914.40	450	7	Cr III	1918.61	40	
Ar III	1914.65	150	7	Mn IV	1918.61	300	
Kr II	1914.673	40		Mn II	1918.643	200	11
V III	1914.68	15		Ar III	1918.67	200	7
Mn II	1914.68	200d	11	N III	1918.69	10 -A	29
S I	1914.6982	350	1	Mg III	1918.777	20	
Ne II	1914.729	30		Mn II	1918.909	30	11
Ni III	1914.75	1		Zn II	1918.962	50	
Zn II	1914.806	60 -A		Fe III	1918.966	200	
Cr III	1914.87	30h		Zn IV	1918.919	100b	
V II	1914.91	150	80	Cr III	1919.05	30	
Ni III	1914.919	1		N III	1919.06	10 -A	
Fe III	1915.083	750	51	Zn III	1919.068	20	
Mn II	1915.10	1000	10	Co III	1919.120	100	20
Mn II	1915.21	20		Mn III	1919.162	20	
Ni III	1915.409	5		Se I	1919.190	600	13
Ni III	1915.497	5		Ar II	1919.199	300	
Ar III	1915.56	350	7	Kr II	1919.199	160	
V II	1915.71	0		V II?	1919.35	200	
Fe III	1915.750	150	57	N III	1919.44	50 -A	29
Ni III	1915.834	2		Ar III	1919.52	200	7
Mn III	1915.907	150		Kr II	1919.522	40	
Ne II	1916.083	500	9	Fe III	1919.572	250	107
V III	1916.09	25		Mn II	1919.639	300	
Co III	1916.112	10		N III	1919.71	100 -A	29
Cr I	1916.23	100		Bc I	1919.80	200	
Mn II	1916.34	0		Co III	1919.980	1	
Mn III	1916.385	20		N III	1919.99	100 -A	29
V II	1916.404	0		Ar II	1920.007	200	
Fe III	1916.507	300	95	Mn II	1920.03	100	
Cl III	1916.53	400	8	O III	1920.04	600	
Mn II	1916.71	30		Mn III	1920.065	300	
Fe III	1917.087	150	102	Na III	1920.12	120	
As I	1917.21	20	8	Ne II	1920.181	80	
Fe III	1917.250	250		Fe III	1920.186	250	95
Co III	1917.321	1		Fe III	1920.260	150	
Fe II	1917.337	300 w	96	Zn I?	1920.271	70 -A	
Fe III	1917.551	550	95	Se IV?	1920.3	600	
Mn II	1917.38	3		Cl III	1920.32	400	8
Kr II	1917.387	80		V III	1920.38	75	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn III	1920.390	70		Co III	1925.260	4h	38
Kr II	1920.467	40		Fe III	1925.271	50	
Ni II	1920.582	1		Mn IV	1925.406	40	
Cu II	1920.6718	5		Mn II	1925.52	300	
Co II	1920.713	20		Co III	1925.563	3	
O III	1920.75	500		Mn II	1925.728	1h	
Fe III	1920.752	150		Mg IV	1925.754	20	
N III	1920.86	400	-A 29	Mn III	1925.851	20	
Mn II	1920.95	2		Fe III	1925.855	200	
Zn	1920.951	10		Fe II	1925.983	400w	123
Zn III	1921.012	20		Fe III	1926.013	500	57
Fe III	1921.132	150		Al II	1926.0291	60	
V III	1921.24	100		Mn II	1926.167	40	
Mo II	1921.250	800		Ti III	1926.18	5	
Mg III	1921.374	2		V III	1926.23	25	
N III	1921.49	200	-A 29	Na III	1926.27	900	
O III	1921.52	500		Fe III	1926.304	1000	34
Fe III	1921.990	70		Mn II	1926.585	500	
Co III	1922.000	0		Cr III	1926.64	40	
Mn II	1922.031	100		B II	1926.65	10	
Fe III	1922.132	70		V III	1926.75	200	
Cu II	1922.1425	5		Fe III	1926.898	200	
Fe II	1922.234	10		Co I	1926.90	100	39
Mn I	1922.516	12		O III	1926.94	500	
Mg III	1922.540	2		Al II	1926.9478	20	
Cr III	1922.72	20		Mn I	1926.948	50	
Mg III	1922.788	1		Zn III	1927.005	2	
Fe III	1922.789	1000	51	C II	1927.02	5	14.01
Fe II	1922.797	400w	138	Al II	1927.0696	10	
Ni III	1922.91	1		Ar II	1927.19	10	
Co II	1922.925	30		Co III	1927.198	1	
C III	1922.96	300	12.02	Na III	1927.21	300	
V III	1922.98	25		Mn I	1927.33	10	
Fe III	1923.003	450	95	Mn II	1927.337	0	
Cr II	1923.02	160	155	Fe III	1927.436	300	
Mg III	1923.042	20		B II	1927.45	1	
Mn II	1923.07	200		Fe II	1927.481	20w	140
C III	1923.16	200	12.02	Ne II	1927.549	5	
Ne II	1923.226	5		Fe II	1927.679	150	
C III	1923.34	200	12.02	Ni II	1927.707	2	
Mn II	1923.34	200		Co III	1927.740	40	61
Cl II	1923.35	400		Mn IV	1927.776	20	
Cr III	1923.41	10		B II	1927.78	1	
Ni III	1923.463	5		Mn III	1927.889	80	
Ge I	1923.4674 st	100	18	V III	1928.05	15	
O III	1923.49	700		Zn III	1928.098	0	
O III	1923.82	500		Mn II	1928.15	40	
Fe III	1923.877	450	57	Fe III	1928.178	250	
Kr III	1923.88	10		Mg III	1928.193	2	
Mg III	1923.896	200		Fe III	1928.265	300w	95
