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Directory of Solar-Terrestrial Physics Monitoring Stations - Edition 2

M.A. SHEA
S.A. MILITELLO
H.E. COFFEY
J.H. ALLEN



6 September 1984

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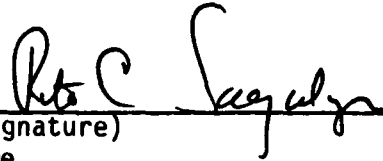
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Preface

The decision to compile and publish the first directory of ground-based observing stations engaged in the monitoring of the solar-terrestrial environment was made at a meeting of the MONSEE Steering Committee in June, 1974. We decided to computerize each entry to facilitate updating the files and to maintain a current and accurate data listing of MONSEE activities. As with any project of such a magnitude, unanticipated delays were encountered in the establishment of this computer information file. Although the initial questionnaires were distributed to people engaged in the various ground-based monitoring programs in 1975, the system for actually computerizing the information was not finalized until 1976, at which time the information from each of the completed questionnaires was entered into the computer.

As in any rapidly evolving program, many entries needed frequent updating; improvements in the information system were also needed. Accordingly, this second publication to update the data entries is necessary. The entire data file of over 1000 entries was reformatted for a word processor "floppy disk" that would be compatible with a computer system on which selected data sorts could be made. This process, initiated in 1979, was completed in 1983. Participants in the MONSEE program were contacted once again to verify the information in the data file prior to publication.

Although a concentrated effort was made to contact every person listed as responsible for a station, it still was not possible to update every entry. The latest update of the information in each entry is the date given on the upper right-hand corner of each listing. We strongly encourage the users of this directory to

assist the MONSEE program and the World Data Centers in their efforts to maintain a current information file on solar-terrestrial research monitoring stations by notifying both the MONSEE Chairman and the World Data Centers of any mistakes found, changes that may occur, or additions to be made. We seek your help, especially, in identifying stations not included in this directory. This type of cooperation will assist users who may wish specific and current information from the data file and will also assist us in the rapid publication of future editions or supplements to this directory.

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1. INTRODUCTION

1. INTRODUCTION

1.1 Background

MONSEE is an acronym for Monitoring of the Sun-Earth Environment. This is the name given to the existing and continuing efforts for systematic observation and data exchange in solar-terrestrial research activities. This includes such disciplines as solar activity, ionosphere, geomagnetism, aurora, airglow, and cosmic radiation. These observations and data are used for many interdisciplinary research studies and applications, often by groups other than those who make the initial observations. In many cases the primary data are used; in many other cases the reduced or summary data are needed. In some cases multi-station indices derived from specific data sets are required for specific analyses. Any individual or organization who gathers or utilizes monitoring type data in their work is considered a participant in the MONSEE program and is invited to participate in MONSEE activities.

The MONSEE program operates under the auspices of the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP) of the International Council of Scientific Unions (ICSU). The MONSEE Steering Committee members are appointed by the various scientific unions and the Committee on Space Research (COSPAR), in addition to representatives from the World Data Centers, and other related international organizations. The purpose of MONSEE is to maintain current information on the scientific programs in which various parameters of the solar-terrestrial environment are monitored. The goal of MONSEE is the expeditious collection, exchange, and distribution of solar-terrestrial data for use by all scientists to aid them in their various scientific analyses.

Most of the major monitoring networks have specific relationships to specialized commissions or committees of one of the scientific unions; the arrangements vary from case to case. The MONSEE program serves to bring these individual efforts together and to provide an interdisciplinary focus. In addition, the committee ascertains the "health" of the solar-terrestrial monitoring activities in the community as a whole.

The foundation of the monitoring activities is the persistent, routine, high-quality observational programs of solar-terrestrial phenomena conducted in a number of countries by many institutions and individuals. The considerable effort necessary to conduct these observational programs is often taken for granted and not acknowledged; however, these monitoring efforts and the generous sharing of these data are absolutely essential for viable solar-terrestrial research programs. Although spectacular space missions are usually in the limelight, it

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is difficult to use these new and exciting observations to their fullest potential without the correlative background measurements.

In the past few years it has become apparent that the entire solar-terrestrial chain is related; phenomena on the sun can, in turn, affect the interplanetary medium, the magnetosphere, ionosphere, and atmosphere. Whereas scientists during the International Geophysical Year tended to concentrate in specific areas, the scientist of today must be cognizant of the entire sun-to-earth transmission line in the study of specific scientific problems. In many cases it is difficult for a researcher in one specific field of solar-terrestrial physics to know exactly what correlative data may be available for a specific time period, or how to obtain these data in a time frame faster than these data are routinely deposited in the World Data Centers or in smaller time increments than routinely available.

In an effort to bridge the gap between the availability of continuously monitored solar-terrestrial physics data and the potential users of these data, the MONSEE Steering Committee decided in 1974 to compile the first directory of stations engaged in monitoring the solar-terrestrial environment. The initial directory, published in 1977, contained information primarily from questionnaires specifically prepared for that directory. At the time of publication, it was recognized that the directory did not contain a complete listing of all solar-terrestrial physics monitoring stations existing at that time; however, it was the start of what has turned out to be a major effort to obtain and maintain as complete a record as possible of solar-terrestrial monitoring stations.

The initial work on this second edition of the directory began in June 1979 with a request to the scientific community to update the information published in the first edition. Followup letters were sent four months later. As changes, deletions, and additions were received, the master data file maintained at World Data Center A for Solar-Terrestrial Physics in Boulder, Colorado, U.S.A., was changed accordingly. Unfortunately the data center had changed computer systems twice since the first file was generated, and what was originally envisioned as a "simple" updating procedure became a massive effort. In April of 1982 the decision was made to convert the entire file to user-friendly word processors; once this was accomplished the process of updating and editing the individual entries was considerably easier. The data base was transferred to the Air Force Geophysics Laboratory, where the major editing and processing was handled. In January 1983 a search was made of the World Data Center solar-terrestrial physics records to identify newly operating stations and stations that might have closed since the first directory was published and for which we had not received any definitive information. In the summer of 1983 a final letter was sent to the people listed as the point of contact for each individual entry requesting that the information be verified for accuracy and corrected if necessary.

This edition of the MONSEE Directory contains station information on all stations for which new and updated information was received. Stations listed in the first directory for which we received no recent verification are also included with a cautionary comment as to the validity of the information. We also listed stations known to exist from an examination of World Data Center records; again a cautionary comment is included. This edition has incorporated stations projected to be in operation during 1984 and "monitoring type" satellite sensors.

1.2 Solar-Terrestrial Physics Data Categories

The different disciplines and subdisciplines used to categorize solar-terrestrial physics data are listed in Table 1. Details of the various types of data and the recommended inputs to the World Data Centers are given in the Fourth Consolidated Guide to International Data Exchange through the World Data Centres (issued by the Secretariat of the ICSU Panel on World Data Centres, Washington, D.C., U.S.A., June 1979).

The following additions have been made to the data categories since publication of the first MONSEE Directory, although not all of these categories have individual entries in this edition of the directory:

- B17 HF Doppler Measurements
- B18 Radio Propagation Predictions
- C14 Other Optical Flare Observations
- E05 Auroral Imagery by Satellite
- E06 Auroral Precipitating Electrons by Satellite
- F06 Satellite Observations
- G02 Satellite Observations
- H06 Infrasonic Waves
- H07 Upper Atmosphere Aeronomy

These additions primarily accommodate new areas and techniques in this rapidly evolving science.

1.3 Arrangement of the Directory

Section 2 contains five summary tables of solar-terrestrial physics monitoring sensors. These tables are intended for quick reference without the detailed sensor and station information given in the individual listings.

Section 2.1 contains the master station list, in alphabetical order, of all stations engaged in solar-terrestrial physics monitoring activities included in this directory. This listing includes the preferred station name, the identification letter and number designating the subdiscipline of solar-terrestrial monitoring activity conducted, the geographic coordinates for each subdiscipline (in some cases sensors are located at remote sites from the principal observing location

Table 1. Identification of Discipline Areas in Solar-Terrestrial Physics

<p>A. Solar and Interplanetary Phenomena</p> <p>A01 Sunspot Positions, Areas, and Classification A02 Sunspot Numbers A03 Solar Magnetic Fields A04 H-Alpha Observations (other than flares) A05 Calcium Plages A06 Solar Maps, Prominences, Filaments A07 Optical Observations of the Corona A08 Total Radio Flux Measurements A09 Radio and Radar Maps of Solar Disk A10 Radio East-West Scans of Solar Disk A11 Solar X-ray and UV Background Levels A12 Energetic Solar Protons and Solar Electrons A13 Solar Wind A14 Comet Tails, Interplanetary Scintillations, Zodiacal Light A15 Sporadic Radio Emissions from Jupiter A16 Total Solar Radiation A17 Interplanetary Magnetic Fields A18 Interplanetary Electric Fields</p>
<p>B. Ionospheric Phenomena</p> <p>B01 Ionosphere Vertical Soundings B02 Topside-Vertical Incidence Soundings B03 Incoherent Scatter Soundings B04 Oblique Incidence Soundings B05 Ionospheric or Aeronomical Rockets B06 Total Electron Content - Satellite Beacons B07 Ionospheric Absorption - Method A1 (Pulse echo) B08 Ionospheric Absorption - Method A2 (Riometer) B09 Ionospheric Absorption - Method A3 (CW Fieldstrength) B10 Ionospheric Drifts B11 Ionospheric Scintillations from Satellite Beacons B12 Ionospheric Back- and Forward-Scatter B13 Whistlers and VLF Emissions B14 Atmospheric Radio Noise B15 Partial Reflection Data B16 Reference Ionospheric Models B17 HF Doppler Measurements B18 Radio Propagation Predictions</p>
<p>C. Flare-Associated Events</p> <p>C01 H-Alpha Flares C02 Solar Local Magnetic Fields C03 Solar Radio Events, Fixed Frequency C04 Solar Radio Spectrograms of Events C05 Solar X-ray Observations C06 Sudden Ionospheric Disturbances C07 Solar Protons and Electrons - Direct Measurement C08 Solar Protons Riometer C09 Solar Protons - Ionospheric Vertical Incidence Soundings C10 Solar Protons and Electrons - VHF Forward Scatter C11 Solar Protons - Other Types of Measurements C12 Solar, Ionospheric, or Aeronomical Rockets Launched During an Event C13 Cosmic Ray Ground Level Increases C14 Other Optical Flare Observations</p>

Table 1. Identification of Discipline Areas in Solar-Terrestrial Physics (Contd)

<p>D. Geomagnetic Variations</p> <p>D01 Geomagnetic Standard and Rapid Run Measurements D02 Magnetospheric Micropulsation Phenomena D03 Space Magnetism D04 Magnetospheric Particles D05 Measurement of Magnetosphere by Whistler and VLF Emissions</p>
<p>E. Aurora</p> <p>E01 All-Sky Camera E02 Visual Observations E03 Other Optical Techniques E04 Radio and Radar Observations E05 Auroral Imagery by Satellite E06 Auroral Precipitating Electrons by Satellite</p>
<p>F. Cosmic Rays</p> <p>F01 Neutron Monitors and Supermonitors F02 Ionization Chambers F03 Meson Telescope F04 Balloon Measurements F05 Aircraft and Ship Measurements F06 Satellite Observations</p>
<p>G. Airglow</p> <p>G01 Airglow G02 Satellite Observations</p>
<p>H. Miscellaneous</p> <p>H01 Noctilucent Clouds H02 Meteorological Rockets H03 Atmospheric Ozone H04 Special Interdisciplinary Projects H05 Record of Sounding Rocket Launchings H06 Infrasonic Waves H07 Upper Atmosphere Aeronomy</p>

but still referred to by the same geographic name), and an item number for ease in referencing the material. We retained all item numbers for stations listed in the first MONSEE Directory; new entries, including stations in operation prior to 1977 but not included in the first directory, were assigned item numbers 2000 or greater. In some cases the geographic coordinates for a particular sensor are not included; this implies that either the coordinates were not available or the sensor is on a satellite. An asterisk (*) at the far right of the page indicates either a sensor for which no response was received for updating information since the initial response in 1975 or unverified listings new to this edition.

Section 2.2 contains cross-reference tables of alternate station names. The table in Section 2.2.1 alphabetically lists the preferred station name on the left side of the page with the various alternate station names given on the right side of the page. The table in Section 2.2.2 alphabetically lists the alternate station name on the left side of the page with the preferred station name on the right. In some cases stations have several alternate names particularly if a sensor was moved a short distance. For example, ionospheric partial reflection observations (B15) at Tromso, Norway ($N69.70^{\circ}$, $E19.00^{\circ}$) are now conducted at Ramfjordmoen, Norway ($N69.58^{\circ}$, $E19.22^{\circ}$). Although some of these names may not be in use at the present time, for continuity and historical studies we list as many alternate names as were available to us.

Section 2.3 contains station listings and geographic coordinates arranged by subdisciplines. The location of solar sensors (Categories A and C) are arranged in order of increasing geographic longitude; other sensor locations are given in order of decreasing geographic latitude (North Pole to South Pole). Stations without specified coordinates and satellite observations (which do not have specific coordinates) are listed at the top of each subdiscipline list.

Section 2.4 contains an alphabetical listing of monitors that have closed since previously listed in the first MONSEE Directory. Details of the individual sensors are included in the first MONSEE Directory; for dates of operation inquiries can be made through the World Data Centers.

Section 3 summarizes the current status of solar-terrestrial monitoring activities compared with 1976. Tables are given for each subdiscipline detailing the relative change of monitoring activities since the publication of the first edition.

Section 4 contains the principal section of this directory, specifically the individual station listings. Within each major discipline and subdiscipline the stations are arranged alphabetically by preferred station name. Maps illustrating the worldwide distribution of stations for various subdisciplines appear at the beginning of the section for each major discipline.

The individual station listings are arranged alphabetically by sub-discipline and are given approximately four to a page. A standard format is used throughout this section; incomplete entries indicate that the information was not available. Although a standard format is used, the actual information about each station varies in detail, particularly in the description of the instrumentation and the comments section. A source for additional information about the station and the data is identified.

The name of the station appears at the top left of each entry; the computer item number and the date that the current information was received appear at the top right; no date is given for entries that were added from inspection of the World Data Center records and for which no verification was received. The remainder of the information is given in the following format:

- Discipline
- Station Latitude
- Station Longitude
- Alternate Names (if any)
- Dates of Operation (including whether station ever moved)
- Observing Schedule
- Instrument Description
- Raw Data (form of raw data holdings)
- Data Reduction Practice (regular, special or none)
- Regular Reduced Data Available After _____
- Form of Reduced Data
- Data Routinely Published (yes, no; name of publication, if any)
- Data Sent to WDC-A (yes or no)
- Data Sent to WDC-B (yes or no)
- Data Sent to WDC-C (yes or no)
- Data Available on Request (yes or no)
- Address for Information about Station
- Address for Information about Data
- Additional Comments

The "additional comments" contain two types of comments: those supplied by the person providing the entry information and those made by the compilers of this directory. Comments are included for all stations for which recent (that is 1983) updating information was not received. An examination of the data files of World Data Center A for Solar-Terrestrial Physics was made for stations included in the first directory for which no updating information was received; the last date for which data were received by World Data Center A is listed in the comment section.

Finally, in Section 5, procedures for correcting and updating individual entries are given. In addition blank forms are included for providing information on new stations. Table 4 is an alphabetical listing of all monitors included in the first directory and for which we did not receive any updated information in 1980 or 1983. Also included are those stations we added from an examination of the World Data Center records, and for which the information contained on the individual entries is woefully incomplete. The users of this directory are requested to provide World Data Center A with definitive information on the status of any of the stations in Table 4.