Fe III	1924.119	250		C II	1928.30	10	14.01
Ne II	1924.166	70		P II	1928.30	5	
Mn III	1924.422	20		Mg III	1928.424	30	
Co I	1924.46	150		Cu II	1928.45	1	
Mg III	1924.479	30		Mn III	1928.479	1w	
Co III	1924.529	10		Co III	1928.490	20	61
Fe III	1924.532	400	79	Co III	1928.570	100	20
Al II	1924.7537	50		Cr III	1928.61	10	
Al II	1924.8254	30		Fe III	1928.642	250	
V II	1924.87	300	195	Cu III	1928.715	1	
Al II	1924.8788	10		Ne II	1928.786	60	
Mn II	1924.96	5		Co III	1928.802	40	
Co I	1925.05	120	122	Mg III	1928.811	4	
Mn II	1925.17	5		Fe III	1928.837	250	
Cr III	1925.26	10		Mn III	1928.925	2	

FINDING LIST

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn IV?	1928.95	269		V III	1932.59	10	
Fe III	1928.991	70		Mn II	1932.600	20	
Ni II	1929.063	1		Cr II	1932.64	100	273
Mg III	1929.080	1		Ne II	1932.754	70	
As I	1929.14	3		Co III	1932.766	0	
Fe II	1929.194	20		Fe III	1932.818	300	95
Ti III	1929.34	20		V III	1932.82	25	
Co I	1929.34	150	95	Mn IV	1932.847	30	
Fe III	1929.413	250w		Mn III	1932.92	1w	
Cu II	1929.6081	25		V II	1932.99	30	
V II	1929.61	600	139	Co I	1933.03	30	
Fe III	1929.632	70	51	Co III	1933.250	10	38
Ne II	1929.643	60		V II	1933.28	100	106
Zn II	1929.670	3	8	Mn II	1933.32	15	
Be I	1929.71	300		Fe II	1933.451	10d	
Cr III	1929.72 P	10		Mn III	1933.483	100	13
Cu II	1929.7510	25	107	Ni III	1933.50 P		
Mn III	1929.752	3		Ne II	1933.529	90	
Co III	1929.756	60	20	As II	1933.530	0	
Cu IV	1929.757	14		Mg III	1933.563	40	
Zn III	1929.774	80		Ne I	1933.642	10	
F II	1929.791	10 -A		Ar II	1933.694	200	
Ge I	1929.8262 st	400	17	Kr II	1933.784	120	
Fe III	1929.941	150	79	Kr II	1933.852	80	
Cr II	1929.96	240	285	Ca III	1933.87	600	
Al II	1929.9775	200		Mn II	1933.93	80b	
Ne II	1930.028	300	9	Mn II	1933.93	80b	
Mn II	1930.06	3h	95	V III	1934.00	30c	
Fe III	1930.184	150w		Ge I	1934.0482 st	100	5
Ge I	1930.2707 st	8		Cr IV	1934.13	20	
Ne I	1930.335	60		Co III	1934.274	10	
Mg II	1930.374	7		Co I	1934.34	120	42
Fe III	1930.387	1000	51	Fe II	1934.475	1d	
Cr III	1930.39	20		Al II	1934.5032	400	
Ni III	1930.431	200	18	Fe I	1934.528	500	37
Mn II	1930.45	30		Cr III	1934.58	10	
Co III	1930.479	10	5	Al II	1934.7129	150	
Zn III	1930.525	15		Co III	1934.734	10	38
Mg III	1930.672	250		Mn II	1934.78	20h	
Fe II	1930.888	20b		Co III	1935.02	20	25
Co I	1930.90	60		Mn II	1935.068	100	
C I	1930.9054 st	1000	33	Ti III	1935.18	60	
Fe III	1930.917	150b		Fe II	1935.296	300	96
Co I	1931.00	100		Zn III	1935.354	5	
Al II	1931.0481	150		Mn II	1935.384	20	
Mn III	1931.06	2		Fe II	1935.45	0	
Zn II	1931.073	40 -A		Co I	1935.46	0	
V III	1931.09	250		V II	1935.531	1	
Kr II	1931.277	40		Na II	1935.54	10	
Fe III	1931.309	70		Cr II	1935.58	500	39
Mn III	1931.394	30c		Ca III	1935.72	600	
Mn II	1931.404	30c		Mn III	1935.770	2	
Ar II	1931.419	100		Al III	1935.840	300	
Fe III	1931.507	90	61	Al III	1935.863	15	
Kr II	1931.565	240		Ni III	1935.947	5	
C VIII	1931.8 P			Al III	1935.949	200	
Co I	1931.89	80		Mn II	1936.089	1	
Mn III	1931.92	2		Ni III	1936.10	2	
Ar II	1932.230	200		Co III	1936.392	4	38
Mn II	1932.27	10		Ne II	1936.417	30	
Al II	1932.3768	200		Mn III	1936.559	200	13
Mn III	1932.44	2		Co I	1936.58	300	98
Co III	1932.442	1h		S II	1936.71	300	
Fe II	1932.477	300	139	Mn II	1936.74	10	95
V II	1932.55	5h		Co III	1936.784	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Fe II	1936.799	407	96	Co I	1939.75	30	
Fe III	1936.806	250b		Mn II	1939.77	1	
Al II	1936.9066	150		Ne II	1939.875	70	
Mg IV	1936.931	5		Cr II	1939.90	100	285
Co III	1936.933	60	20	Ni II	1939.901	10	
Ar II	1937.041	100		Mn II	1939.96	20	
Co II	1937.070	30		Fe III	1940.018	550	61
Fe III	1937.077	200	51	Mn III	1940.056	100	