2. STATION SUMMARY INFORMATION

2.1 Master Station List

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
ABERDEEN, UNITED KINGDOM	G01	57.15	357.87	1
ABISKO, SWEDEN	D01	68.36	18.82	2200
ADDIS ABABA, ETHIOPIA	D01	9.29	38.76	2285
ADELAIDE, AUSTRALIA	G01	-34.60	138.40	777
AHMEDABAD, INDIA	B01	23.00	72.60	730 *
AHMEDABAD, INDIA	B07	23.00	72.60	4
AHMEDABAD, INDIA	B15	23.01	72.60	735
AHMEDABAD, INDIA	C03	23.07	72.60	732
AKITA, JAPAN	B01	39.73	140.13	5
AKITA, JAPAN	B09	39.73	140.14	6
ALERT, CANADA	D01	82.50	297.50	7
ALERT, CANADA	F01	82.50	297.67	8
ALERT, CANADA	F03	82.50	297.67	9
ALEXANDRIA, EGYPT	C06	31.20	29.87	2401
ALEXANDRIA, EGYPT	C11	31.20	29.87	2418
AL IBAG, INDIA	D01	18.64	72.87	10
ALMA-ATA, USSR	B01	43.25	76.92	831 *
ALMA-ATA, USSR	D01	43.25	76.92	832
ALMA-ATA, USSR	F01	43.25	76.92	11 *
ALMA-ATA, USSR	F03	43.25	76.92	13
ALMA-ATA, USSR	F04	43.25	76.92	14 *
ALMA-ATA, USSR	F04	43.25	76.92	15
ALMERIA, SPAIN	D01	36.85	357.54	16
AMATSIA, ISRAEL	D01	31.55	34.91	2218
ANCHORAGE, USA	C06	61.17	210.03	2005
ANDERMA, USSR	B08	63.9		2372 *
ANDOYA, NORWAY	B08	60.28	16.02	18
ANDOYA, NORWAY	B13	60.17	16.01	2028
ANDOYA, NORWAY	D01	60.28	16.02	19
ANDOYA, NORWAY	D02	60.17	16.01	2017
ANDOYA, NORWAY	E01	60.17	16.01	2032
ANDOYA, NORWAY	E03	60.17	16.01	2021
ANDOYA, NORWAY	E03	60.17	16.01	2027
ANGMAGSSALIK, GREENLAND	B08	65.61	322.34	721
ANNAMALAINAGAR, INDIA	D01	11.37	79.68	20

* - No response since 1975

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
APATITY, USSR	B08	67.50	33.33	2436
APATITY, USSR	D01	67.50	33.33	786
APATITY, USSR	F01	67.50	33.33	21
APATITY, USSR	F03	67.50	33.33	22
APATITY, USSR	F04	67.50	33.33	2269
APIA, WESTERN SAMOA	D01	-13.80	188.22	23
ARCETRI, ITALY	C06	43.75	11.26	24
ARECIBO, PUERTO RICO, USA	B03	18.35	293.25	29
ARECIBO, PUERTO RICO, USA	G01	18.35	293.25	31
ARECIBO, PUERTO RICO, USA	G01	18.35	293.25	207
AREQUIPA, PERU	G01	-16.50	288.50	2314
ARGENTINE ISLANDS	B01	-65.25	295.73	2001
ARGENTINE ISLANDS	D01	-65.25	295.73	28
ARKHANGELSK, USSR	B01	64.60	40.50	2334
ARKHANGELSK, USSR	B08	64.60	40.50	2373 *
ARKHANGELSK, USSR	D01	64.60	40.50	2339
ARMIDALE, AUSTRALIA	B06	-30.50	151.50	32
ASCENSION ISLAND	C06	-7.95	14.33	2411
ASCENSION ISLAND	C11	-7.95	14.33	2428
ASHKHABAD, USSR	B01	37.90	58.30	847
ASHKHABAD, USSR	B07	37.93	58.37	846
ASHKHABAD, USSR	B07	37.56	58.22	2008
ASHKHABAD, USSR	D01	37.95	58.10	848
ASHKHABAD, USSR	G01	37.90	58.40	844 *
ATHENS, GREECE	A01	37.85	23.72	206
ATHENS, GREECE	A02	37.85	23.72	1145
ATHENS, GREECE	A04	37.85	23.72	1146
ATHENS, GREECE	A06	37.85	23.72	1147
ATHENS, GREECE	A08	37.85	23.72	1148
ATHENS, GREECE	B06	37.85	23.72	1149
ATHENS, GREECE	C01	37.85	23.72	1150
ATHENS, GREECE	C03	37.85	23.72	1151
ATHENS, GREECE	F01	37.96	23.70	784
ATIBAIA, ITAPETINGA, BRAZIL	B13	-23.50	313.50	36
ATTU, USA	C06	52.83	173.18	2405
ATTU, USA	C11	52.83	173.18	2422
AUCKLAND, NEW ZEALAND	B01	-37.00	175.00	38
AUCKLAND, NEW ZEALAND	B06	-37.00	175.00	40

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
AUCKLAND, NEW ZEALAND	B08	-37.00	175.00	808
AUSTIN, USA	C06	30.90	262.34	2404
AUSTIN, USA	C11	30.90	262.34	2421
BAGNERES, FRANCE	F01	43.08	0.15	42
BAGUIO, PHILIPPINES	A01	16.41	120.63	44
BAGUIO, PHILIPPINES	A16	16.42	120.60	43
BAGUIO, PHILIPPINES	D01	16.41	120.58	45
BAKER LAKE, CANADA	D01	64.33	263.97	46
BANGUI, CENTRAL AFRICAN REPUBLIC	D01	4.44	18.56	48
BARROW, USA	D01	71.32	203.38	49
BATTELLE, USA	E03	46.40	240.40	489
BEAR ISLAND, NORWAY	B08	74.50	19.20	709
BEAR ISLAND, NORWAY	D01	74.51	19.02	50
BEKESCSABA, HUNGARY	B01	46.67	21.17	73
BELEM, BRAZIL	B13	1.39	311.56	1032
BELEM, BRAZIL	C06	1.39	311.56	1033
BELEM, BRAZIL	C11	1.39	311.56	2012
BELSK, POLAND	B06	51.84	20.79	54 *
BELSK, POLAND	B08	51.84	20.79	55 *
BELSK, POLAND	B11	51.84	20.79	916 *
BELSK, POLAND	C06	51.84	20.79	917 *
BERMUDA	B13	32.26	295.12	1011
BERMUDA	C06	32.26	295.12	1012
BERMUDA	C11	32.26	295.12	2014
BERN, SWITZERLAND	C01	46.85	7.27	2267
BERN, SWITZERLAND	C03	46.85	7.27	2268
BERN, SWITZERLAND	C04	46.85	7.27	2274
BEVERIDGE, AUSTRALIA	G01	-37.47	144.93	771
BIG BEAR, USA	A01	34.16	243.49	2325
BIG BEAR, USA	A02	34.16	243.49	2326
BIG BEAR, USA	A05	34.16	243.49	58
BIG BEAR, USA	C01	34.16	243.87	57
BIG BEAR, USA	C02	34.16	243.49	59
BINZA, ZAIRE	D01	-4.37	15.25	61 *
BJORNOYA, NORWAY	B08	74.51	19.18	2019

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
BLEIEN, SWITZERLAND	C03	47.44	8.77	158
BLEIEN, SWITZERLAND	C04	47.44	8.72	159
BORIN, PUERTO RICO, USA	C06	18.50	292.87	2413
BORIN, PUERTO RICO, USA	C11	18.50	292.87	2430
BOROK, USSR	D01	58.02	38.97	856
BOROK, USSR	D02	58.03	38.97	773 *
BOROK, USSR	D02	58.03	38.33	837 *
BOLOGNA, ITALY	F03	44.50	11.35	2015
BORDEAUX, FRANCE	A08	44.84	359.47	2162
BORDEAUX, FRANCE	C03	44.84	359.47	2164
BOULDER, USA	A01	39.98	254.72	64
BOULDER, USA	A02	39.98	254.72	920
BOULDER, USA	A04	39.98	254.72	927
BOULDER, USA	A06	39.98	254.72	928
BOULDER, USA	A11			921
BOULDER, USA	A12			922
BOULDER, USA	A12			2303
BOULDER, USA	B01	40.03	254.70	66
BOULDER, USA	C02	39.98	254.72	930
BOULDER, USA	C05			923
BOULDER, USA	C07			924
BOULDER, USA	D01	40.13	254.77	68
BOULDER, USA	D03			926
BRISBANE, AUSTRALIA	B01	-27.53	152.92	70
BRISBANE, AUSTRALIA	C06	-27.03	153.17	2410
BRISBANE, AUSTRALIA	C11	-27.03	153.17	2427
BRISBANE, AUSTRALIA	F01	-27.43	153.08	712
BRISBANE, AUSTRALIA	H03	-27.50	152.90	71
BROKEN HILL, AUSTRALIA	D02	-32.00	141.46	2000
BRORFELDE (BFE), DENMARK	D01	55.63	11.67	783
BRUXELLES, BELGIUM	B06	50.50	4.20	704
BUCHAREST, ROMANIA	A01	44.41	26.05	72
BUCHAREST, ROMANIA	A04	44.41	26.05	932
BUCHAREST, ROMANIA	C01	44.41	26.05	933
BUDAPEST, HUNGARY	F03	47.49	18.96	740
BUDKOV, CZECHOSLOVAKIA	D01	49.07	14.02	819 *
BUDKOV, CZECHOSLOVAKIA	D02	49.07	14.02	820
BUENOS AIRES, ARGENTINA	A01	-34.55	301.27	74 *

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
BUENOS AIRES, ARGENTINA	A02	-34.55	301.27	75 *
BUENOS AIRES, ARGENTINA	A04	-34.55	301.27	76 *
BUENOS AIRES, ARGENTINA	A08	-34.55	301.27	828 *
BUENOS AIRES, ARGENTINA	B01	-34.50	301.50	818
BUENOS AIRES, ARGENTINA	B07	-34.50	301.50	817
BUENOS AIRES, ARGENTINA	C01	-34.55	301.27	934 *
BUENOS AIRES, ARGENTINA	C03	-34.55	301.27	827 *
BUENOS AIRES, ARGENTINA	C06	-34.62	301.64	2020
BUENOS AIRES, ARGENTINA	C11	-34.62	301.64	2022
BUNIA - RUAMPARA, ZAIRE	D01	1.53	30.02	77
CACHOEIRA PAULISTA, BRAZIL	B01	-22.70	314.98	533
CACHOEIRA PAULISTA, BRAZIL	B06	-22.70	314.98	2312
CACHOEIRA PAULISTA, BRAZIL	D01	-22.88	314.61	535
CACHOEIRA PAULISTA, BRAZIL	G01	-22.70	315.00	536
CAIRNS, AUSTRALIA	H03	-12.47	130.83	2023
CALGARY, CANADA	F01	51.08	245.90	790 *
CAMBRIDGE, AUSTRALIA	F03	-42.85	147.42	2446
CAMBRIDGE, USA	C06	42.39	288.86	2024
CAMBRIDGE, USA	C11	42.39	288.86	2025
CAMBRIDGE BAY, CANADA	D01	69.10	255.00	75
CAMPBELL ISLAND	B01	-52.60	169.10	79
CAMPBELL ISLAND	B08	-52.60	169.10	2026
CAMPBELL ISLAND	B13	-52.50	169.20	80
CAMPBELL ISLAND	D01	-52.50	169.20	2286
CAMPBELL ISLAND	E01	-52.25	169.15	82
CANARIAS, CANARY ISLANDS	A02	28.48	343.72	598 *
CANARIAS, CANARY ISLANDS	A14	28.48	343.72	1105 *
CANARIAS, CANARY ISLANDS	D01	28.48	343.74	599 *
CANARIAS, CANARY ISLANDS	D02	28.48	343.74	1054
CANARIAS, CANARY ISLANDS	G01	28.48	343.72	1106
CANBERRA, AUSTRALIA	B01	-35.32	149.00	84
CANBERRA, AUSTRALIA	D01	-35.31	149.00	85
CANBERRA, AUSTRALIA	D01	-35.32	149.36	86
CAPE PARRY, CANADA	D02	70.17	235.28	2154
CAPE ZEYGARI, CYPRUS	B01	34.58	32.95	87
CAPE ZHELANIZA, USSR	B08	70.30		2374 *
CARIBOU PEAK, USA	B13	65.30	212.55	467

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
CARRA, AUSTRALIA	C06	-38.47	146.93	2403
CARRA, AUSTRALIA	C11	-38.47	146.93	2420
CASEY, ANTARCTICA	B08	-66.54	110.36	2029
CASEY, ANTARCTICA	D01	-66.54	110.36	91
CASEY, ANTARCTICA	D02	-66.54	110.36	92
CASTEL TESINO, ITALY	D01	46.05	11.65	2260
CATANIA, ITALY	A02	37.50	15.08	100
CATANIA, ITALY	A04	37.50	15.08	101
CATANIA, ITALY	A06	37.50	15.08	935
CATARMAN, PHILIPPINES	A16	12.52	124.67	98 *
CHACALTAYA, BOLIVIA	F01	-16.35	291.87	102 *
CHACALTAYA, BOLIVIA	F03	-16.31	291.80	103 *
CHARTERS TOWER, AUSTRALIA	D01	-20.10	146.30	2169
CHATANIKA, USA	E01	65.10	212.57	107
CHELUSKIN, USSR	E01	77.80	104.30	877 *
CHICHIJIMA, JAPAN	D01	27.09	142.18	108
CHICHIJIMA, JAPAN	D02	27.09	142.18	111
CHOUTUPPAL (HYDERABAD), INDIA	D02	17.30	78.93	2030
CHRISTCHURCH, NEW ZEALAND	B01	-43.41	172.35	112
CHUBU, JAPAN	A08	35.27	137.01	301
CHUBU, JAPAN	B10	35.27	137.01	2031
CHUBU, JAPAN	B13	35.32	137.44	966
CHUBU, JAPAN	C03	35.27	137.01	964
CHUBU, JAPAN	C06	35.27	137.01	965
CHUNG-LI, TAIWAN, CHINA	B01	24.91	121.24	113
CHURCHILL, CANADA	B01	58.70	265.80	114
CHURCHILL, CANADA	B01	58.70	265.80	2159
CLIMAX, USA	F01	39.37	253.82	117
COCOS, AUSTRALIA	C06	-12.19	96.83	2409
COCOS, AUSTRALIA	C11	-12.19	96.83	2426
COIMBRA, PORTUGAL	D01	40.22	351.75	2201
COLLEGE, USA	B01	64.93	212.00	123
COLLEGE, USA	B08	64.87	212.18	203

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
COLLEGE, USA	B12	64.86	212.15	204
COLLEGE, USA	D01	64.87	212.17	118
COLLEGE, USA	D01	64.86	212.15	119
COLLEGE, USA	D02	64.86	212.15	121
COLLEGE, USA	E01	64.86	212.15	124
COLLM, GDR	B10	51.32	13.00	2035
COLOMBO, SRI LANKA	B07	6.90	79.87	125
CONCEPCION, CHILE	B01	-36.78	286.88	126
CRIMEAN ASTRO OBSERVATORY, USSR	A08			2369 *
CUBI POINT, PHILIPPINES	C06	18.78	120.30	2417
CUBI POINT, PHILIPPINES	C11	18.78	120.30	2434
CULGOORA, AUSTRALIA	A06	-30.32	149.56	2307
CULGOORA, AUSTRALIA	A08	-30.32	149.56	2204
CULGOORA, AUSTRALIA	C01	-30.32	149.57	129
CULGOORA, AUSTRALIA	C03	-30.32	149.57	130
CULGOORA, AUSTRALIA	C04	-30.32	149.57	936
DAKAR, SENEGAL	B01	14.76	342.58	131
DANEBOG, GREENLAND	B08	74.30	339.18	2036
DANMARKSHAVN, GREENLAND	B08	76.66	341.37	722
DARMSTADT, FRG	B01	54.00	9.00	2013
DARMSTADT, FRG	C06	54.00	7.00	2011
DARWIN, AUSTRALIA	B01	-12.45	130.95	2009
DARWIN, AUSTRALIA	C06	-12.38	130.97	2037
DARWIN, AUSTRALIA	C11	-12.38	130.97	2038
DARWIN, AUSTRALIA	F01	-12.42	130.87	2039
DAVAO, PHILIPPINES	D01	7.08	125.58	134
DAVIS, ANTARCTICA	B08	-68.58	77.97	136
DAVIS, ANTARCTICA	D01	-68.58	77.97	2440
DAVIS, ANTARCTICA	D02	-68.58	77.97	139
DAVIS, ANTARCTICA	E01	-68.58	77.97	140
DE BILT, THE NETHERLANDS	B01	52.10	5.18	141
DE BILT, THE NETHERLANDS	B07	52.10	5.18	142
DE BILT, THE NETHERLANDS	B07	52.10	5.18	2077
DEEP RIVER, CANADA	F01	46.10	282.50	145
DEEP RIVER, CANADA	F03	46.10	282.50	146