Mn III	1937.121	4		Kr II	1940.112	20	
Ge I	1937.1456 st	8		Co III	1940.147	100	20
V III	1937.17	25		Co I	1940.16	150	95
B II	1937.2			Mn II	1940.19	8b	95
Fe I	1937.274	500	35	Mn III	1940.274	6h	13
Mn II	1937.28	2		Zn II	1940.413	40 -A	
Fe III	1937.345	950	51	Mn III	1940.458	15	13
V II	1937.44	600	106	Fe III	1940.631	150	79
Mn II	1937.46	15		Fe I	1940.649	300	37
Ge I	1937.4825 st	300	6	Mn III	1940.74	2	13
Mg III	1937.539	1		Fe III	1940.769	250	
Cr II	1937.56	400	39	V II	1940.86	400	59
As I	1937.59	900r	1	Ar II	1941.0724 ST	300	13
Cr IV	1937.65	200		V II	1941.27	300	59
Co III	1937.661	20	25	Co II	1941.281	800	5
Ni II	1937.661	1		Mn III	1941.282	500	13
V II	1937.68	70	59	As I	1941.36	5	
Mg III	1937.78			Ti III	1941.40	80	
Cr III	1937.84	30		V II	1941.40	300	59
Mg III	1937.843	150		Ni III	1941.41	0	
As II	1937.869	0		Co III	1941.460	10	38
Fe III	1937.996	250		Mg III	1941.500	10	
Ge II	1938.0077 st	100	1	Ni III	1941.58	0	
Ge III	1938.01	10		Mn III	1941.59	1h	
Mn II	1938.20	20		Na III	1941.61	10	
Mg III	1938.249	7		Fe III	1941.633	200	79
Mn II	1938.27	10		Si II	1941.667	50 -A	27
Ge I	1938.3003 st	300	5	Co III	1941.730	20	38
Cr II	1938.42	60	59	Na III	1941.77	10	
Kr II	1938.427	20		As II	1941.876	1	
V II	1938.50	100		Mn II	1941.89	20	
Ca III	1938.572	150		Kr II	1941.944	40	
Ni II	1938.579	2		Fe II	1941.99	2	
V II	1938.70	80	58	Mg III	1942.036	4	
Fe III	1938.775	250	95	Mn II	1942.08	20	
Zn	1938.775	12		Ar II	1942.13	30	
Ne II	1938.826	200	9	Na III	1942.19	120	
Ge II	1938.8906 st	100	1	Cr III	1942.30	50	
Fe II	1938.899	160b	188	V II	1942.35	400	106
Fe III	1938.901	650b	106	Mn II	1942.35	5	
Mn II	1938.92	1		Co III	1942.369	40	20
Mg III	1938.936	7		Zn III	1942.392	1	
Co I	1938.94	100		Co III	1942.497	20	38
Kr II	1939.037	40		Mn IV	1942.602	0	
V IV	1939.065	500		Ni III	1942.64	0	
Fe III	1939.107	70		Mn II	1942.66	40	95
Cr II	1939.15	120	136	Cr III	1942.73	10	
Ca III	1939.244	400		Co III	1942.796	20	38
Al II	1939.2606	220		Mn III	1942.886	250w	
Na III	1939.32	10		Ni III	1942.886	10	
V II	1939.32	80	106	Ca III	1943.012	550	
Ni III	1939.40	3		Ni II	1943.060	2	
Cr III	1939.44	20		Mn III	1943.209	800	13
Ni II	1939.56 P		!	As II	1943.305	0	
Ni III	1939.588	100		As II	1943.317	40	
Cr IV	1939.64 P	100		Na III	1943.40	120	
Ca III	1939.683	500		Fe III	1943.481	950	51

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1943.541	100		Co I	1947.58	50	
Co I	1943.64	120	97	Co III	1947.526	1	20
Fe III	1943.715	150		Si II	1947.769	1 -A	23
Be I	1943.72	500		Mn II	1947.932	200	94
Ni II	1943.744	2		Co I	1948.09	100	
Kr II	1943.765	40		Ca III	1948.257	600	
V II	1943.99	0		Cr IV	1948.28	20	
Ge I	1944.1163 st	150		Mn II	1948.28	10	94
Mn II	1944.16	100	94	Fe III	1948.280	200	
Zn III	1944.160	60		Mn III	1948.282	200	
Co II	1944.181	20		Fe II	1948.372	200w	123
Mn IV?	1944.23	200		Zn II	1948.458	30	
Ma I?	1944.36	20		Cr I?	1948.51	200	136
Ni III	1944.36	2		Co III	1948.655	20	20
Si II	1944.586	15 -A	23	Mn II	1948.72	80	
Cu II	1944.5970	40		F III	1948.731	10	
Mn III	1944.640	150	13	Mn IV	1948.75	200	
Ge I	1944.7313 st	300	5	Kr II	1948.752	240	
Mn II	1944.77	40	94	Ti III	1948.79	100	
Ne II	1944.883	60		Cr II	1949.00	800	205
Cr III	1944.94	5		Co I	1949.00	150	95
Na III	1944.99	60d		Mn I	1949.100	3	
Fe I	1945.070	200	35	N III	1949.22	300	
Co I	1945.09	120	104	Cr II	1949.22	700	272
Mn II	1945.15	200	94	Si II	1949.331	10 -A	27
Co III	1945.234	40	20	Mn III	1949.354	200	13
Fe I	1945.294	400	37	Ne II	1949.450	5	
Fe III	1945.342	800	61	Fe III	1949.462	150	79
V II	1945.35	300	58	Mn II*	1949.53	30	
Ne II	1945.458	100		Co III	1949.533	6	
Si II	1945.504	3 -A	23	Mn II	1949.56	10	
P II	1945.54	50		Si II	1949.564	100 -A	27
Zn II	1945.583	60 -A		Fe III	1949.666	200	95
V I?	1945.64	300	106	Ne II	1949.696	70	
Fe III	1945.724	150	106	Mn III	1949.744	150	
Mn II	1945.83	5		N III	1949.76 P	200	
Co I	1945.86	0		Co III	1949.805	40	20
Cr II	1945.98	200	136	Se III	1950.0	500	
Mg IV	1946.135	60		Cr II	1950.06	1000	272
As II	1946.137	1		Co II	1950.097	500	5
Fe I	1946.219	40	35	Mn II	1950.143	200	
Fe III	1946.321	20		Fe I	1950.223	500	37
Mn II	1946.34	30	95	Ne II	1950.276	40	
Fe II	1946.420	2		Mn II	1950.31	30	
Na III	1946.43	400d		Fe III	1950.334	650	116
Cu II	1946.4929	10	106	S II	1950.45	300	
Cr IV	1946.59	150		Mn II	1950.69	2	
Zn III	1946.637	0		Zn	1950.769	10	
Kr II	1946.677	20		V II	1950.77	5	
Fe III	1946.760	200		Na III	1950.79	300	
V IV	1946.772	5		Ni III	1950.90	0	
Co I	1946.79	250	100	Co III	1950.911	80	25
Co III	1946.792	60	25	Mn II	1950.922	40	94
Ar II	1946.795	200		Co III	1950.961	10	60
Na III	1946.82	10		Cr IV	1951.00	40	
Fe II	1946.85	2		Fe III	1951.007	800	68
Mn II	1946.94	20	95	Na III	1951.21	800	
Fe I	1946.983	600	36	Mn III	1951.24	1	
N III	1946.99	250		Fe III	1951.318	200	68
Se III	1947.1	500		As II	1951.393	0	
Mn III	1947.320	150		N III	1951.43	100	
V III	1947.37	20		V IV	1951.432	400	
Mn III	1947.516	200	13	Co I	1951.44	120	99
Ge II	1947.55	20		Mn III	1951.504	200	
As II	1947.572	0		Fe I	1951.556	500	37

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ne II	1951.727	80		Fe III	1954.975	550	116
Ca III	1951.888	150		Mn II	1955.06	1	94
Co I	1951.90	250	103	Ge I	1955.1150 st	200	5
Zn II	1951.911	60 -A		P I	1955.16	21	
Ni II	1951.92 P		1	Co I	1955.17	300	105
V III	1952.00	150		Na III	1955.31	160	
Ca III	1952.133	450		Mn III	1955.4	2	
N III	1952.14 P	50		Co III	1955.505	6	46
Co III	1952.158	40	24	Fe II	1955.639	20	
Fe I	1952.262	500	37	Mn IV	1955.663	300	
Ge II	1952.29	3h		Fe I	1955.690	400	36
Mn III	1952.361	500	13	Ni III	1955.74	0	
Fe III	1952.362	150w	68	P I	1955.79	21	
Fe III	1952.514	200	68	Co III	1955.793	40	20
Mn III	1952.525	1000	13	Cr II	1955.93	300	205
Ni III	1952.540	200	24	Fe III	1955.943	20	
As II	1952.541	0		Co III	1955.011	40	20
Cu II	1952.5758	5		Fe I	1956.026	500	35
Fe I	1952.579	500	36	Fe II	1956.085	10d	138
Fe III	1952.648	700	68	Co I	1956.22	150	41
Ca III	1952.523	200		Cr III	1956.36	40h	
Mn II	1952.86	2		Ni III	1956.402	3	
Zn II	1952.999	80 -A		Kr II	1956.412	40	
Fe I	1953.001	500	35	Na III	1956.48	10	
Ca III	1953.064	450		Mg IV	1956.570	40	
Fe III	1953.202	250		Mn II	1956.614	300	12
Mn II	1953.23	300	94	Be I	1956.67	100	
Cr III	1953.26	50		As II	1956.835	0	
Ca III	1953.295	150		Cr III	1956.93	50	
Fe III	1953.322	900	68	Ni III	1956.964	20	18
Mn II	1953.35	3		Ti III	1957.02	5	
Ni II	1953.407	40	34	Fe III	1957.137	200	
Fe III	1953.488	650	68	Fe III	1957.375	150	
B III	1953.495	10		Co II	1957.418	150	5
Mn II	1953.51	10		Mn III	1957.472	10	
Ca III	1953.546	500		O II	1957.49	10	
N III	1953.65	150		Cu II	1957.5176	20	105
Co I	1953.71	80	38	Kr II	1957.542	20	
N III	1953.80	150		Co I	1957.69	120	39
Ge I	1953.8018 st	100		Ar III	1957.83	50	
Fe III	1953.821	70		Fe I	1957.838	600	36
B III	1953.827	40		Cr III	1957.88	10	
Mn II	1953.90	10		V I	1957.90	250	55
Co III	1953.942	100	20	Fe III	1957.938	400	47
Si III	1953.968 P		69	Si I	1957.965 st	1	55
Fe III	1953.968	750		Mn II	1957.98	40	
Mn II	1953.98	5		Cr III	1958.05	10	
P I	1954.01	12		Fe II	1958.086	5	
Ne II	1954.048	70		Co I	1958.10	80	
V II	1954.061	2h		Fe II	1958.121	100	170
Mn II	1954.10	5		Ca III	1958.149	300	
Zn III	1954.187	1		V I	1958.18	60	55
P I	1954.20	21		Al II	1958.2470	8	
Co I	1954.22	30d	95	Mn III	1958.310	8	
Fe III	1954.223	650w	61	Kr II	1958.427	40	
Mn II	1954.22	30		V II	1958.446	1	
Mn IV	1954.580 F	50		S II	1958.45	300	