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
DEL RIO OBSERVATORY, USA	D01	29.49	259.08	2002
DIEGO GARCIA	C06	-7.28	72.36	2040
DIEGO GARCIA	C11	-7.28	72.36	2041
DILIMAN, PHILIPPINES	A01	14.68	121.07	2270
DILIMAN, PHILIPPINES	A02	14.65	121.07	2273
DIXON, USSR	B01	73.50	80.60	2194
DIXON, USSR	B08	67.20		2375 *
DIXON, USSR	E01	73.50	80.40	876 *
DOLGOSCHELIE, USSR	B09	66.03	43.24	794 *
DOMBAS, NORWAY	D01	62.07	9.12	151
DOURBES, BELGIUM	B01	50.10	4.60	152
DOURBES, BELGIUM	B07	50.10	4.60	938
DOURBES, BELGIUM	D01	50.10	4.60	824
DOURBES, BELGIUM	F01	50.10	4.60	153
DUMONT D'URVILLE, ANTARCTICA	E02	-66.67	140.00	1055
DUMONT D'URVILLE, ANTARCTICA	E03	-66.67	140.00	1056
DUMONT D'URVILLE, ANTARCTICA	G01	-66.67	140.00	1057
DUNEDIN, NEW ZEALAND	B13	-45.79	170.48	154
DURBAN, REP. OF S. AFRICA	B13	-29.97	30.95	2081
DURHAM, USA	F01	43.10	289.17	157
DWINGELOO, THE NETHERLANDS	C03	52.81	6.40	1086
EBRO, SPAIN	A01	40.82	0.49	618
EBRO, SPAIN	A02	40.82	0.49	619
EBRO, SPAIN	A16	40.82	0.49	621
EBRO, SPAIN	B01	40.82	0.49	622
EBRO, SPAIN	B06	40.82	0.49	623
EBRO, SPAIN	B09	40.82	0.49	624
EBRO, SPAIN	B14	40.82	0.49	625
EBRO, SPAIN	C06	40.82	0.49	1063
EBRO, SPAIN	D01	40.82	0.49	626
EL ARENOSILLO, SPAIN	B01	37.10	353.25	160
EL LEONCITO, ARGENTINA	G01	-31.80	290.70	762 *
EMBUDO, USA	F03	35.20	253.32	164
ESKDALEMUIR, UNITED KINGDOM	D01	55.32	356.80	165
ESKDALEMUIR, UNITED KINGDOM	D02	55.32	356.80	166

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
ETAIYAPURAM, INDIA	D01	9.20	78.00	2046
EUSEBIO, BRAZIL	D01	-3.88	321.27	171
EYREWELL, NEW ZEALAND	D01	-43.42	173.35	2047
FARNBOROUGH, UNITED KINGDOM	C06	51.28	359.25	2048
FARNBOROUGH, UNITED KINGDOM	C11	51.28	359.25	2049
FORTALEZA, BRAZIL	B01	-3.75	321.05	172
FORT CHURCHILL, CANADA	D01	58.80	265.90	115
FORT YUKON, USA	B08	66.56	214.78	175
FORT YUKON, USA	B12	66.57	214.75	176
FORT YUKON, USA	D01	66.56	214.78	177
FORT YUKON, USA	E01	66.56	214.78	178
FREDERICKSBURG, USA	D01	38.20	282.63	180
FRESNO OBSERVATORY, USA	D01	37.09	240.28	2003
FROBISHER BAY, CANADA	C06	63.76	291.46	2052
FROBISHER BAY, CANADA	C11	63.75	291.46	2053
FUERSTENFELDBRUCK, FRG	D01	48.17	11.28	182
FUERSTENFELDBRUCK, FRG	D02	48.17	11.28	183
FUERSTENFELDBRUCK, FRG	D02	48.17	11.28	2054
FUKISHIMA, JAPAN	F01	37.68	140.45	184
GARCHY, FRANCE	B01	47.28	3.07	187
GENERAL BELGRANO, ANTARCTICA	B01	-77.97	321.20	51
GENERAL BELGRANO, ANTARCTICA	B08	-77.97	321.20	910
GENERAL BELGRANO, ANTARCTICA	B13	-77.07	321.20	2055
GENERAL BELGRANO, ANTARCTICA	D01	-77.97	321.20	911
GENOVA, ITALY	B09	44.55	8.95	748
GEORGIANA OBSERVATORY, HUNGARY	A01	47.52	19.04	2306
GEORGIANA OBSERVATORY, HUNGARY	A06	47.52	19.04	2247
GEORGIANA OBSERVATORY, HUNGARY	C01	47.52	19.04	2246
GIBILMANNA, ITALY	D01	38.00	14.02	2261
GILGIT, PAKISTAN	A16	35.92	74.33	2320
GLENLEA, CANADA	D01	49.60	262.90	2288
GNANGARA, AUSTRALIA	D01	-31.78	115.95	202

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
GODHAVN, GREENLAND	B01	69.26	306.49	729
GODHAVN, GREENLAND	B08	69.26	306.49	725
GODHAVN, GREENLAND	D01	69.25	306.47	2279
GODTHAB, GREENLAND	B08	64.19	308.27	723
GOETTINGEN, FRG	D01	51.55	9.96	2224
GOLEO NUEVO, ARGENTINA	C06	-43.22	294.73	2056
GOLEO NUEVO, ARGENTINA	C11	-43.22	294.73	2057
GOOSE BAY, CANADA	B01	53.32	299.54	208
GOOSE BAY, CANADA	B06	55.33	299.50	209
GOOSE BAY, CANADA	B12	53.32	299.54	2059
GOOSE BAY, CANADA	F01	53.27	299.60	210
GOOSE BAY, CANADA	F03	53.27	299.60	211
GORKY, USSR	B01	56.15	44.30	2188
GRAHAMSTOWN, REP. OF S. AFRICA	B01	-33.32	26.50	212
GRAHAMSTOWN, REP. OF S. AFRICA	B04	-33.32	26.50	939
GRAHAMSTOWN, REP. OF S. AFRICA	G01	-33.32	26.50	2004
GRAZ, AUSTRIA	B01	47.10	15.50	214
GRAZ, AUSTRIA	B06	47.10	15.50	215
GREAT WHALE RIVER, CANADA	D01	55.30	282.25	217
GUAM	D01	13.59	144.87	219
GULMARG, INDIA	D01	34.08	74.24	2061
GULMARG, INDIA	F01	34.07	74.42	221
HAIFA, ISRAEL	B06	32.87	35.09	222
HAIFA, ISRAEL	B11	32.87	35.09	941
HALEAKALA, USA	C01	20.71	203.74	226
HALLEY BAY, ANTARCTICA	B01	-75.52	333.37	227
HALLEY BAY, ANTARCTICA	B08	-75.52	333.37	228
HALLEY BAY, ANTARCTICA	B13	-75.52	333.05	229
HALLEY BAY, ANTARCTICA	C06	-75.52	333.37	942
HALLEY BAY, ANTARCTICA	C08	-75.52	333.37	943
HALLEY BAY, ANTARCTICA	D01	-75.52	333.05	232
HALLEY BAY, ANTARCTICA	D02	-75.52	333.05	233
HAMBURG, FRG	A01	53.64	9.96	235
HAMBURG, FRG	A02	53.64	9.96	944

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
HAMILTON, USA	B06	42.63	289.14	237
HANKASALMI, FINLAND	E04	62.5	26.9	2065
HARTEBEESTHOEK, REP. OF S. AFRICA	D01	-25.88	27.71	238
HARTLAND, UNITED KINGDOM	D01	50.99	355.52	239
HARTLAND, UNITED KINGDOM	D02	50.99	355.52	240
HARTLAND, UNITED KINGDOM	D02	51.00	355.52	241
HATIZYO, JAPAN	D01	33.07	139.83	2219
HAUTE PROVENCE, FRANCE	C01	43.93	5.72	242
HAUTE PROVENCE, FRANCE	G01	43.92	5.72	243
HEISS ISLAND, USSR	B01	80.60	58.00	2195
HEISS ISLAND, USSR	B08	73.80		2376 *
HEISS ISLAND, USSR	D01	80.62	58.05	2340
HEISS ISLAND, USSR	D02	80.62	58.05	839 *
HEISS ISLAND, USSR	E01	80.70	55.20	878 *
HERMANUS, REP. OF S. AFRICA	B01	-34.42	19.23	244
HERMANUS, REP. OF S. AFRICA	B08	-34.42	19.22	245
HERMANUS, REP. OF S. AFRICA	B13	-34.42	19.23	246
HERMANUS, REP. OF S. AFRICA	D01	-34.42	19.22	248
HERMANUS, REP. OF S. AFRICA	D01	-34.42	19.22	249
HERMANUS, REP. OF S. AFRICA	D02	-34.42	19.22	250
HERMANUS, REP. OF S. AFRICA	D02	-34.42	19.23	1157
HERMANUS, REP. OF S. AFRICA	F01	-34.42	19.22	256
HESTMONA, NORWAY	B13	66.53	12.85	1014
HESTMONA, NORWAY	B14	66.53	12.85	1016
HESTMONA, NORWAY	C06	66.53	12.85	1015
HESTMONA, NORWAY	C11	66.53	12.85	2066
HIRAIISO, JAPAN	A08	36.37	140.62	258
HIRAIISO, JAPAN	B06	36.37	140.62	2067
HIRAIISO, JAPAN	B08	36.37	140.62	260
HIRAIISO, JAPAN	B09	36.37	140.62	261
HIRAIISO, JAPAN	B11	36.37	140.63	2058
HIRAIISO, JAPAN	C03	36.37	140.62	950
HIRAIISO, JAPAN	C06	36.37	140.62	951
HOBART, AUSTRALIA	B01	-42.88	147.33	262
HOBART, AUSTRALIA	B07	-42.88	147.33	2437
HOBART, AUSTRALIA	F01	-42.88	147.33	713
HOBART, AUSTRALIA	F01	-42.90	147.33	2444
HOBART, AUSTRALIA	F03	-42.88	147.33	715
HOBART, AUSTRALIA	H03	-42.90	147.20	1156

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
HOKKAIDO, JAPAN	C06	45.52	141.84	2069
HOKKAIDO, JAPAN	C11	45.52	141.84	2070
HONG KONG	B01	22.33	114.20	264
HONG KONG	F02	22.42	114.20	269
HONOLULU, USA	D01	21.32	201.99	270
HUANCAYO, PERU	F01	-12.03	284.67	271
HURBANOVO, CZECHOSLOVAKIA	A02	47.87	18.19	954
HURBANOVO, CZECHOSLOVAKIA	A04	47.87	18.19	953
HURBANOVO, CZECHOSLOVAKIA	A06	47.87	18.19	955
HURBANOVO, CZECHOSLOVAKIA	C01	47.87	18.19	273
HURBANOVO, CZECHOSLOVAKIA	D01	47.87	18.18	807 *
HYDERABAD, INDIA	D01	17.42	78.55	274
IBADAN, NIGERIA	B01	7.40	3.90	275 *
IBADAN, NIGERIA	B06	7.40	3.90	276 *
INNSBRUCK, AUSTRIA	F01	47.32	11.38	2207
INNSBRUCK, AUSTRIA	F03	47.32	11.38	2232
INUBO, JAPAN	C06	35.70	140.86	277
INUVIK, CANADA	C06	68.31	226.50	2168
INUVIK, CANADA	C11	68.31	226.50	2072
INUVIK, CANADA	F01	68.35	226.28	281
INUVIK, CANADA	F03	68.35	226.28	282
INVERCARGILL, NEW ZEALAND	B06	-46.40	168.40	283
IRKUTSK, USSR	A03	52.47	104.03	860 *
IRKUTSK, USSR	A08	52.47	104.03	859 *
IRKUTSK, USSR	B01	52.50	104.00	861
IRKUTSK, USSR	B10	52.50	104.00	862
IRKUTSK, USSR	C03	52.47	104.03	858 *
IRKUTSK, USSR	D01	52.27	104.27	865
IRKUTSK, USSR	F01	52.28	104.02	872
IRKUTSK, USSR	F03	52.28	104.02	873
ISTANBUL, TURKEY	A01	41.01	31.93	2255
ISTANBUL, TURKEY	A02	41.01	31.93	2256
ISTANBUL, TURKEY	C01	41.01	31.93	2257
ISTANBUL-KANDILLI, TURKEY	D01	41.14	29.14	294
ITAPETINGA(INPE), ATIBAIA, BRAZIL	A08	-23.18	313.44	2241
ITAPETINGA(INPE), ATIBAIA, BRAZIL	C03	-23.18	313.44	1078

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
ITAPETINGA(INPE), ATIBAIA, BRAZIL	C06	-23.18	313.44	541
IZMIRAN, USSR	A03			2361 *
IZMIRAN, USSR	A04			2365 *
IZMIRAN, USSR	A08			2370 *
IZMIRAN, USSR	C01			2380 *
IZMIRAN, USSR	C03			2385 *
IZMIRAN, USSR	C04			2386 *
IZMIRAN, USSR	F01	55.47	37.32	853
JAIPUR, INDIA	D01	26.92	75.79	285
JAN MAYEN, NORWAY	B08	70.93	8.74	2127
JAN MAYEN, NORWAY	D01	70.93	8.74	2120
JICAMARCA, PERU	B03	-11.95	283.13	286 *
JOHANNESBURG, REP. OF S. AFRICA	B01	-26.10	28.10	287
JULIUS/RUGEN, GDR	B01	54.63	13.38	288
JULIUS/RUGEN, GDR	B07	54.63	13.38	956
JUNGFRAUJOCH, SWITZERLAND	F01	46.55	7.98	289
KAGOSHIMA, JAPAN	B13	31.48	130.71	290
KAKIOKA, JAPAN	D01	36.23	140.19	291
KAKIOKA, JAPAN	D02	36.23	140.19	292
KALININGRAD, USSR	B01	54.70	20.62	854 *
KANDILLI, TURKEY	A01	41.06	29.06	293
KANDILLI, TURKEY	A02	41.06	29.06	957
KANDILLI, TURKEY	A04	41.06	29.06	958
KANDILLI, TURKEY	A05	41.06	29.06	959
KANDILLI, TURKEY	B14	41.06	29.06	2075
KANDILLI, TURKEY	C01	41.06	29.06	960
KANOYA, JAPAN	D01	31.42	130.88	295
KANOYA, JAPAN	D02	31.42	130.88	296
KANOZAN, JAPAN	D01	35.25	139.96	2203
KANZELHOEHE, AUSTRIA	A01	46.68	13.91	297
KANZELHOEHE, AUSTRIA	A02	46.68	13.91	961
KANZELHOEHE, AUSTRIA	A04	46.68	13.91	298
KANZELHOEHE, AUSTRIA	C01	46.68	13.91	962
KARACHI, PAKISTAN	A16	24.90	67.13	2315

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
KARAGANDA, USSR	B01	49.81	73.08	835 *
KARAGANDA, USSR	001	49.82	73.08	836
KARAVIA, ZAIRE	D01	-11.65	27.47	163 *
KASAKH ASTRONOMICAL INST., USSR	A03			2362 *
KASAKH ASTRONOMICAL INST., USSR	A04			2366 *
KASAKH ASTRONOMICAL INST., USSR	A07			2368 *
KASAKH ASTRONOMICAL INST., USSR	C01			2381 *
KASAKH ASTRONOMICAL INST., USSR	C02			2383 *
KASHIMA, JAPAN	B02	35.95	140.67	299
KASHIMA, JAPAN	B13	35.95	140.65	300
KAZAN, USSR	D01	55.83	48.85	2341
KEFLAVIK, ICELAND	B09	63.96	337.28	2080
KEFLAVIK, ICELAND	C06	63.96	337.28	2078
KEFLAVIK, ICELAND	C11	63.96	337.28	2079
KEM, USSR	D01	65.00	34.40	785 *
KHABAROVSK, USSR	B01	48.50	135.1	2190
KHABAROVSK, USSR	D01	48.48	135.07	2342
KHARTOUM, SUDAN	C06	15.61	32.54	2406
KHARTOUM, SUDAN	C11	15.61	32.54	2423
KIEL, FRG	F01	54.30	10.10	309
KIEV, USSR	B01	50.50	30.50	850
KIEV, USSR	D01	50.72	30.30	849
KIEV, USSR	F01	50.72	30.30	851
KINGSTON, USA	B14	41.31	288.27	311
KINGSTON, USA	D02	41.31	288.27	970
KIRUNA, SWEDEN	B01	67.80	20.40	312
KIRUNA, SWEDEN	B08	67.84	20.42	313
KIRUNA, SWEDEN	D01	67.83	20.42	315
KIRUNA, SWEDEN	E01	67.84	20.42	316
KIRUNA, SWEDEN	E03	67.84	20.42	317
KISLOVODSK, USSR	A01	44.70	42.50	320 *
KISLOVODSK, USSR	A03	44.70	42.50	972 *
KISLOVODSK, USSR	A04	44.70	42.50	973
KISLOVODSK, USSR	A05	44.70	42.50	974 *
KISLOVODSK, USSR	A06	44.70	42.50	975 *
KISLOVODSK, USSR	A07	44.70	42.50	976 *
KISLOVODSK, USSR	A08	44.70	42.50	977 *

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
KISLOVODSK, USSR	C03	44.70	42.50	978 *
KISO, JAPAN	G01	35.80	137.63	321
KITT PEAK, USA	A03	31.96	248.40	322
KITT PEAK, USA	A06	31.96	248.40	979
KITT PEAK, USA	C02	31.96	248.40	980
KOCHI, JAPAN	F02	33.55	133.49	2042
KODAIKANAL, INDIA	B01	10.20	77.50	765
KODIAKANAL, INDIA	B09	10.20	77.50	766
KODIAKANAL, INDIA	C01	10.20	77.50	764
KODIAKANAL, INDIA	D01	10.23	76.95	323
KOGANEI, JAPAN	B06	35.71	139.49	2327
KOKUBUNJI/TOKYO, JAPAN	B01	35.71	139.48	324
KUHLUNGSBORN, GDR	B09	54.12	11.77	325
KUHLUNGSBORN, GDR	B14	54.12	11.77	982
KUHLUNGSBORN, GDR	C06	54.12	11.77	983
KUHLUNGSBORN, GDR	E04	54.12	11.77	984
KURE, JAPAN	C06	28.39	181.71	2083
KURE, JAPAN	C11	28.39	181.71	2084
LAHORE, PAKISTAN	A16	31.55	74.43	2318
LAJES, AZORES	B09	38.77	333.84	2087
LAJES, AZORES	C06	38.77	333.84	2085
LAJES, AZORES	C11	38.77	333.84	2086
LA JOLLA, USA	A14	32.51	242.58	326
LA MOURE, USA	B13	46.56	261.36	1023
LA MOURE, USA	C06	46.56	261.36	1024
LA MOURE, USA	C11	46.56	261.36	2155
LANNION, FRANCE	B01	48.75	356.55	327
LA PAZ, BOLIVIA	C03	-16.30	291.91	330 *
LA PAZ, BOLIVIA	F01	-15.30	291.91	2146
L'AQUILA, ITALY	D01	42.38	13.31	332
LA REUNION	C06	-20.91	55.51	2088
LA REUNION	C11	-20.91	55.51	2089
LAS ACACIAS, ARGENTINA	D01	-35.00	302.32	753 *

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
LATROBE, USA	C06	40.28	280.72	334
LAUDER, NEW ZEALAND	B02	-45.04	169.69	2090
LAUDER, NEW ZEALAND	D01	-45.04	169.69	2091
LAUDER, NEW ZEALAND	H07	-45.04	169.69	2073
LAUNCESTON, AUSTRALIA	D02	-41.67	147.16	335
LAUREL RIDGE, USA	G01	40.16	280.84	767
LEEDS, UNITED KINGDOM	F01	53.82	358.40	336
LEICESTER, UNITED KINGDOM	B13	52.62	358.88	338
LEICESTER, UNITED KINGDOM	C06	52.62	358.88	2177
LEIRVOGUR, ICELAND	D01	64.18	338.30	341
LEIRVOGUR, ICELAND	D01	64.18	338.30	342
LENINGRAD, USSR	B01	60.00	30.70	2189
LENINGRAD, USSR	D01	59.95	30.70	857
LENINGRAD, USSR	E03	59.95	30.70	787 *
LERWICK, UNITED KINGDOM	D01	60.13	358.82	343
LERWICK, UNITED KINGDOM	D02	60.13	358.82	344
LERWICK, UNITED KINGDOM	D02	60.13	358.82	345
LEWIS, UNITED KINGDOM	C06	58.51	353.74	2408
LEWIS, UNITED KINGDOM	C11	58.51	353.74	2425
LOMNICKY STIT, CZECHOSLOVAKIA	F01	49.20	20.22	355
LONGYEARBYEN (LYR), NORWAY	E01	79.00	15.00	2043
LONGYEARBYEN, NORWAY	E03	79.00	15.00	2033
LONGYEARBYEN, NORWAY	E03	79.00	15.00	2034
LORING AFB, USA	D01	46.95	292.12	358
LOS BANOS, PHILIPPINES	A16	14.17	121.25	359
LOVO, SWEDEN	D01	59.35	17.83	2199
LOVOZERO, USSR	D01	67.97	35.02	2343
LOWELL, USA	A16	35.20	248.34	361
LUANDA, ANGOLA	A02	-8.79	13.31	362 *
LUANDA, ANGOLA	D01	-8.92	13.17	2157
LUCKY LAKE, CANADA	D01	51.15	252.74	363
LUNPING, TAIWAN, CHINA	A01	25.00	121.17	365

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
LUNPING, TAIWAN, CHINA	A02	25.00	121.17	994
LUNPING, TAIWAN, CHINA	B06	25.00	121.10	2093
LUNPING, TAIWAN, CHINA	B09	25.00	121.17	367
LUNPING, TAIWAN, CHINA	B11	25.00	121.10	2284
LUNPING, TAIWAN, CHINA	D01	25.00	121.17	366
LVOV, USSR	D01	49.90	23.75	830
LYCKSELE, SWEDEN	B01	64.62	18.67	368
LYCKSELE, SWEDEN	B08	64.62	18.67	369
LYCKSELE, SWEDEN	D01	64.62	18.67	370
LYCKSELE, SWEDEN	E01	64.62	18.67	371
LYCKSELE, SWEDEN	E03	64.62	18.67	373
MACQUARIE ISLAND	B08	-54.50	158.95	374
MACQUARIE ISLAND	B11	-54.48	158.97	2439
MACQUARIE ISLAND	D01	-54.50	158.95	376
MACQUARIE ISLAND	D02	-54.50	158.95	377
MACQUARIE ISLAND	D02	-54.50	158.95	379
MACQUARIE ISLAND	D02	-54.48	158.97	2094
MACQUARIE ISLAND	E01	-54.50	158.95	380
MACQUARIE ISLAND	H03	-54.48	158.97	2095
MAGADAN, USSR	D01	60.12	151.02	868
MAGADAN, USSR	F01	60.10	151.00	2389 *
MAGADAN, USSR	F03	60.10	151.00	2397 *
MALVIK, NORWAY	E04	63.40	10.70	2096
MANILA, PHILIPPINES	A01	14.65	121.07	382
MANILA, PHILIPPINES	A01	14.64	121.08	383
MANILA, PHILIPPINES	A02	14.65	121.07	995
MANILA, PHILIPPINES	A04	14.64	121.08	384
MANILA, PHILIPPINES	A04	14.64	121.08	385
MANILA, PHILIPPINES	A05	14.64	121.08	996
MANILA, PHILIPPINES	A06	14.64	121.08	997
MANILA, PHILIPPINES	A08	14.64	121.08	389
MANILA, PHILIPPINES	A16	14.63	121.02	386
MANILA, PHILIPPINES	A16	14.64	121.08	387
MANILA, PHILIPPINES	B01	14.70	121.10	2097
MANILA, PHILIPPINES	C01	14.64	121.08	998
MANILA, PHILIPPINES	C03	14.64	121.08	1000
MANILA, PHILIPPINES	D01	14.64	121.08	390
MAPUTO, MOZAMBIQUE	D01	-25.92	32.58	2244
MARCUS ISLAND	C06	24.29	153.98	2098
MARCUS ISLAND	C11	24.29	153.98	2099
MARTIN DE VIVIES, AMSTERDAM ISLAND	D01	-37.50	77.34	2248

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
MATSUMOTO, JAPAN	F03	36.25	137.97	2103
MATSUSHIRO, JAPAN	F03	36.53	138.02	2104
MAUI, USA	B01	20.83	203.53	393
MAUNA LOA, USA	A06	19.53	204.42	1003
MAUNA LOA, USA	A07	19.53	204.42	394
MAWSON, ANTARCTICA	B01	-67.60	62.88	689
MAWSON, ANTARCTICA	B08	-67.60	62.88	690
MAWSON, ANTARCTICA	B13	-67.60	62.88	2101
MAWSON, ANTARCTICA	D01	-67.60	62.86	691
MAWSON, ANTARCTICA	D02	-67.60	62.90	2100
MAWSON, ANTARCTICA	E01	-67.61	62.88	693
MAWSON, ANTARCTICA	F01	-67.60	62.88	714
MAWSON, ANTARCTICA	F03	-67.60	62.88	823
MAWSON, ANTARCTICA	G01	-67.62	62.87	2292
MBOUR, SENEGAL	D01	14.39	343.04	1103
MCMATH-HULBERT, USA	B08	42.66	276.74	1100
MCMATH-HULBERT, USA	D01	42.66	276.74	1101
MCMURDO, ANTARCTICA	E04	-77.75	167.50	548
MCMURDO, ANTARCTICA	F01	-77.90	166.60	2353
MCMURDO, ANTARCTICA	F03	-77.90	166.60	2354
MCMURDO, ANTARCTICA	H06	-77.75	167.50	2309
MEANOOK, CANADA	D01	54.62	246.67	1104
MEDINE SUGAR ESTATE, MAURITIUS	A16	-20.26	57.39	2237
MELBOURNE, AUSTRALIA	H03	-37.71	144.97	2016
MEMAMBETSU, JAPAN	D01	43.91	144.19	395
MEMAMBETSU, JAPAN	D02	43.91	144.19	396
MEUDON, FRANCE	A03	48.80	2.25	397
MEUDON, FRANCE	A04	48.80	2.23	399
MEUDON, FRANCE	A05	48.80	2.23	1004
MEUDON, FRANCE	A06	48.80	2.23	1005
MEUDON, FRANCE	C01	48.80	2.23	400
MEUDON, FRANCE	C01	48.80	2.23	1006
MEXICO CITY, MEXICO	B01	19.26	260.58	401
MEXICO CITY, MEXICO	F01	19.33	260.82	402
MEXICO CITY, MEXICO	F03	19.33	260.82	1007
MILLSTONE HILL, USA	B01	42.61	288.51	403
MILLSTONE HILL, USA	B03	42.62	288.51	404

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
MINSK, USSR	D01	54.10	26.52	875
MIRNY, ANTARCTICA	B08	-76.80		2377 *
MIRNY, ANTARCTICA	D01	-66.52	93.02	2344
MIRNY, ANTARCTICA	D02	-66.58	93.02	838
MIRNY, ANTARCTICA	E01	-66.60	93.00	879 *
MIRNY, ANTARCTICA	F04	-66.57	92.92	405
MISATO, JAPAN	F03	36.06	137.83	2102
MITAKA/TOKYO, JAPAN	A01	35.67	139.55	2249
MITAKA/TOKYO, JAPAN	A02	35.67	139.55	2250
MITAKA/TOKYO, JAPAN	C01	33.67	139.55	1060
MIYAZU, JAPAN	D01	35.32	135.11	406
MIZUSAWA, JAPAN	D01	39.11	141.21	2202
MOLODEZHNA YA, ANTARCTICA	B08	-67.60		2378 *
MOLODEZHNA YA, ANTARCTICA	D01	-67.67	45.85	2345
MOMBASA, KENYA	C06	4.06	39.67	2414
MOMBASA, KENYA	C11	4.06	39.67	2431
MONROVIA, LIBERIA	B09	6.43	349.19	2107
MONROVIA, LIBERIA	C06	6.43	349.19	2105
MONROVIA, LIBERIA	C11	6.43	349.19	2106
MORIOKA, JAPAN	F01	39.70	141.13	407
MOSCOW, USSR	B01	55.50	39.30	852
MOSCOW, USSR	D01	55.48	37.32	855
MOSCOW, USSR	F01	55.19	37.11	2352
MOSCOW, USSR	F04	55.93	37.52	408
MOSHIRI, JAPAN	B13	44.36	142.27	409
MOSHIRI, JAPAN	B13	44.36	142.27	410
MOULD BAY, CANADA	D01	76.20	240.60	412
MT. NORIKURA, JAPAN	F01	36.11	137.55	415
MT. NORIKURA, JAPAN	F02	36.11	137.55	416
MT. NORIKURA, JAPAN	F03	36.11	137.55	417
MOUNT SAYAN OBSERVATORY, USSR	A01			2359 *
MOUNT SAYAN OBSERVATORY, USSR	A03			2364 *
MOUNT SAYAN OBSERVATORY, USSR	A04			2367 *
MOUNT SAYAN OBSERVATORY, USSR	C01			2382 *
MOUNT SAYAN OBSERVATORY, USSR	C02			2384 *
MT. WASHINGTON, USA	F01	44.30	288.70	418

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
MT. WELLINGTON, AUSTRALIA	F01	-42.92	147.20	2445
MT. WILSON, USA	A01	34.22	242.06	2239
MT. WILSON, USA	A03	34.22	242.06	2240
MULEMBA, ANGOLA	A01	-8.79	13.31	993 *
MULTAN, PAKISTAN	A16	30.20	71.43	2317
MUNDARING, AUSTRALIA	B01	-31.98	116.22	419
MUNDARING, AUSTRALIA	D02	-32.00	116.20	420
MUNTINLUPA, PHILIPPINES	D01	14.38	121.02	421
MURMANSK, USSR	B01	69.0	33.0	2196
MURMANSK, USSR	C07	68.95	33.05	422
MURMANSK, USSR	D01	68.25	33.08	2346
MURMANSK, USSR	F04	68.95	33.05	1008
NAGOYA, JAPAN	F03	35.15	136.97	424
NAGYCENK, HUNGARY	D01	47.63	16.72	425
NAGYCENK, HUNGARY	D02	47.63	16.72	426
NAIROBI, KENYA	D01	-1.33	36.81	428
NAMPULA, MOCAMBIQUE	D01	-15.09	39.25	2245
NANCAY, FRANCE	A10	47.38	0.15	429
NANCAY, FRANCE	A10	47.38	0.15	430
NANCAY, FRANCE	A10	47.38	0.15	431
NANCAY, FRANCE	C03	44.40	2.20	433
NARSSARSSUAQ, GREENLAND	B01	61.17	314.59	727
NARSSARSSUAQ, GREENLAND	B08	61.17	314.59	724
NARSSARSSUAQ, GREENLAND	D01	61.18	314.57	2280
NAVAL OCEAN SYSTEMS CENTER, USA	B09	32.70	242.75	2111
NAVAL OCEAN SYSTEMS CENTER, USA	C06	32.70	242.75	2112
NAVAL OCEAN SYSTEMS CENTER, USA	C11	32.70	242.75	2113
NEA MAKRI, GREECE	C06	38.10	23.18	2114
NEA MAKRI, GREECE	C11	38.10	23.98	2115
NEUCHATEL, SWITZERLAND	D01	47.00	6.57	2220
NEWARK, USA	F01	39.70	284.30	2355
NEWARK, USA	F03	39.70	284.50	2356
NEWCASTLE, AUSTRALIA	D02	-32.75	151.50	434

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
NEW ZEALAND	C06	-41.23	174.92	2415
NEW ZEALAND	C11	-41.23	174.92	2432
NGOYA, REP. OF S. AFRICA	D02	-28.83	31.88	760
NIEMEGK, GDR	D01	52.07	12.68	1009
NIEMEGK, GDR	D02	52.07	12.68	1010
NIIGATA, JAPAN	G01	37.70	138.82	739
NISHINOMIYA, JAPAN	C06	34.72	135.38	438
NOBEYAMA, JAPAN	A08	35.93	138.48	2116
NOBEYAMA, JAPAN	A10	35.93	138.48	440
NOBEYAMA, JAPAN	C04	35.93	138.48	441
NORDDEICH, FRG	B09	53.57	7.10	364
NORFOLK, USA	B13	36.57	285.71	1035
NORFOLK, USA	C06	36.82	285.71	1036
NORFOLK ISLAND, AUSTRALIA	B01	-29.03	167.97	442
NORIKURA, JAPAN	A07	36.11	137.55	414
NORILSK, USSR	B01	69.00	88.00	863 *
NORILSK, USSR	B08	69.00	88.00	864 *
NORILSK, USSR	F01	69.00	88.00	874 *
NOVOKAZALINSK, USSR	B01	45.76	62.12	833 *
NOVOKAZALINSK, USSR	D01	45.77	62.12	834
NOVOLAZAREVSKAYA, ANTARCTICA	B08	-66.20		2379 *
NOVOLAZAREVSKAYA, ANTARCTICA	D01	-70.77	11.82	2347
NOVOLAZAREVSKAYA, ANTARCTICA	D02	-70.77	11.82	840 *
NOVOLAZAREVSKAYA, ANTARCTICA	E01	-70.80	11.80	880 *
NOVOSIBIRSK, USSR	D01	55.03	82.90	2348
NOVOSIBIRSK, USSR	F01	54.80	83.00	2390 *
NOVOSIBIRSK, USSR	F03	54.80	83.00	2398 *
NURMIJARVI, FINLAND	D01	60.51	24.65	2265
NYAALESUND, NORWAY	B08	79.00	12.00	711
NYAALESUND, NORWAY	B08	78.92	11.92	718
NYAALESUND, NORWAY	D01	78.92	11.93	445
NYAALESUND, NORWAY	D01	78.92	11.93	2221
NYAALESUND, NORWAY	E01	78.92	11.93	2126
NYDA, USSR	D01	66.60	73.00	2387 *