Ni II	1954.709	1		Co I	1958.55	250	
Fe III	1954.769	250		Mn II	1958.58	5h	
Co III	1954.791	60	25	Fe III	1958.583	700	55
Mn II	1954.81	200d	94	Fe I	1958.598	600	37
Mg III	1954.831	7		V I	1958.60	0	
Zn II	1954.872	75 -A		Fe III	1958.732	300	
Co III	1954.876	20	46	Fe I	1958.739	300	36
Si I	1954.9681 st	50	55	Al II	1958.77	1	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
As I	1958.82	20		Cr III	1962.37	10	
Fe I	1958.84	0		Al II	1962.5904	70	
As I	1958.91	40	24	Al II	1962.6452	8	
Mn II	1958.932	80		Al II	1962.6910	60	
Co I	1958.94	150	101	Fe III	1962.717	300	61
Ca III	1958.971	500		Al II	1962.7349	70	
Al II	1959.00	6		Ar III	1962.74	100	
Fe III	1959.026	200		Fe I	1962.746	10	36
V I	1959.12	150	59	Al II	1962.7634	50	
Mn II	1959.246	300		Mn II	1962.80	30	
Fe III	1959.324	550	61	Fe I	1962.871	400	36
V I	1959.36	150	54	Mn III	1962.878	100	
Co III	1959.414	100	25	Fe III	1962.958	250	
Mn II	1959.69	5		Zn III	1962.974	1	
F II	1959.758	1		Cr II	1963.00	300	205
Ge II	1959.781	30h	14	V IV	1963.103	300	
V I	1959.97	200	54	Fe I	1963.110	500b	35
Mn III	1959.98	2		Fe II	1963.110	500b	170
Ne II	1959.994	60		Zn IV	1963.112	60	
V II	1960.137	3		Cr III	1963.15	80	
Fe I	1960.139	600	35	Fe III	1963.209	70	
Cr III	1960.18	10h		Co III	1963.243	1	
F II	1960.255	10		Mn III	1963.27	1h	
Mn I ₂	1960.27	10		Kr II	1963.361	240	
Fe III	1960.318	900	82	Ge I	1963.3728 st	100	
Al II	1960.3221	3		Co I	1963.38	120	95
Cu IV	1960.335	12		F III	1963.439	20	
O II	1960.34	100		Fe III	1963.461	70	
Mn II	1960.37	10	94	V I	1963.47	350	55
V II	1960.445	0		Mn III	1963.514	100	12
Al II	1960.6458	3		Co I	1963.55	200	122
Mn II	1960.67	0	94	Fe I	1963.629	200	35
Cr III	1960.69	10		Mn III	1963.719	200	13
Na III	1960.76	400		Ni III	1963.73	2	
Al II	1960.8466	10		Co III	1963.743	20	24
As I	1960.89	2		Ni I	1963.85	50	47
Mn II	1960.90	5		O II	1963.86	200	
Se I	1960.901	1000	2	Co I	1963.92	80	
V II	1960.98	20		Fe III	1964.019	300	82
F II	1960.984	40		Co I	1964.03	200	94
Co I	1961.00	150	95	Fe I	1964.043	400	35
Fe III	1961.010	300		V II	1964.091	1	
Fe III	1961.230	400	61	Fe III	1964.169	550	82
Fe I	1961.236	500		Mn II	1964.19	10	
Co I	1961.26	80	39	Fe III	1964.260	450	61
Ni III	1961.324	5		V I	1964.27	300	54
Ar II	1961.3610 ST	400	13	Fe II	1964.342	240	170
Mn II	1961.39	20		O II	1964.35	10	
Co III	1961.450	10	60	Mn II	1964.45	80	
Fe III	1961.456	70		Mn IV	1964.451 P	250	
Co I	1961.59	250		Zn II	1964.538	80 -A	
V I	1961.69	300	55	Ca III	1964.614	650	
Fe III	1961.724	70		Be I	1964.63	900	
Ne II	1961.772	60		Ni III	1964.689	100	24
Kr II	1961.863	40		Mn II	1964.70	20	
Cr III	1961.93	10		Co III	1964.765	1	
Ge I	1962.0133 st	500	16	Fe III	1964.776	550	82
Fe I	1962.031	500	35	Al II	1964.9903	40	
Mn III	1962.042	250		As II	1965.036	3	
Fe II	1962.071	1		Na III	1965.04	360	
Fe I	1962.107	600	35	V I	1965.07	300	55
Mg III	1962.145	7		V I	1965.26	300	54
Cr III	1962.16	5		Fe III	1965.309	550	106
Ar II	1962.161	300		Al II	1965.3157	10	
O II	1962.27	300		Ni II	1965.357	8	44

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Ge I	1965.3830 st	200	5	Fe I	1970.771	10	36
Cr III	1965.56	200		Cu IV	1970.822	11	
Mn II	1965.68	60		S II	1970.86	400	
F III	1965.726	35		V II	1970.877	0	
Mn I	1966.04	20		Ge I	1970.8796 st	500	6
Fe III	1966.074	200		Mn II	1970.947	5	
Fe III	1966.201	150	61	As II	1970.953	0	
Mn II	1966.24	2		Fe II	1970.989	1d	
V IV	1966.244	20		Cr III	1971.11	20	
Ge II	1966.3173	40h	14	Co I	1971.16	300	96
V I	1966.52	300	54	Mn II	1971.22	100	
Cr III	1966.57	10		Mn III	1971.28	100	
Ni XIV	1966.6	f		Zn III	1971.416	2	
Co I	1966.68	90	105	V IV	1971.471	40	
Co III	1966.680	i		Mg III	1971.514	4	
Fe III	1966.740	550	116	As II	1971.580	0	