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
OBSERVATORIO DE MARINA, SPAIN	D01	36.47	353.80	532
OBSERV. LOMNICKY STIT, CZECHOSLOVAKIA	A06	49.18	20.22	353
OBSERV. LOMNICKY STIT, CZECHOSLOVAKIA	A07	49.18	20.22	592
OBSERV. STARA LESNA, CZECHOSLOVAKIA	A04	49.16	20.29	2329
OBSERV. STARA LESNA, CZECHOSLOVAKIA	A16	49.16	20.29	2330
ODESSA, USSR	D01	46.78	30.88	829
OKINAWA, JAPAN	B01	26.28	127.81	446
OKTYOMTSKY, USSR	F01			2391 *
OKTYOMTSKY, USSR	F03			2399 *
ONDREJOV, CZECHOSLOVAKIA	A08	49.92	14.98	2291
ONDREJOV, CZECHOSLOVAKIA	B14	49.92	14.98	804 *
ONDREJOV, CZECHOSLOVAKIA	C01	49.92	14.98	802
ONDREJOV, CZECHOSLOVAKIA	C03	49.92	14.98	801
ONDREJOV, CZECHOSLOVAKIA	C04	49.92	14.98	805
OOTY, INDIA	A14	11.38	76.67	448
OSHIMA, JAPAN	C06	34.81	139.37	2121
OTTAWA, CANADA	A08	45.96	281.93	2252
OTTAWA, CANADA	A10	45.96	281.93	2254
OTTAWA, CANADA	B01	45.10	283.85	449
OTTAWA, CANADA	C03	45.96	281.93	2263
OTTAWA, CANADA	D01	45.40	284.45	450
OUAGADOUGOU, UPPER VOLTA	B01	12.37	358.47	452
OULU, FINLAND	D02	65.08	25.87	453
OULU, FINLAND	F01	65.05	25.47	2182
OULU, FINLAND	F0	65.05	25.47	2185
OVEJUVO, BOLIVIA	B01	-16.00	291.00	454 *
PALEHUA, USA	C01	21.38	201.93	1118
PALEHUA, USA	C03	21.38	201.93	1119
PAMATAI, FRENCH POLYNESIA	D02	-17.34	210.65	2217
PANAGJURISTE, BULGARIA	D01	42.31	24.11	2110
PANAMA	C06	9.41	280.09	2124
PANAMA	C11	9.41	280.09	2125
PANSKA VES, CZECHOSLOVAKIA	B09	50.53	14.57	822 *

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
PAPEETE (PAMATAI), FRENCH POLYNESIA	D01	17.34	210.25	456
PARATUNKA, USSR	E03	52.58	158.14	788 *
PEKING, CHINA	A08	40.10	116.33	2178
PEKING, CHINA	C01	40.10	116.33	2156
PEKING, CHINA	C03	40.10	116.33	2122
PEKING, CHINA	F01	39.08	116.27	2119
PENDELI, GREECE	D01	38.05	23.86	35
PENN STATE U, USA	C03	40.82	282.13	775 *
PENTELEI, GREECE	A01	38.05	23.86	900
PENTELEI, GREECE	A02	38.05	23.86	901
PENTELEI, GREECE	A04	38.05	23.86	902
PENTELEI, GREECE	A06	38.05	23.86	904
PENTELEI, GREECE	A08	38.05	23.86	905
PENTELEI, GREECE	B06	38.05	23.86	906
PENTELEI, GREECE	C01	38.05	23.86	907
PENTELEI, GREECE	C03	38.05	23.86	908
PENTICTON, CANADA	A08	49.32	240.38	2253
PENTICTON, CANADA	C03	49.32	240.38	2264
PERTH, AUSTRALIA	C06	-31.94	115.98	2412
PERTH, AUSTRALIA	C11	-31.94	115.98	2429
PERTH, AUSTRALIA	H03	-31.56	115.50	459
PERU	C06	-16.47	342.81	2128
PERU	C11	-16.47	342.81	2129
PETROPAVLOVSK-KAMCHATSKII, USSR	D01	53.10	158.63	2349
PIC DU MIDI, FRANCE	A07	42.94	0.01	460
PLAISANCE, MAURITIUS	A16	-20.43	57.67	2238
POATINA, AUSTRALIA	F03	-41.82	146.88	2447
PODKAMENNAYA TUNGUSKA, USSR	D01	61.60	90.00	2350
POITIERS, FRANCE	B01	46.57	0.35	464
POKER FLAT, USA	B08	65.13	212.52	466
POKER FLAT, USA	D01	65.13	212.52	468
POKER FLAT, USA	E01	65.13	212.52	470
POKER FLAT, USA	E01	65.13	212.52	2130
POKER FLAT, USA	E03	65.11	212.52	2044
POKER FLAT, USA	E03	64.86	212.15	2045

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
PORT ALFRED, CROZET ISLANDS	D01	-46.43	51.87	127
PORT AUX FRANCAIS, KERGUELEN ISLANDS	B01	-49.35	70.24	302
PORT AUX FRANCAIS, KERGUELEN ISLANDS	B08	-49.35	70.27	303
PORT AUX FRANCAIS, KERGUELEN ISLANDS	B13	-49.44	70.42	304
PORT AUX FRANCAIS, KERGUELEN ISLANDS	D01	-49.35	70.21	305
PORT AUX FRANCAIS, KERGUELEN ISLANDS	D02	-49.44	70.42	306 *
PORT AUX FRANCAIS, KERGUELEN ISLANDS	E01	-49.35	70.22	307
PORT AUX FRANCAIS, KERGUELEN ISLANDS	E02	-49.35	70.22	967
PORT AUX FRANCAIS, KERGUELEN ISLANDS	E03	-49.35	70.22	968
PORT AUX FRANCAIS, KERGUELEN ISLANDS	F01	-49.35	70.22	308
PORT AUX FRANCAIS, KERGUELEN ISLANDS	G01	-49.35	70.22	969
PORT MORESBY, PAPUA	D01	-9.42	147.15	472
POTCHEFSTROOM, REP. OF S. AFRICA	F01	-26.66	27.08	473
POTSDAM, GDR	A01	52.38	13.07	1136
POTSDAM, GDR	A02	52.38	13.07	1137
POTSDAM, GDR	A03	52.38	13.07	474
POTSDAM, GDR	A04	52.38	13.07	1138
PREDIGSTUHL, FRG	F01	47.70	12.88	475
PRESTON, UNITED KINGDOM	A02	53.77	357.30	476
PRESTON, UNITED KINGDOM	C06	53.81	357.41	477
PRETORIA, REP. OF S. AFRICA	C06	-25.73	28.27	2402
PRETORIA, REP. OF S. AFRICA	C11	-25.73	28.27	2419
PROVIDENIYA BAY, USSR	B01	64.40	186.60	2336
PRUHONICE, CZECHOSLOVAKIA	B01	50.00	14.60	821 *
PURPLE MOUNTAIN, CHINA	A01	32.07	118.82	2167
PURPLE MOUNTAIN, CHINA	A02	32.07	118.82	2171
PURPLE MOUNTAIN, CHINA	A04	32.07	118.82	2180
PURPLE MOUNTAIN, CHINA	A08	32.07	118.82	2160
PURPLE MOUNTAIN, CHINA	C01	32.07	118.82	2181
QUETTA, PAKISTAN	A16	30.18	66.95	2316
QUETTA, PAKISTAN	D01	30.18	66.95	2242
RAF UPPER HEYFORD, UNITED KINGDOM	D01	51.56	358.85	2179
RAMEY, PUERTO RICO, USA	A01	18.50	292.80	478
RAMEY, PUERTO RICO, USA	A04	18.50	292.80	1121
RAMEY, PUERTO RICO, USA	A06	18.52	292.90	1123
RAMEY, PUERTO RICO, USA	B06	18.50	292.80	479
RAMEY, PUERTO RICO, USA	C01	18.50	292.80	1122
RAMEY, PUERTO RICO, USA	C07	18.52	292.90	1125

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
RAMFJORDMOEN, NORWAY	B01	69.58	19.22	2131
RAMFJORDMOEN, NORWAY	B08	69.58	19.22	2123
RAMFJORDMOEN, NORWAY	B15	69.58	19.22	708
RAROTONGA, COOK ISLANDS	B06	-21.20	200.20	810
RECIFE, BRAZIL	C06	-8.11	325.10	2134
RECIFE, BRAZIL	C11	-8.11	325.10	2135
RESOLUTE BAY, CANADA	B01	74.70	265.10	486
RESOLUTE BAY, CANADA	C06	74.71	265.03	2136
RESOLUTE BAY, CANADA	C11	74.71	265.03	2137
RESOLUTE BAY, CANADA	D01	74.60	265.10	487
REUNION (PLAINE DES CAFRES)	B01	-21.07	55.32	2333
REWA, INDIA	F01	24.32	81.17	488
RIO DE JANEIRO, BRAZIL	B13	-22.87	316.87	1029
RIO DE JANEIRO, BRAZIL	C06	-22.87	316.87	1030
ROBURENT, ITALY	B13	44.30	7.88	749
ROME, ITALY	A01	41.90	12.50	741
ROME, ITALY	A03	41.90	12.50	745
ROME, ITALY	A04	41.90	12.50	744
ROME, ITALY	A05	41.90	12.50	742
ROME, ITALY	C01	41.90	12.50	743
ROME, ITALY	F01	41.90	12.52	492
ROSTOV, USSR	B01	47.20	39.70	2191
ROSTOV, USSR	B07	47.20	39.70	2337
ROSTOV, USSR	B10	47.20	39.70	2338
RUDE SKOV (RSV), DENMARK	D01	55.84	12.46	2222
SABANA SECA, PUERTO RICO, USA	B09	18.45	293.78	2140
SABANA SECA, PUERTO RICO, USA	C06	18.45	293.78	2138
SABANA SECA, PUERTO RICO, USA	C11	18.45	293.78	2139
SABHAWALA, INDIA	D01	30.37	77.80	493 *
SACRAMENTO PEAK, USA	A01	32.78	254.68	500
SACRAMENTO PEAK, USA	A03	32.70	254.60	501
SACRAMENTO PEAK, USA	A04	32.78	254.68	1126
SACRAMENTO PEAK, USA	A05	32.78	254.68	1127
SACRAMENTO PEAK, USA	A06	32.78	254.68	1128
SACRAMENTO PEAK, USA	A07	32.78	254.68	499
SACRAMENTO PEAK, USA	A07	32.78	254.68	506
SACRAMENTO PEAK, USA	A07	32.78	254.68	2074
SACRAMENTO PEAK, USA	C01	32.78	254.68	498

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
SACRAMENTO PEAK, USA	C01	32.78	254.68	502
SACRAMENTO PEAK, USA	C14	32.78	254.68	2050
SACRAMENTO PEAK, USA	C14	32.78	254.68	2076
SAGAMORE HILL, USA	A08	42.63	289.18	1159
SAGAMORE HILL, USA	A16	42.63	289.18	508
SAGAMORE HILL, USA	B06	42.63	289.18	509
SAGAMORE HILL, USA	B11	42.63	289.18	1158
SAGAMORE HILL, USA	C03	42.63	289.18	236
SAGAMORE HILL, USA	C03	42.63	289.18	1160
SAGAMORE HILL, USA	C04	42.63	289.18	522
ST. ANTHONY, CANADA	C06	51.36	304.37	2163
ST. ANTHONY, CANADA	C11	51.34	304.27	2006
ST. CLOUD, USA	C06	45.57	265.81	574
ST. CLOUD, USA	D01	45.57	265.81	2166
ST. HELENA ISLAND	C06	-15.94	354.33	2407
ST. HELENA ISLAND	C11	-15.94	353.33	2424
ST. JOHNS, CANADA	D01	47.60	307.32	576
ST. KILDA, AUSTRALIA	B04	-34.73	138.54	524
SAINT PETER-ORDING, FRG	B01	54.00	9.30	2092
SAINT SANTIN, FRANCE	B03	44.63	2.22	525
SAKASHITA, JAPAN	F03	35.58	137.53	2143
SAKUSHIMA, JAPAN	B13	34.73	137.05	526
SALEKHARD, USSR	B01	66.50	66.50	2193
SAMOA	C06	-14.33	189.28	2144
SAMOA	C11	-14.33	189.28	2145
SANAE, ANTARCTICA	B01	-70.31	357.59	528
SANAE, ANTARCTICA	B04	-70.31	357.59	1044
SANAE, ANTARCTICA	B08	-70.31	357.64	2108
SANAE, ANTARCTICA	B13	-70.31	357.48	529
SANAE, ANTARCTICA	B13	-70.31	357.65	2082
SANAE, ANTARCTICA	C13	-70.31	357.64	1047
SANAE, ANTARCTICA	C13	-70.31	357.64	1153
SANAE, ANTARCTICA	D01	-70.32	357.66	530
SANAE, ANTARCTICA	D02	-70.31	357.64	1045
SANAE, ANTARCTICA	D02	-70.31	357.60	2109
SANAE, ANTARCTICA	E01	-70.30	357.66	781
SANAE, ANTARCTICA	E03	-70.31	357.65	1046
SANAE, ANTARCTICA	E03	-70.32	357.66	2205

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
SANAE, ANTARCTICA	F01	-70.31	357.64	531
SANAE, ANTARCTICA	G01	-70.30	357.59	782
SAN CARLO CANAVESE, ITALY	B01	45.01	7.64	616
SAN FERNANDO OBSERVATORY, USA	A01	34.31	241.51	2133
SAN FERNANDO OBSERVATORY, USA	A03	34.31	241.51	2141
SAN FERNANDO OBSERVATORY, USA	A04	34.31	241.51	2142
SAN FERNANDO OBSERVATORY, USA	C02	34.31	241.51	2147
SAN FERNANDO OBSERVATORY, USA	C03	34.31	241.51	2152
SAN JUAN, PUERTO RICO, USA	D01	18.12	293.85	538
SAN MIGUEL, ARGENTINA	A01	-34.52	301.24	2321
SAN MIGUEL, ARGENTINA	A02	-34.52	301.24	2322
SAN PABLO-TOLEDO, SPAIN	D01	39.55	355.65	2276
SAN PABLO-TOLEDO, SPAIN	D02	39.55	355.65	2277
SAO JOSE DOS CAMPOS, BRAZIL	B06	-23.21	314.14	534
SAO JOSE DOS CAMPOS, BRAZIL	B06	-23.21	314.14	2313
SAO JOSE DOS CAMPOS, BRAZIL	B13	-23.20	313.50	2062
SAO PAULO, BRAZIL	B13	-23.50	313.50	759
SARDINIA, ITALY	C06	39.18	9.16	1018
SCORESBYSUND, GREENLAND	B08	70.48	338.03	2206
SCOTT BASE, ANTARCTICA	B01	-77.81	166.76	543
SCOTT BASE, ANTARCTICA	B01	-77.81	166.76	2287
SCOTT BASE, ANTARCTICA	D01	-77.81	166.76	544
SEATTLE, USA	C06	47.60	237.67	2148
SEATTLE, USA	C11	47.60	237.67	2149
SEOUL, REPUBLIC OF KOREA	B01	37.23	126.57	549 *
SEOUL, REPUBLIC OF KOREA	D01	37.23	126.57	550 *
SHILLONG, INDIA	D01	25.57	91.88	552
SINGAPORE, MALAYSIA	C06	1.46	103.83	2416
SINGAPORE, MALAYSIA	C11	1.46	103.83	2433
SIPLE, ANTARCTICA	C08	-76.00	276.00	2150
SIPLE, ANTARCTICA	D01	-76.00	276.00	554
SIPLE, ANTARCTICA	D02	-76.00	276.00	555
SIPLE, ANTARCTICA	D02	-76.00	276.00	1048
SITKA, USA	D01	57.06	224.67	557
SLOPE POINT, NEW ZEALAND	E04	-44.67	169.03	2151

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
SLOUGH, UNITED KINGDOM	B01	51.48	359.43	561
SOCORRO, USA	F03	34.04	253.07	563
SODANKYLA, FINLAND	D01	67.37	26.63	2266
SOGRA, USSR	B13	62.80	46.25	791 *
SONDERSTROM, GREENLAND	B01	67.02	309.28	2158
SONDRE STROMFJORD, GREENLAND	B01	67.00	309.05	2324
SONDRE STROMFJORD, GREENLAND	B08	67.02	309.28	719
SOUTH POLE, ANTARCTICA	D01	-90.00	0.	2304
SOUTH POLE, ANTARCTICA	D02	-90.00	0.	2305
SOUTH POLE, ANTARCTICA	E01	-90.00	0.	570
SOUTH POLE, ANTARCTICA	F01	-90.00	0.	2357
SOUTH UIST, UNITED KINGDOM	B01	57.37	352.67	571
STANFORD, USA	A03	37.41	237.83	573
STATION NORD, GREENLAND	B08	81.60	343.30	2165
SUGADAIRA, JAPAN	B13	36.51	138.35	580
SVERDLOVSK, USSR	B01	56.43	58.57	2371 *
SVERDLOVSK, USSR	D01	56.43	58.57	866 *
SVERDLOVSK, USSR	F01	58.34	56.20	2392 *
SVERDLOVSK, USSR	F01	56.73	61.07	2393 *
SYDNEY, AUSTRALIA	A08	-33.87	150.77	583
SYDNEY, AUSTRALIA	B01	-34.05	150.67	2010
SYDNEY, AUSTRALIA	B07	-31.50	150.70	2007
SYDNEY, AUSTRALIA	B09	-33.87	150.77	582
SYOWA, ANTARCTICA	B01	-69.00	39.35	1141
SYOWA, ANTARCTICA	B06	-69.00	39.60	1142 *
SYOWA, ANTARCTICA	B08	-69.00	39.35	586
SYOWA, ANTARCTICA	B13	-69.00	39.58	587
SYOWA, ANTARCTICA	B13	-69.00	39.35	2290
SYOWA, ANTARCTICA	D01	-69.00	39.58	2210
SYOWA, ANTARCTICA	D02	-69.00	39.58	2208
SYOWA, ANTARCTICA	E01	-69.00	39.58	2209
SYOWA, ANTARCTICA	E04	-69.00	39.35	588
TAHITI, FRENCH POLYNESIA	B01	-17.73	210.68	589
TAIPEI, TAIWAN, CHINA	A01	25.03	121.51	2271
TAIPEI, TAIWAN, CHINA	A02	25.03	121.51	2272
TAIPEI, TAIWAN, CHINA	B06	25.20	121.50	591

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
TAIPEI, TAIWAN, CHINA	B11	25.20	121.50	1053 *
TAKEYAMA, JAPAN	F03	35.22	139.62	592
TANGERANG, INDONESIA	D01	-6.17	106.65	2223
TASHKENT, USSR	A01			2360 *
TASHKENT, USSR	F01	41.33	69.61	594 *
TBILISI, USSR	B01	41.70	44.80	2187
TBILISI, USSR	D01	42.08	44.70	2435
TBILISI, USSR	F01	41.72	44.80	2395 *
TEHRAN, IRAN	B01	35.70	51.40	755
TEHRAN, IRAN	B06	35.70	51.40	757
TEHRAN, IRAN	D01	35.70	51.40	756
TEL AVIV, ISRAEL	C01	32.10	34.50	597
TERRE ADELIE, ANTARCTICA	B01	-66.66	140.02	600
TERRE ADELIE, ANTARCTICA	B02	-66.66	140.02	601
TERRE ADELIE, ANTARCTICA	B08	-66.66	140.02	602 *
TERRE ADELIE, ANTARCTICA	B09	-66.40	140.01	792
TERRE ADELIE, ANTARCTICA	D01	-66.67	140.00	603
TERRE ADELIE, ANTARCTICA	E01	-66.67	140.00	604
TERRE ADELIE, ANTARCTICA	F01	-66.67	140.02	605
THORSHAVN, FAEROE ISLANDS	B08	62.03	353.24	717
THULE, GREENLAND	B01	77.50	290.80	728
THULE, GREENLAND	B06	76.55	291.34	607
THULE, GREENLAND	B08	77.51	290.77	726
THULE, GREENLAND	D01	76.55	291.17	608
THULE, GREENLAND	D01	77.48	290.83	2281
THULE, GREENLAND	D02	76.60	291.20	609 *
THULE, GREENLAND	F01	76.50	291.30	2358
THULE AB, GREENLAND	B13	76.50	291.30	2215
THULE AB, GREENLAND	C08	76.50	291.30	2216
TIHANY, HUNGARY	B13	46.90	17.89	610
TIHANY, HUNGARY	D01	46.90	17.89	1059
TILARAN, COSTA RICA	D01	10.44	84.32	2278
TIXIE BAY, USSR	B01	71.60	128.90	842
TIXIE BAY, USSR	D01	71.58	129.00	871
TIXIE BAY, USSR	E01	71.60	128.80	2226
TIXIE BAY, USSR	E03	71.60	128.80	2228
TIXIE BAY, USSR	E03	71.60	128.80	2229
TIXIE BAY, USSR	F01	71.60	129.00	843

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
TIXIE BAY, USSR	F02	71.60	128.80	2227
TJORNES, ICELAND	B08	66.20	342.90	2172
TOKYO, JAPAN	F01	35.72	139.72	612
TOKYO, JAPAN	F02	35.75	139.72	613
TOKYO, JAPAN	F03	35.75	139.72	2225
TOMSK, USSR	B01	56.00	84.00	825
TOMSK, USSR	B01	56.50	84.90	2192
TOOLANGI, AUSTRALIA	D01	-37.53	145.47	615
TORUN, POLAND	A08	53.10	18.55	1089
TORUN, POLAND	C03	53.10	18.55	1090
TOWNSVILLE, AUSTRALIA	B01	-19.63	146.85	628
TOWNSVILLE, AUSTRALIA	B04	-19.63	146.85	629
TOYOKAWA, JAPAN	A08	34.83	137.37	630
TOYOKAWA, JAPAN	A09	34.83	137.37	631
TOYOKAWA, JAPAN	A09	34.83	137.37	1143
TOYAKAWA, JAPAN	A10	34.83	137.37	632
TOYOKAWA, JAPAN	A10	34.83	137.37	1144
TOYOKAWA, JAPAN	A14	34.83	137.37	780
TREMSDORF, GDR	A08	52.28	13.13	634
TREMSDORF, GDR	C03	52.28	13.13	1064
TRELEW, ARGENTINA	B01	-43.20	294.70	815
TRELEW, ARGENTINA	B07	-43.20	294.70	816
TRELEW, ARGENTINA	D01	-43.25	294.68	754 *
TRIESTE, ITALY	A08	45.64	13.88	635
TRIESTE, ITALY	C03	45.64	13.88	1065
TRIVANDRUM, INDIA	D01	8.48	76.95	637
TROMSO, NORWAY	B01	69.70	19.00	705
TROMSO, NORWAY	B08	69.70	19.00	706
TROMSO, NORWAY	C08	69.70	19.20	2170
TROMSO, NORWAY	D01	69.66	18.94	638
TROMSO, NORWAY	E01	69.66	18.94	2132
TSIMLJANSK, USSR	A02	47.70	42.00	2161
TSIMLJANSK, USSR	G01	47.70	42.00	1161 *
TSUMEB, NAMIBIA	D01	-19.20	17.58	639

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
TSUMEB, NAMIBIA	F01	-19.20	17.58	2173
TSUSHIMA, JAPAN	C06	34.32	129.21	2174
TSUSHIMA, JAPAN	C11	34.32	129.21	2175
TUCSON, USA	D01	32.25	249.17	641
TUCUMAN, ARGENTINA	D01	-26.80	294.80	2071
TULSA, (TUL), USA	A16	35.91	264.21	2214
TULSA, (TUL), USA	B08	35.91	264.21	2213
TULSA, (TUL), USA	D01	35.91	264.22	2211
TULSA, (TUL), USA	D02	35.91	264.21	2212
TUNTUNGAN, INDONESIA	D01	3.51	98.56	2197
TURKU, FINLAND	F01	60.4	22.6	2117
TURKU, FINLAND	F03	60.4	22.6	2118
UCCLE, BELGIUM	A01	50.80	4.35	644
UCCLE, BELGIUM	A02	50.80	4.35	642
UCLA, USA	A17			2258
UCLA, USA	A17			2259
UDAIPUR, INDIA	A04	24.10	74.00	2018
UDAIPUR, INDIA	A06	24.10	74.00	2282
UDAIPUR, INDIA	B07	24.50	73.70	826
UDAIPUR, INDIA	B10	24.50	73.70	2176
UDAIPUR, INDIA	C01	24.10	74.00	2283
UECHT, SWITZERLAND	C01	46.85	7.27	1067
UECHT, SWITZERLAND	C03	46.85	7.27	646
UGUT, USSR	D01	60.50	74.00	2388 *
UJJAIN, INDIA	D01	23.02	75.78	648
UPICE, CZECHOSLOVAKIA	B08	50.30	16.01	798
UPICE, CZECHOSLOVAKIA	B14	50.30	16.01	799 *
UPICE, CZECHOSLOVAKIA	C01	50.30	16.01	797
UPICE, CZECHOSLOVAKIA	C03	50.30	16.91	796
UPPSALA, SWEDEN	B01	59.80	17.60	1092
UPPSALA, SWEDEN	B08	59.80	17.60	650
UPPSALA, SWEDEN	D01	59.80	17.60	1091
UPPSALA, SWEDEN	E04	59.80	17.60	2310
URBANA, USA	B10	40.17	271.84	2051

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
URBANA, USA	B15	40.17	271.84	652
URBANA, USA	H07	40.17	271.84	2063
URBANA, USA	H07	40.17	271.84	2064
URBANA, USA	H07	40.17	271.84	2068
USHUAIA, ARGENTINA	A02	-54.80	291.70	2308
USHUAIA, ARGENTINA	B01	-54.80	291.70	811
USHUAIA, ARGENTINA	B08	-54.80	291.70	813
USHUAIA, ARGENTINA	B14	-54.80	291.70	814
VACOAS, MAURITIUS	A16	-20.30	57.50	2236
VALENTIA, UNITED KINGDOM	D01	51.93	349.75	654
VALLEY COTTAGE, USA	B14	41.07	286.45	657
VALLEY COTTAGE, USA	C06	41.07	286.45	1068
VANDENBERG AFB, USA	B01	34.73	239.43	463
VANIMO, INDONESIA	B01	-2.70	141.30	659
VICTORIA, CANADA	D01	48.52	236.58	660
VICTORIA, CANADA	G01	48.46	236.70	1093
VICTORIAS, PHILIPPINES	A16	10.90	123.07	661 *
VLADIVOSTOK, USSR	D01	43.68	132.17	869
VOSTOK, ANTARCTICA	E01	-78.40	106.90	881 *
VSETIN, CZECHOSLOVAKIA	B14	49.21	17.59	806
WAKKANAI, JAPAN	B01	45.39	141.69	664
WALLOPS ISLAND, USA	B01	37.94	284.53	665
WARNKENHAGEN, GDR	D01	54.00	11.07	1154
WARSAK, PAKISTAN	A16	34.00	71.52	2319
WASHINGTON, USA	C06	38.86	258.01	2183
WASHINGTON, USA	C11	38.86	258.01	2184
WEISSENAU, FRG	C04	47.46	9.35	2275
WELEN, USSR	D01	66.17	169.83	2351
WICK, UNITED KINGDOM	E04	58.50	356.90	2311
WIEN-KOBENZL, AUSTRIA	D01	48.26	16.32	2243

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
WINGST, FRG	D01	53.74	9.07	668
WINGST, FRG	D01	53.74	9.07	669
WINGST, FRG	D01	53.74	9.07	2108
WITTEVEEN, THE NETHERLANDS	D01	52.81	6.67	673
WITTEVEEN, THE NETHERLANDS	D01	52.81	6.67	674
WOOMERA, AUSTRALIA	D02	-31.10	136.78	676
YAKUTSK, USSR	B01	62.00	129.60	841
YAKUTSK, USSR	B12	62.00	129.70	677
YAKUTSK, USSR	D01	62.02	129.72	867
YAKUTSK, USSR	E01	62.02	129.72	2235
YAKUTSK, USSR	E03	62.00	129.70	2233
YAKUTSK, USSR	F01	62.02	129.72	678
YAKUTSK, USSR	F02	62.02	129.72	679
YAKUTSK, USSR	F03	62.02	129.72	681
YAMAGAWA, JAPAN	B01	31.20	130.61	684
YAMAGAWA, JAPAN	B06	31.20	130.62	2328
YELLOWKNIFE, CANADA	D01	62.48	245.53	685
YORK, UNITED KINGDOM	D02	53.97	358.92	686
YUNNAN, CHINA	A01	25.03	102.78	2293
YUNNAN, CHINA	A02	25.03	102.78	2294
YUNNAN, CHINA	A03	25.03	102.78	2295
YUNNAN, CHINA	A08	25.03	102.78	2296
YUNNAN, CHINA	C01	25.03	102.78	2297
YUNNAN, CHINA	C03	25.03	102.78	2298
YUNNAN, CHINA	C06	25.03	102.78	2299
YUZHNO-SAKHALINSK, USSR	D01	46.95	142.72	870
ZHIGANSK, USSR	B01	66.70	123.30	2230
ZHIGANSK, USSR	D01	66.70	123.30	2231
ZILINA, CZECHOSLOVAKIA	B14	49.12	18.45	2186
ZVENIGOROD, USSR	G01	55.70	36.80	1162 *

2.2 Master and Alternate Station Cross Reference List

2.2.1 STATION NAMES VS ALTERNATE STATION NAMES

STATION NAME	ALTERNATE NAME
Addis Ababa	AAE
Akita	Ak. 539
Alma Ata	Cosmic Ray Lab
Alma Ata	Kazakh State U
Andoya	Oksebasen
Argentine Island	Port Lockroy
Argentine Island	Faraday
Athens	Det 3 2 ^d Weather Wing
Atibaia	Itapetinga
Atibaia	Sao Paulo
Bagneres	Bagneres-De-Bagaire
Baguio	Baguio Weather Station
Baguio	Manila
Baguio	Miradar
Battelle	Richland
Bear Island	Bjornoya
Bekescsaba	Budapest
Bern	Locarno
Bern	Solar Radio Observatory Bumishus
Bern	Uecht
Binza	Kinshasa
Boulder	Boulder Field Station
Boulder	Boulder Ionospheric Sounding
Boulder	Boulder Observatory
Boulder	Boulder Radio Observatory
Boulder	IONBC
Boulder	SOLTERWARN
Boulder	TELCOM Boulder
Boulder	TIROS
Buenos Aires	San Miguel
Bunia-Ruampara	Bunia
Cachoeira Paulista	San Jose dos Campos
Cachoeira Paulista	San Jose
Canarias	Centro Geofisico de Canarias
Canarias	Obs Geofisico de Tenerife
Canarias	Tenerife
Casey	Wilkes
Casey	REPSTAT
Catarman	UEP Agromet
Chacaltaya	Inst. Inv. Fisicas, UMSA
Chacaltaya	La Paz
Chatanika	Chatanika Radar
Chelyuskin	Cape Chelyuskin
Christchurch	Godley Head
Christchurch	Lincoln

STATION NAME	ALTERNATE NAME
Chubu	Chubu Inst of Technology
Chubu	Kasugai
Chubu	Second Division, Chubu Institute for Scientific and Industrial Research
Chubu	Yamaoka
Chung-Li	Taipei
College	Chatanika
College	Ester Dome Observatory
College	Fairbanks
College	Murphy Dome
College	Poker Flat Research Range
College	Sheep Creek
Colombo	Sri Lanka
Conception	IONCP
Culgoora	Culgoora Radioheliograph
Culgoora	I. P. S. Solar Observatory
Culgoora	CSIRO Solar Observatory
Dakar	Camberene
Darmstadt	Norddeich
Davao	Manila Observatory
Dixon	Dixon Island
Dourbes	Uccle
Dumont d'Urville	Terre Adelle
Dunedin	Swampy Summit
Dwingeloo	DWINGELOO Observatory
Dwingeloo	Netherlands Foundation Radio Astronomy
Ebro	Tortosa
Etaiyapuram	Equatorial Observatory of NGRI
Fort Churchill	Churchill
General Belgrano	Belgrano
General Belgrano	GraJ Belgrano
Genova	B-236
Glenea	Winnipeg
Goose Bay	AFGL Goose Bay Ionospheric Obs.
Goose Bay	Melville AFB
Great Whale River	Great Whale
Haifa	Haifa Radio Observatory
Haifa	Natl Comm Space Research
Haifa	Radio Observatory NCSR
Halley Bay	Halley
Hamburg	Gesellsc Volkstumliche Astron
Hamburg	Planetarium Hamburg Hamilton
Hamilton	Det 2, 4WW
Harvard	Fort Davis
Haute Provence	Observatoire de Haute Provence

STATION NAME	ALTERNATE NAME
Heiss Island	Heiss
Heiss Island	Tikhaya
Hokkaido	Soya-Misaki
Hong Kong	Physics Dept, Hong Kong Univ.
Hong Kong	Royal Obs, Hong Kong
Hurbanovo	Slovak Center of Amateur Astronomy
Innsbruck	Observatorium Hafelkar
Inuvik	Soya-Misaki
Irkutsk	Patrony
Irkutsk	Zui
Istanbul-Kandilli	Istanbul
Itapetinga - Craam	ATIBAIA
Itapetinga - Craam	Centre of Radio Astronomy & Astrophysics Mackenzie University
Izmiran	Kasnaya Pakhra
Izmiran	Moscow
Juliusruh/Rugen	Zentralinst fur Solar-Ter Physik (HHI)
Juliusruh/Rugen	HHI Ionosondenstation
Kandilli	Istanbul
Kanzelhoehe	Sonnenobs Kanzelhoehe
Kanzelhoehe	Sonneobs de Univ Graz
Kanzelhoehe	Universitaet Graz
Karaganda	Bereznyaki
Karavia	Lumbumbashi
Karavia	Elizabethville
Kashima	Satellite Control Section - Kashima Branch
Kashima	Radio Research Labs
Kazan	Raifa
Kingston	Kingston Elf Station
Kingston	Univ. of Rhode Island - ELF
Kitt Peak	KPNO
Kokubunji/Tokyo	TO. 535
Kuhlungsborn	Obs fur Ionospharenforschung
Kuhlungsborn	Zentral Institut fur Solar-terrestriche Physik (HHI)
Kuhlungsborn	
La Jolla	UCSD
La Moure	North Dakota
Latrobe	Indirect Solar Flare Patrol
Latrobe	Network Station A-19 Latrobe
Latrobe	SID-SVC-A-19
Leirvogur	Reykjavik
Leningrad	Voyeikovo
Longyearbyen	Spitzbergen
Longyearbyen	Svalbard
Los Banos	UPCA Los Banos