V II	1966.752	3h		Ne II	1971.621	20	
V I	1966.76	300	55	Mn II	1971.71	20	
Ar II	1966.953	100		Co I	1971.75	150	41
Mn III	1967.080	10h		Co III	1971.389	20	24
V III	1967.11	150		Mn III	1971.976	8b	
V II	1967.185	4		Ca III	1971.992	250	
Zn III	1967.230	1		Mn III	1972.218	5	
Se IV	1967.3	400		Fe III	1972.245	150	
Fe III	1967.352	250		Ar II	1972.274	200	
Mn II	1967.59	30		V II	1972.278	1	
Fe II	1967.670	1		Cr III	1972.45	100	
Co I	1967.78	100	100	Mn III	1972.471	3w	
Ca III	1967.936	650		V I	1972.48	75	54
V I	1967.98	400	54	Co I	1972.52	300	99
Cu II	1968.0118	2		V II	1972.62	200	163
Ni III	1968.053	3		As I	1972.62	800r	1
Fe I	1968.060	20		Fe III	1972.638	150	
Fe I	1968.210	i		Co I	1972.82	0	
Cr IV	1968.27 P	150		Ca III	1972.823	600	
V III	1968.37	5		Mn III	1972.861	100	12
Fe III	1968.625	150		Cr II	1973.20	70	
As II	1968.660	20		Mn IV	1973.414	80	
Co I	1968.69	250		Ar II	1973.4837 ST	200	
Mn III	1968.776	4		Fe III	1973.578	20	
As I	1968.855	20		Co I	1973.62	50	
Fe II	1968.872	20c		As I	1973.65	3	
Ni I	1968.90	50	23	Co III	1973.667	1	
Co II	1968.918	30		Co III	1973.767	2	
Co I	1968.921	250	97	Ar III	1973.78	200	
Mn II	1969.24	200		Co I	1973.85	250	101
Kr II	1969.278	40		Fe I	1973.911	20	36
Co III	1969.312	4		Kr II	1974.015	20	
Zr II	1969.404	100		Cr III	1974.03	50	
V I	1969.57	75	54	Ge III	1974.05	20	
Mn III	1969.576	50		Fe I	1974.059	20	36
Ni III	1969.62	0		Mn II	1974.10	100b	
Co I	1969.68	30		Mn III	1974.10	20b	
Mn II	1969.87	50		Zn IV	1974.254	15	
Mn II	1969.95	100		V II	1974.278	1	
Co III	1970.054	60	24	Co I	1974.39	150	95
Kr II	1970.125	80		Cr III	1974.43	60	
Mn II	1970.16	5		Ar II	1974.462	300	
Fe II	1970.329	2		Zn II	1974.467	12 -A	
Cu II	1970.4946	15	18	Cu II	1974.4681	0	
Ni III	1970.54	0		Fe II	1974.489	1	
Mn III	1970.639	2		Ni III	1974.493	15	
Fe II	1970.680	20		Cr III	1974.70	10	
Co I	1970.71	500	102	Mg III	1974.737	12	
Co I	1970.77 P		37	Ni III	1974.780	15	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Mn II	1974.32	80		Mg III	1979.43		
Zn III	1974.863	0		Cl III	1979.46	300	
Co III	1974.883	40	51	V II	1979.618	1	
Co II	1975.002	20		C III	1979.62	50 -A	41
V II	1975.021	1		As II	1979.755	10	
Mn II	1975.24	30		Mn III	1979.790	1	12
Kr II	1975.251	280		Cu II	1979.9565	200	17
As II	1975.270	1		Ni II	1980.010	15	34
Co I	1975.36	60		V II	1980.04	400	127
V I	1975.42	100	54	Cr III	1980.09	100	
Na III	1975.43	10		Co III	1980.113	40	24
Mn III	1975.439	100	12	Cr III	1980.24	100	
V II	1975.439	1		Ni III	1980.248	2	
Fe II	1975.542	20		Fe III	1980.392	150	
Cr III	1975.56	100		Li I	1980.59	-A	
Co I	1975.67	200		V II	1980.59	250	127
Mn III	1975.690	200		Co I	1980.59	150	39
Cr III	1975.90	10		Si I	1980.6185 st	300	7
Co I	1975.94	60		Ni II	1980.699	3	
Mn II	1976.002	10		Mn II	1980.84	2	
Cr III	1976.07	30		Co I	1980.89	400	
Fe III	1976.126	550	54	Na III	1980.95	10	
Mn II	1976.18	2		As II	1980.992	2	
Kr II	1976.252	40		Co III	1981.000	0	
Mn II	1976.27	2		Mn II	1981.01	10	
Mn III	1976.490	30		Mn II	1981.16	20	
Na III	1976.62	20		Ca III	1981.192	550	
V II	1976.62	600	127	V II	1981.245	0	
Ar II	1976.765	300		Kr II	1981.264	40	
Mn II	1976.87	40		Co III	1981.345	20	24
Ni I	1976.87	150	47	As II	1981.466	10	
Co I	1976.97	300	40	V II	1981.53	80	127
Ca III	1977.013	500		Cr III	1981.61	40	
Cu II	1977.0270	15	107	Ni I	1981.61	100	47
Co III	1977.031	40	24	S II	1981.64	200	
Mn III	1977.044	4		Kr II	1981.653	40	
Na III	1977.14	20		Mn II	1981.67	20	
Zn II	1977.159	25 -A		Ar II	1981.74	100	
Ar II	1977.200	20		Cr III	1981.82	20	
Zn II	1977.494	5 -A		V I	1981.85	5	
Mg III	1977.554	60		Co I	1981.97	200	37
Si I	1977.5978 st	400	7	Ne VII	1981.974	600	
V II	1977.60	5		V I	1982.05	200	53
Ne II	1977.657	70		Fe III	1982.076	400	54