STATION NAME	ALTERNATE NAME
Luanda	Belas
Luanda	Estacao Solar do Sentro
Luanda	Espacial da Mulemba
Luanda	Mulemba Space Center, Solar Station
Luanda	Mulemba Space Center
Magadan	Srednekan
Makapuu Pt	Honolulu
Manila	Manila Solar Observatory
Manila	PAGASA Astronomical Observatory
Manila	PAGASA
Manila	Quezon City
Maputo	Maputo Magnetic Observatory
Martin de Vivres	Amsterdam Island
Mauna Loa	HAO/NCAR Mauna Loa Station
Meudon	Observatoire de Meudon (DASOP)
Mexico City	Mexico
Mexico City	C.U. (Ciudad Universitaria)
Millstone Hill	Millstone Hill Observatory
Minsk	Pleschenitsi
Mirny	Fort Davis
Moscow	Dolgoprundny, Moscow Region
Moscow	Krasnaya Pakhra
Mulemba	Estacao Solar do Cen Espac Mulemba
Mulemba	Luanda
Mulemba	Mulemba Space Center Solar Station
Murmansk	Olenja, Murmansk Region
Murmansk	Loparskaya
Nampula	Nampula Magnetic Observatory
Naval Ocean System Center	NEL
Naval Ocean System Center	NELC
Neuchatel	Observatoire de Neuchatel
Niemegk	Potsdam
Niemegk	Seddin
Norddeich	Luechow
Novosibirsk	Klyuchi
Observatoire de Marina	San Fernando
Observatory Lomnický Stit	Astronomical Institute Skalnaté Pleso
Observatory Lomnický Stit	Lomnický Stit
Okinawa	OK. 426
Ooty	OOTY Radio Telescope
Ooty	Ootacamund
Ottawa	ARO: Algonquin Radio Observatory
Ottawa	Ashton Ionospheric Station
Ougadougou	Haute Volta
Palehua	OL-D, 1st Weather Wing

STATION NAME	ALTERNATE NAME
Palehua	Det 6, 1st Weather Wing
Papeete (Pametai)	Observatoire Geophysique de Tahiti
Papeete (Pametai)	Tahiti
Penteli	Athens
Penteli	National Observatory of Athens
Penticton	DRAO: Dominion Radio Astrophysical Observatory
Peru	Arequipa
Petropavlovsk-Kamchatskii	Paratunka
Poker Flat	PKR
Poker Flat	Geophysical Institute (Elvey Bldg)
Poker Flat	University of Alaska, Fairbanks Campus
Port Alfred	Crozet
Port Aux Francais	Kerguelen
Potsdam	Sonnenobservatorium Einsteinurm
Preston	Jermiah Harrocks Observatory
Preston	Wilfred Hall Observatory
Quetta	Geophysics Quetta
Ramey	Det 5, 12th Weather Squadron
Ramfjordmoen	Tromso
Resolute Bay	Resolute
Rewa	Nil
Roburent	B-280
Rome	Svirco
Rome	Roma
Sacramento Peak	Sac Peak
Sagamore Hill	Hamilton
Sagamore Hill	Det 2, 4WW
Sanae	Norway Station
San Carlo Canavese	IEN - Torino
San Carlo Canavese	Torino
San Juan	Puerto Rico
Sao Jose dos Campos	INPE/Sao Jose dos Campos
Sao Jose dos Campos	San Jose
Sao Paulo	Itapetinga Radio Observatory
South Uist	West Geirinish, Scotland
Stanford	Stanford Solar Observatory
Sutherland	South Africa Astronomical Observatory (SAAO)
Sverdlovsk	Arti
Sydney	Fleurs
Sydney	Camden/Sydney, Australia
Syowa	SW. 951
Tahiti	Taravao
Taipei	CWB
Taipei	RWRL, NTU
Taipei	Radio Wave Research Laboratory

STATION NAME	ALTERNATE NAME
Tbilisi	Dusheti
Terre Adelie	Dumont d'Urville
Thule	Camp Tuto
Thule	GEOPOLE
Thule	RADC
Tilaran	CHIRIPA
Tokyo	Itabashi
Tokyo	Itabashi-Tokyo
Tokyo	Tokyo-Itabashi
Torun	Nicolaus Copernicus University
Torun	Piwnice Astronomical Obs
Tremsdorf	Observatory Solare Radioastronomie Tresmsdorf
Tremsdorf	Zentralinst Solar-Terrestisch Physik (HHI)
Trieste	Basovizza Observing Stations, TRST
Tromso	Ramfjord
Tsimljansk	REPSTAT
Tsimljansk	UEP Agromet
Tulsa (TUL)	Oklahoma Geophysical Observatory
UCLA	Venus
UCLA	ISEE 1 and ISEE 2
Udaipur	Solar Observatory
Udaipur	USO/Udaipur
Uecht	BUMI
Urbana	Aeronomy Laboratory Field Station
Valley Cottage	A1 AAVSO
Vandenberg AFB	Point Arguello
Vladivostok	Gornotsezhno
Vladivostok	Ussurisk
Wakkanai	WK. 545
Weissenau	Weissenau Station
Yamagawa	YG. 431
Yellowknife	Yellowknife B

2.2.2 ALTERNATE STATION NAMES VS STATION NAMES

ALTERNATE NAME	STATION NAME
A1 AAVSO	Valley Cottage
AAE	Addis Ababa
Aeronomy Laboratory Field Station	Urbana
AFGL Goose Bay Ionospheric Obs.	Goose Bay
Ak. 539	Akita
Amsterdam Island	Martin de Vivres
Arequipa	Peru
ARO: Algonquin Radio Observatory	Ottawa
Arti	Sverdlovsk
Ashton Ionospheric Station	Ottawa
Astronomical Institute Skalnaté Pleso	Observatory Lomnický štít
Athens	Penteli
Atibaia	Itapetinga - Craam
B-236	Genova
B-280	Roburent
Bagnères-De-Bagnères	Bagnères
Baguio Weather Station	Baguio
Basovizza Observing Stations, TRST	Trieste
Belas	Luanda
Belgrano	General Belgrano
Bereznyaki	Karaganda
Bjornoya	Bear Island
Boulder Field Station	Boulder
Boulder Ionospheric Sounding	Boulder
Boulder Observatory	Boulder
Boulder Radio Observatory	Boulder
Budapest	Bekescsaba
BUMI	Uecht
Camberene	Dakar
Camden/Sydney, Australia	Sydney
Camp Tuto	Thule
Cape Chelyuskin	Chelyuskin
Centre of Radio Astronomy & Astrophysics Mackenzie University	Itapetinga-Kandilli
Centro Geofísico de Canarias	Canarias
Chatanika	College
Chatanika Radar	Chatanika
CHIRIPA	Tilaran
Chubu Inst of Technology	Chubu
Churchill	Fort Churchill
Cosmic Ray Lab	Alma Ata
Crozet	Port Alfred
CSIRO Solar Observatory	Culgoora
C.U. (Ciudad Universitaria)	Mexico
Culgoora Radioheliograph	Culgoora

ALTERNATE NAME	STATION NAME
CWB	Taipei
Det 2, 12th Weather Squadron	Ramey
Det 2, 4WW	Hamilton
Det 2, 4WW	Sagamore Hill
Det 3 2d Weather Wing	Athens
Det 6, 1st Weather Wing	Palehua
Dixon Island	Dixon
Dolgoprundny, Moscow Region	Moscow
DRAO: Dominion Radio Astrophysical Observatory	Penticton
Dumont d'Urville	Terre Adelle
Durten	Bleien
Dusheti	Tbilisi
Dwingeloo Observatory	Dwingeloo
Elizabethville	Karavia
Equatorial Observatory of NGRI	Etaiyapuram
Espacial da Mulemba	Luanda
Estacao Solar do Cen Espac Mulemba	Mulemba
Estacao Solar do Sentro	Luanda
Ester Dome Observatory	College
Fairbanks	College
Faraday	Argentine Island
Fleurs	Sydney
Fort Davis	Harvard
Geophysical Institute (Elvey Bldg)	Poker Flat
Geophysics Quetta	Quetta
GEOPOLE	Thule
Gesellsc Volkstumliche Astron	Hamburg
Godley Head	Christchurch
Gornotsezhnoe	Vladivostok
Gral Belgrano	General Belgrano
Great Whale	Great Whale River
Haifa Radio Observatory	Haifa
Halley	Halley Bay
Hamilton	Sagamore Hill
Haute Volta	Ougadougou
HAO/NCAR Mauna Loa Station	Mauna Loa
Heiss	Heiss Island
HHI Ionosondenstation	Juliusruh/Rugen
IEN - Torino	San Carlo Canavese
Indirect Solar Flare Patrol	Latrobe
Inst. Inv. Fisicas, UMSA	Chacaltaya
INPE/Sao Jose dos Campos	Sao Jose dos Campos
IONBC	Boulder
IONCP	Conception

ALTERNATE NAME	STATION NAME
I. P. S. Solar Observatory	Culgoora
ISEE1 and ISEE 2	UCLA
Istanbul	Kandilli
Istanbul	Istanbul-Kandilli
Itabashi	Tokyo
Itabashi-Tokyo	Tokyo
Itapetinga	Atibaia
Itapetinga Radio Observatory	Sao Paulo
Jermiah Harrocks Observatory	Preston
Kasnaya Pakhra	Izmiran
Kasugai	Chubu
Kazakh State U	Alma Ata
Kerguelen	Port Aux Francais
Kingston Elf Station	Kingston
Kinshasa	Binza
Klyuchi	Novosibirsk
KPNO	Kitt Peak
Krasnaya Pakhra	Moscow
La Paz	Chacaltaya
Lincoln	Christchurch
Locarno	Bern
Lomnický Stit	Observatory Lomnický Stit
Loparskaya	Murmansk
Luanda	Mulemba
Luechow	Norddeich
Lumbumbashi	Karavia
Manila Observatory	Davao
Manila	Baguio
Manila Solar Observatory	Manila
Maputo Magnetic Observatory	Maputo
Mexico	Mexico City
Melville AFB	Goose Bay
Millstone Hill Observatory	Millstone Hill
Miradar	Baguio
Moscow	Izmiran
Mulemba Space Center	Luanda
Mulemba Space Center, Solar Station	Luanda
Murphy Dome	College
Nampula Magnetic Observatory	Nampula
National Agro	Los Banos
Natl Comm Space Research	Haifa
National Observatory of Athens	Penteli
NEL	Naval Ocean System Center
NELC	Naval Ocean System Center
Netherlands Foundation Radio Astronomy	Dwingeloo
Network Station A-19 Latrobe	La Posta

ALTERNATE NAME	STATION NAME
Nicolaus Copernicus University	Torun
Nil	Rewa
Norddeich	Darmstadt
North Dakota	La Moure
Norway Station	Sanae
Obs fur Ionospharenforschung	Kuhlungsborn
Obs Geofisico de Tenerife	Canarias
Observatoire de Haute Provence	Haute Provence
Observatoire de Meudon (DASOP)	Meudon
Observatoire de Neuchatel	Neuchatel
Observatoire Geophysique de Tahiti	Papeete (Pameta)
Observatorium Hafelekar	Innsbruck
Observatory Solare Radioastronomie Tremisdorf	Tremisdorf
OK. 426	Okinawa
Oklahoma Geophysical Observatory	Tulsa (TUL)
Oksebasen	Andoya
OL-D, 1st Weather Wing	Palehua
Olenja, Murmansk Region	Murmansk
Ootacamund	Ooty
OOTY Radio Telescope	Ooty
PAGASA Astronomical Observatory	Manila
PAGASA	Manila
Paratunka	Petropavlovsk-Kamchatskii
Patrony	Irkutsk
Physics Dept, Hong Kong Univ.	Hong Kong
Piwnice Astronomical Obs	Torun
PKR	Poker Flat
Planetarium Hamburg	Hamburg
Pleschenitisi	Minsk
Point Arguello	Vandenberg AFB
Poker Flat Research Range	College
Port Lockroy	Argentine Island
Portin	Norfolk
Portsmith	Norfolk
Potsdam	Niemegk
Puerto Rico	San Juan
Quezon City	Manila
RAUC	Thule
Radio Observatory NCSR	Haifa
Radio Research Labs	Kashima
Radio Wave Research Laboratory	Taipei, Taiwan
Raifa	Kazan
Ramfjord	Tromso
REPSTAT	Casey

ALTERNATE NAME	STATION NAME
REPSTAT	Tsimljansk
Research Inst of Magnetosphere	Cataman
Resolute	Resolute Bay
Reykjavik	Leirvogur
Richland	Battelle
Rome	Roma
Royal Obs, Hong Kong	Hong Kong
RWRL, NTU	Taipei, Taiwan
Sac Peak	Sacramento Peak
San Fernando	Observatoire de Marina
San Jose	Cachocira Paulista
San Jose	Sao Jose dos Carlos
San Jose dos Campos	Cachocira Paulista
San Miguel	Buenos Aires
San Juan	Sabanaseca
Sanji	Sabanaseca
Sao Paulo	Atibaia
Satellite Control Section - Kashima Branch	Kashima
Second Division, Chubu Inst for Scientific and Industrial Research	Chubu
Seddin	Niemegk
Sheep Creek	College
SID-SVC-A-19	Latrobe
Slovak Center of Amateur Astronomy	Hurbanovo
Solar Observatory	Udaipur
Solar Radio Observatory Bumishus	Bern
SOLTERWARN	Boulder
Sonnenobs Kanzelhoehe	Kanzelhoehe
Sonnenobservatorium Einsteinurm	Potsdam
Sonneobs de Univ Graz	Kanzelhoehe
Soya-Misaki	Hokkaido
Soya-Misaki	Inuvik
Spitzbergen	Longyearbyen
Srednekan	Magadan
Sri Lanka	Colombo
Stanford Solar Observatory	Stanford
Svalbard	Longyearbyen
Svirco	Rome
SW. 951	Syowa
Swampy Summit	Dunedin
Tahiti	Papeete (Pameta)
Taipei	Chung-Li
Taravao	Tahiti
TELCOM Boulder	Boulder
Tenerife	Canarias
Terre Adelle	Dumont d'Urville

STATION NAME	ALTERNATE NAME
Tikhaya	Heiss Island
TO. 535	Kokubunji/Tokyo
Tokyo-Itabashi	Tokyo
Tortosa	Ebro
Torino	San Carlo Canavese
Tromso	Ramfjordmoen
Uccle	Dourbes
UCSD	La Jolla
Uecht	Bern
UEP Agromet	Catarman
UEP Agromet	Tsimljansk
Universitaet Graz	Kanzelhoehe
University of Alaska, Fairbanks Campus	Poker Flat
Univ. of Rhode Island - ELF	Kingston
UPCA Los Banos	Los Banos
USO/Udaipur	Udaipur
Ussurisk	Vladivostok
Venus	UCLA
Voyeikovo	Leningrad
Weissenau Station	Weissenau
West Geirinish, Scotland	South Uist
Wilfred Hall Observatory	Preston
Wilkes	Casey
Winnipeg	Glenlea
WK. 545	Wakkanai
Yamaoka	Chubu
Yellowknife B	Yellowknife
YG. 431	Yamagawa
Zentral Institut fur Solar-terrestriche Physik (HHI)	Kuhlungsborn
Zentralinst Solar-Terrestrisch Physik (HHI)	Tremsdorf
Zentralinst fur Solar-Ter Physik (HHI)	Juliusruh/Rugen
Zuf	Irkutsk