Mn II	1977.72	40		Zn II	1982.111	100 -A	
Ni III	1977.84	1		V II	1982.21	5	
Ge III	1978.21	40		Mn III	1982.212	20	
Co I	1978.36	100	95	V II	1982.41	80	127
Fe III	1978.417	250	54	V IV	1982.422	15	
Co I	1978.53	120		Zn II	1982.429	10 -A	
Ca III	1978.551	500		V I	1982.45	200	53
Fe III	1978.626	150		Co I	1982.52	200	37
Mn II	1978.75	20		Ni III	1982.538	50	24
Kr II	1978.904	80		Ne II	1982.576	40	
Cr III	1978.91	40		Mn II	1982.60	10	
Co III	1978.948	10	45	Mn III	1982.76	400	
Mn III	1978.953	500		Fe III	1982.805	550	56
V II	1978.96	200	138	Co I	1982.81	80	100
Fe III	1979.002	70		Kr II	1982.866	120	
V II	1979.087	5		Fe II	1983.05	0	
C III	1979.16	100 -A	41	Fe III	1983.123	20	
Si I	1979.2056 st	400	7	Co II	1983.162	100h	
Si III	1979.233 P		83	Mn II	1983.17	60	
Ge II	1979.2736 st	30	1	Si I	1983.2330 st	300	7
Mg III	1979.327	80		Ar II	1983.299	100	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
V I	1983.37	250		Mn III	1987.70	1h	
As II	1983.581	100	53	C II	1987.76	120	19
Cl III	1983.61	500		Fe III	1987.810	200	56
Kr II	1983.634	40		V II	1987.82	3	
Al II	1983.6496	10		Ni III	1987.83	1h	
Fe III	1983.676	150		Ge I	1987.8492 st	300	
As II	1983.787	3	81	Zn IV	1987.874	35	
Ar II	1983.829	100		Co III	1987.952	2	
Co II	1983.947	20		As II	1988.018	20	
Fe III	1984.027	450	86	V II	1988.031	8	
V II	1984.05	100b		Mn II	1988.06	30	
Mn III	1984.052	2		C II	1988.09	80	19
Si I	1984.0719 st	3	53.01	Ge I	1988.2668 st	600	5
Fe III	1984.288	600	81	C II	1988.51	40	19
Co III	1984.324	6		Ar II	1988.620	350	
V I	1984.43	30		V II	1988.674	0	
Mn II	1984.43	20		Al II	1988.6985	3	
Si I	1984.4400 st	20	53.01	As II	1988.955	100	
Cu II	1984.7643	1		Si I	1988.9937 st	1000	7
Co II	1984.827	10		Cr I	1989.00	200	49
V I	1984.91	250	53	Ne II	1989.036	80	
Fe I	1984.94	0		Mn III	1989.038	8	
S II	1985.07	200		Ge I	1989.1174 st	100	
Fe III	1985.105	200	56	V I	1989.17	i	
Be I	1985.17	300		Cr III	1989.18 P	60	
Mg III	1985.173	12		Zn III	1989.190	10b	
Mn II	1985.25	2		Zn IV	1989.190	10b	
Co I	1985.25	100		Co I	1989.28	100	
Co I	1985.36	100	38	Mn II	1989.41	50	
Mn III	1985.398	20		Ca III	1989.512	450	
Cr II	1985.42 P	440	31	Mn III	1989.587	400	
Na III	1985.58	600		Co III	1989.598	80	51
Cr IV	1985.58	75	15	Cr IV	1989.64	10	
Zn II	1985.608	70 A		Co III	1989.645	20	24
Cr II	1985.67	240	31	Co I	1989.80	250	94
Mn III	1985.717	300		V I	1989.82	60	53
Mn III	1985.797	750		Cu II	1989.8554	90	15
Co I	1985.88	40		Cr I	1989.92	750	48
Zn III	1986.020	4		Fe III	1989.975	450	50
Co I	1986.31	60		Cu II	1990.1804	1	
Si I	1986.3640 st	500	7	Mn III	1990.219	3	12
Mn II	1986.40	20		Cr IV	1990.22	200	15
Fe II	1986.423	40		Ni I	1990.25	200	47
Cr III	1986.54	50		Cr I	1990.27	400	48
Ge II	1986.6	3h		V III	1990.33	0	
Co III	1986.704	1		Co I	1990.34	300	97
Cr III	1986.82	10		Kr II	1990.341	20	
Mn III	1986.839	100	12	As I	1990.35	200	7
Zn II	1986.988	100 A		Al II	1990.5310	700	8
Cr III	1987.00	10		Zn III	1990.637	25	
Fe III	1987.006	70		V IV	1990.712	40	
Co I	1987.03	150		Cr II	1990.79	200	236
Co I	1987.15	120	37	Fe II	1990.805	1	
Cr III	1987.19	10		Co III	1990.841	2	
Co III	1987.197	6		Al II	1991.05	1	
Co I	1987.24	100		As I	1991.13	100	7
V I	1987.25	100		Cr III	1991.17	40	
V II	1987.314	10		Cr I	1991.22	750	48
C II	1987.32	40	19	Mn III	1991.290	50	
Cr III	1987.42	30h	49	N I	1991.301 P	10	
Cr II	1987.43	100	154	V I	1991.31	0	
Fe III	1987.503	1000	50	V II	1991.31	0	
V II	1987.547	4		Co II	1991.574	0	
Cr III	1987.62	150		Fe III	1991.613	950	50
Co I	1987.65	200	99	V I	1991.75	10	

Element	Wavelength	Intensity	Multiplet	Element	Wavelength	Intensity	Multiplet
Co I	1991.80	30		Fe III	1995.266	450	50
Si I	1991.8537 st	50	53	Mn II	1995.275	!	
S I	1991.9369	8		Ne II	1995.280	50	
Fe III	1992.017	600	81	Co III	1995.397	10	24
Ne VII	1992.060	300		V I	1995.43	1	
Cr I	1992.12	300	48	As I	1995.43	100	23
Co III	1992.158	2	45	Fe III	1995.563	800	50
Fe III	1992.196	600	81	Na III	1995.62	60	
Mn II	1992.30	20		Cr I	1995.69	250	49
Fe III	1992.427	70	50	Ni II	1995.723	15	33
V I	1992.46	1	53	Mn III	1995.838	700	
Kr II	1992.464	46		Cr III	1996.03	10	
Mn III	1992.492	2	12	Mn I	1996.056	50	
Cr III	1992.57	100		Fe III	1996.420	800	50
Cr I	1992.65	250	48	Cr II	1996.62	60	
As II	1992.682	5		Cr III	1996.70	20h	
Cr III	1992.72	250	49	Mn III	1996.905	15	
Co I	1992.79	200		Zn II	1996.922	50 -A	
V III	1992.83	100		Fe II	1997.034	4d	
Fe III	1992.858	400	106	Cr I	1997.09	250	49
Mn III	1992.889	10		Co II	1997.095	10	
Se III	1993.0	200		Mn III	1997.109	20	
Mn III	1993.222	80		Cr III	1997.12	10	
Co I	1993.25	100		Cr I	1997.30	500h	48
Fe III	1993.262	450	50	Ne VII	1997.345	100	
Fe II	1993.289	160w	95	Cr IV	1997.35	20	
Ni III	1993.362	10		Mn IV	1997.545	650	
Zn II	1993.367	50 -A		V IV	1997.722	500	
Cr II	1993.37	300	31	Ge I	1997.8064 st	150	
Mn III	1993.550	20		Cr I	1997.90	600	48
Ar II	1993.555	20		Mn II	1997.94	20	
Ni II	1993.570	2		Be I	1997.95	100	
Mn II	1993.60	10		Be I	1997.98	300	
C I	1993.620	50	32	Be I	1998.07	600	
Co III	1993.625	20	24	Mn III	1998.127	100	
Cr II	1993.63	500	31	Cr II	1998.14	40	204
Mg III	1993.759	7		Zn III	1998.150	10	
Kr II	1993.763	120		Zn II?	1998.238	20	
Cu II	1993.81	1		As II	1998.340	10	
Sc III	1993.886	180	4	Co I	1998.49	250	37
Ni II	1993.906	1		Zn III	1998.653	10	
Mn II	1993.99	100		Ne II	1998.667	20	
Fe III	1994.073	900	50	S II	1998.80	200	
Mg III	1994.089	4		Mn III	1998.883	20	
Ne II	1994.099	90		Ge I	1998.8569 st	1000	5
Cr I	1994.10	400	48	Zn II	1998.977	25b -A	
Mn II	1994.23	300		Zn III	1998.977	25b	
Ni I	1994.29	100	20	Fe III	1999.100	70	
V II	1994.34	100		Cr III	1999.12	20	
Fe III	1994.366	70	50	V IV	1999.320	200	
Zn III	1994.454	1		Fe II	1999.430	200	187
Cr I	1994.55	750	48	Fe II	1999.462	150	186
V III	1994.57	25		Cr III	1999.47	50	
Fe II	1994.857	400	228	Mn I	1999.511	100r	
As I	1994.89	20	24	Ni I	1999.53	0	23
Co I	1994.98	150		Fe III	1999.588	600	55
V II	1995.02	5		Fe II	1999.727	20	
Mn III	1995.02	3		Fe III	1999.893	200	
Cr III	1995.09	50		Co III	1999.913	1	
Se I	1995.112	300	22	Mn II	1999.92	80	

H He Li Be B C N O F Ne Na Mg Al Si P S Cl Ar K Ca Sc Ti V Cr Mn Fe Co Ni Cu Zn Ga Ge As Se Br Kr

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