2.3 Listing by Subdisciplines

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
A01 SUNSPOT POSITIONS, AREAS, AND CLASSIFICATION				
TASHKENT, USSR	A 1			2360 *
MOUNT SAYAN OBSERVATORY, USSR	A 1			2359 *
EBRO, SPAIN	A 1	40.82	.49	618
UCCLE, BELGIUM	A 1	50.80	4.35	644
HAMBURG, FRG	A 1	53.64	9.96	235
ROME, ITALY	A 1	41.90	12.50	741
POTSDAM, GDR	A 1	52.38	13.07	1136
MULEMBA, ANGOLA	A 1	-8.79	13.31	993 *
KANZELHOEHE, AUSTRIA	A 1	46.68	13.91	297
GEORGIANA OBSERVATORY, HUNGARY	A 1	47.52	19.04	2306
ATHENS, GREECE	A 1	37.85	23.72	206
PENTELI, GREECE	A 1	38.05	23.86	900
BUCHAREST, ROMANIA	A 1	44.41	26.05	72
KANDILLI, TURKEY	A 1	41.06	29.06	293
ISTANBUL, TURKEY	A 1	41.01	31.93	2255
KISLOVODSK, USSR	A 1	44.70	42.50	320 *
YUNNAN, CHINA	A 1	25.03	102.78	2293
PURPLE MOUNTAIN, CHINA	A 1	32.07	118.82	2167
BAGUIO, PHILIPPINES	A 1	16.41	120.63	44
DILIMAN, PHILIPPINES	A 1	14.68	121.07	2270
MANILA, PHILIPPINES	A 1	14.65	121.07	382
MANILA, PHILIPPINES	A 1	14.64	121.08	383
LUNPING, TAIWAN, CHINA	A 1	25.00	121.17	365
TAIPEI, TAIWAN, CHINA	A 1	25.03	121.51	2271
MITAKA/TOKYO, JAPAN	A 1	35.67	139.55	2249
SAN FERNANDO OBSERVATORY, USA	A 1	34.31	241.51	2133
MT. WILSON, USA	A 1	34.22	242.06	2239
BIG BEAR, USA	A 1	34.16	243.49	2325
SACRAMENTO PEAK, USA	A 1	32.78	254.68	500
BOULDER, USA	A 1	39.98	254.72	64
RAMEY, PUERTO RICO, USA	A 1	18.50	292.80	478
SAN MIGUEL, ARGENTINA	A 1	-34.52	301.24	2321
BUENOS AIRES, ARGENTINA	A 1	-34.55	301.27	74 *
A02 SUNSPOT NUMBERS				
EBRO, SPAIN	A 2	40.82	.49	619
UCCLE, BELGIUM	A 2	50.80	4.35	642
HAMBURG, FRG	A 2	53.64	9.96	944
POTSDAM, GDR	A 2	52.38	13.07	1137
LUANDA, ANGOLA	A 2	-8.79	13.31	362 *
KANZELHOEHE, AUSTRIA	A 2	46.68	13.91	961
CATANIA, ITALY	A 2	37.50	15.08	100
HURBANOVO, CZECHOSLOVAKIA	A 2	47.87	18.19	954
ATHENS, GREECE	A 2	37.85	23.72	1145
PENTELI, GREECE	A 2	38.05	23.86	901
KANDILLI, TURKEY	A 2	41.06	29.06	957
ISTANBUL, TURKEY	A 2	41.01	31.93	2256
TSIMLJANSK, USSR	A 2	47.70	42.00	2161
YUNNAN, CHINA	A 2	25.03	102.78	2294

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
A02 SUNSPOT NUMBERS (continued)				
PURPLE MOUNTAIN, CHINA	A 2	32.07	118.82	2171
DILIMAN, PHILIPPINES	A 2	14.65	121.07	2273
MANILA, PHILIPPINES	A 2	14.65	121.07	995
LUNPING, TAIWAN, CHINA	A 2	25.00	121.17	994
TAIPEI, TAIWAN, CHINA	A 2	25.03	121.51	2272
MITAKA/TOKYO, JAPAN	A 2	35.67	139.55	2250
BIG BEAR, USA	A 2	34.16	243.49	2326
BOULDER, USA	A 2	39.98	254.72	920
USHUAIA, ARGENTINA	A 2	-54.80	291.70	2308
SAN MIGUEL, ARGENTINA	A 2	-34.52	301.24	2322
BUENOS AIRES, ARGENTINA	A 2	-34.55	301.27	75 *
CANARIAS, CANARY ISLANDS	A 2	28.48	343.72	598 *
PRESTON, UNITED KINGDOM	A 2	53.77	357.30	476
A03 SOLAR MAGNETIC FIELDS				
IZMIRAN, USSR	A 3			2361 *
KASAKH ASTRONOMICAL INST., USSR	A 3			2362 *
MOUNT SAYAN OBSERVATORY, USSR	A 3			2364 *
MEUDON, FRANCE	A 3	48.80	2.25	397
ROME, ITALY	A 3	41.90	12.50	745
POTSDAM, GDR	A 3	52.38	13.07	474
KISLOVODSK, USSR	A 3	44.70	42.50	972 *
YUNNAN, CHINA	A 3	25.03	102.78	2295
IRKUTSK, USSR	A 3	52.47	104.03	860 *
STANFORD, USA	A 3	37.41	237.83	573
SAN FERNANDO OBSERVATORY, USA	A 3	34.31	241.51	2141
MT. WILSON, USA	A 3	34.22	242.06	2240
KITT PEAK, USA	A 3	31.96	248.40	322
SACRAMENTO PEAK, USA	A 3	32.70	254.60	501
A04 H-ALPHA OBSERVATIONS (OTHER THAN FLARES)				
IZMIRAN, USSR	A 4			2365 *
KASAKH ASTRONOMICAL INST., USSR	A 4			2366 *
MOUNT SAYAN OBSERVATORY, USSR	A 4			2367 *
MEUDON, FRANCE	A 4	48.80	2.23	399
ROME, ITALY	A 4	41.90	12.50	744
POTSDAM, GDR	A 4	52.38	13.07	1138
KANZELHOEHE, AUSTRIA	A 4	46.68	13.91	298
CATANIA, ITALY	A 4	37.50	15.08	101
HURBANOVO, CZECHOSLOVAKIA	A 4	47.87	18.19	953
OBSERV. STARA LESNA, CZECHOSLOVAKIA	A 4	49.16	20.29	2329
ATHENS, GREECE	A 4	37.85	23.72	1146
PENTELI, GREECE	A 4	38.05	23.86	902
BUCHAREST, ROMANIA	A 4	44.41	26.05	932
KANDILLI, TURKEY	A 4	41.06	29.06	958
KISLOVODSK, USSR	A 4	44.70	42.50	973
UDAIPUR, INDIA	A 4	24.10	74.00	2018

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
A04 H-ALPHA OBSERVATIONS (OTHER THAN FLARES) (continued)				
PURPLE MOUNTAIN, CHINA	A 4	32.07	118.82	2180
MANILA, PHILIPPINES	A 4	14.64	121.08	384
MANILA, PHILIPPINES	A 4	14.64	121.08	385
SAN FERNANDO OBSERVATORY, USA	A 4	34.31	241.51	2142
SACRAMENTO PEAK, USA	A 4	32.78	254.68	1126
BOULDER, USA	A 4	39.98	254.72	927
RAMEY, PUERTO RICO, USA	A 4	18.50	292.80	1121
BUENOS AIRES, ARGENTINA	A 4	-34.55	301.27	76 *
A05 CALCIUM PLAGES				
MEUDON, FRANCE	A 5	48.80	2.23	1004
ROME, ITALY	A 5	41.90	12.50	742
KANDILLI, TURKEY	A 5	41.06	29.06	959
KISLOVODSK, USSR	A 5	44.70	42.50	974 *
MANILA, PHILIPPINES	A 5	14.64	121.08	996
BIG BEAR, USA	A 5	34.16	243.49	58
SACRAMENTO PEAK, USA	A 5	32.78	254.68	1127
A06 SOLAR MAPS, PROMINENCES, FILAMENTS				
MEUDON, FRANCE	A 6	48.80	2.23	1005
CATANIA, ITALY	A 6	37.50	15.08	935
HURBANOVO, CZECHOSLOVAKIA	A 6	47.87	18.19	955
GEORGIANA OBSERVATORY, HUNGARY	A 6	47.52	19.04	2247
OBSERV. LOMNICKY STIT, CZECHOSLOVAKIA	A 6	49.18	20.22	353
ATHENS, GREECE	A 6	37.85	23.72	1147
PENTELI, GREECE	A 6	38.05	23.86	904
KISLOVODSK, USSR	A 6	44.70	42.50	975 *
UDAIPUR, INDIA	A 6	24.10	74.00	2282
MANILA, PHILIPPINES	A 6	14.64	121.08	997
CULGOORA, AUSTRALIA	A 6	-30.32	149.56	2307
MAUNA LOA, USA	A 6	19.53	255.58	1003
KITT PEAK, USA	A 6	31.96	248.40	979
SACRAMENTO PEAK, USA	A 6	32.78	254.68	1128
BOULDER, USA	A 6	39.98	254.72	928
RAMEY, PUERTO RICO, USA	A 6	18.52	292.90	1123
A07 OPTICAL OBSERVATIONS OF THE CORONA				
KASAKH ASTRONOMICAL INST., USSR	A 7			2368 *
PIC DU MIDI, FRANCE	A 7	42.94	.01	460
OBSERV. LOMNICKY STIT, CZECHOSLOVAKIA	A 7	49.18	20.22	992
KISLOVODSK, USSR	A 7	44.70	42.50	976 *
NORIKURA, JAPAN	A 7	36.11	137.55	414
MAUNA LOA, USA	A 7	19.53	204.42	394
SACRAMENTO PEAK, USA	A 7	32.78	254.68	499
SACRAMENTO PEAK, USA	A 7	32.78	254.68	506
SACRAMENTO PEAK, USA	A 7	32.78	254.68	2074

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
A08 TOTAL RADIO FLUX MEASUREMENTS				
CRIMEAN ASTRO OBSERVATORY, USSR	A 8			2369 *
IZMIRAN, USSR	A 8			2370 *
TREMSDORF, GDR	A 8	52.28	13.13	634
TRIESTE, ITALY	A 8	45.64	13.88	635
ONDREJOV, CZECHOSLOVAKIA	A 8	49.92	14.98	2291
TORUN, POLAND	A 8	53.10	18.55	1089
ATHENS, GREECE	A 8	37.85	23.72	1148
PENTEI, GREECE	A 8	38.05	23.86	905
KISLOVODSK, USSR	A 8	44.70	42.50	977 *
YUNNAN, CHINA	A 8	25.03	102.78	2296
IRKUTSK, USSR	A 8	52.47	104.03	859 *
PEKING, CHINA	A 8	40.10	116.33	2178
PURPLE MOUNTAIN, CHINA	A 8	32.07	118.82	2160
MANILA, PHILIPPINES	A 8	14.64	121.08	389
CHUBU, JAPAN	A 8	35.27	137.01	301
TOYOKAWA, JAPAN	A 8	34.83	137.37	630
NOBEYAMA, JAPAN	A 8	35.93	138.48	2116
HIRAISO, JAPAN	A 8	36.37	140.62	258
CULGOORA, AUSTRALIA	A 8	-30.32	149.56	2204
SYDNEY, AUSTRALIA	A 8	-33.87	150.77	583
PENTICTON, CANADA	A 8	49.32	240.38	2253
OTTAWA, CANADA	A 8	45.96	281.93	2252
SAGAMORE HILL, USA	A 8	42.63	289.18	1159
BUENOS AIRES, ARGENTINA	A 8	-34.55	301.27	828 *
ITAPETINGA(INPE), ATIBAIA, BRAZIL	A 8	-23.18	313.44	2241
BORDEAUX, FRANCE	A 8	44.84	359.47	2162
A09 RADIO AND RADAR MAPS OF SOLAR DISK				
TOYOKAWA, JAPAN	A 9	34.83	137.37	631
TOYOKAWA, JAPAN	A 9	34.83	137.37	1143
A10 RADIO EAST-WEST SCANS OF SOLAR DISK				
NANCAY, FRANCE	A10	47.38	.15	429
NANCAY, FRANCE	A10	47.38	.15	430
NANCAY, FRANCE	A10	47.38	.15	431
TOYAKAWA, JAPAN	A10	34.83	137.37	632
TOYOKAWA, JAPAN	A10	34.83	137.37	1144
NOBEYAMA, JAPAN	A10	35.93	138.48	440
OTTAWA, CANADA	A10	45.96	281.93	2254
A11 SOLAR X-RAY AND UV BACKGROUND LEVELS				
BOULDER, USA	A11			921

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
A12 ENERGETIC SOLAR PROTONS AND SOLAR ELECTRONS				
BOULDER, USA	A12			922
BOULDER, USA	A12			2303
A14 COMET TAILS, INTERPLANETARY SCINTILLATIONS, ZODIACAL LIGHT				
OOTY, INDIA	A14	11.38	76.67	448
TOYOKAWA, JAPAN	A14	34.83	137.37	780
LA JOLLA, USA	A14	32.51	242.58	326
CANARIAS, CANARY ISLANDS	A14	28.48	343.72	1105 *
A16 TOTAL SOLAR RADIATION				
EBRO, SPAIN	A16	40.82	.49	621
OBSERV. STARA LESNA, CZECHOSLOVAKIA	A16	49.16	20.29	2330
MEDINE SUGAR ESTATE, MAURITIUS	A16	-20.26	57.39	2237
VACOAS, MAURITIUS	A16	-20.30	57.50	2236
PLAISANCE, MAURITIUS	A16	-20.43	57.67	2238
QUETTA, PAKISTAN	A16	30.18	66.95	2316
KARACHI, PAKISTAN	A16	24.90	67.13	2315
MULTAN, PAKISTAN	A16	30.20	71.43	2317
WARSAK, PAKISTAN	A16	34.00	71.52	2319
GILGIT, PAKISTAN	A16	35.92	74.33	2320
LAHORE, PAKISTAN	A16	31.55	74.43	2318
BAGUIO, PHILIPPINES	A16	16.42	120.60	43
MANILA, PHILIPPINES	A16	14.63	121.02	386
MANILA, PHILIPPINES	A16	14.64	121.08	387
LOS BANOS, PHILIPPINES	A16	14.17	121.25	359
VICTORIAS, PHILIPPINES	A16	10.90	123.07	661 *
CATARMAN, PHILIPPINES	A16	12.52	124.67	98 *
LOWELL, USA	A16	35.20	248.34	361
TULSA, (TUL), USA	A16	35.91	264.21	2214
SAGAMORE HILL, USA	A16	42.63	289.18	508
A17 INTERPLANETARY MAGNETIC FIELDS				
UCLA, USA	A17			2258
UCLA, USA	A17			2259

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
B01 IONOSPHERE VERTICAL SOUNDINGS				
HEISS ISLAND, USSR	B 1	80.60	58.00	2195
THULE, GREENLAND	B 1	77.50	290.80	728
RESOLUTE BAY, CANADA	B 1	74.70	265.10	486
DIXON, USSR	B 1	73.50	80.60	2194
TIXIE BAY, USSR	B 1	71.60	128.90	842
TROMSO, NORWAY	B 1	69.70	19.00	705
RAMFJORDMOEN, NORWAY	B 1	69.58	19.22	2131
GODHAVN, GREENLAND	B 1	69.26	306.49	729
NORILSK, USSR	B 1	69.00	88.00	863 *
MURMANSK, USSR	B 1	69.00	33.00	2196
KIRUNA, SWEDEN	B 1	67.80	20.40	312
SONDERSTROM, GREENLAND	B 1	67.02	309.28	2158
SONDRE STROMFJORD, GREENLAND	B 1	67.00	309.05	2324
ZHIGANSK, USSR	B 1	66.70	123.30	2230
SALEKHARD, USSR	B 1	66.50	66.50	2193
COLLEGE, USA	B 1	64.93	212.00	123
LYCKSELE, SWEDEN	B 1	64.62	18.67	368
ARKHANGELSK, USSR	B 1	64.60	40.50	2334
PROVIDENIYA BAY, USSR	B 1	64.40	186.60	2336
YAKUTSK, USSR	B 1	62.00	129.60	841
NARSSARSSUAQ, GREENLAND	B 1	61.17	314.59	727
LENINGRAD, USSR	B 1	60.00	30.70	2189
UPPSALA, SWEDEN	B 1	59.80	17.60	1092
CHURCHILL, CANADA	B 1	58.70	265.80	2159
CHURCHILL, CANADA	B 1	58.70	265.80	114
SOUTH UIST, UNITED KINGDOM	B 1	57.37	352.67	571
TOMSK, USSR	B 1	56.50	84.90	2192
SVERDLOVSK, USSR	B 1	56.43	58.57	2371 *
GORKY, USSR	B 1	56.15	44.30	2188
TOMSK, USSR	B 1	56.00	84.00	825
MOSCOW, USSR	B 1	55.50	39.30	852
KALININGRAD, USSR	B 1	54.70	20.62	854 *
JULIUS/RUGEN, GDR	B 1	54.63	13.38	288
SAINT PETER-ORDING, FRG	B 1	54.00	9.30	2092
DARMSTADT, FRG	B 1	54.00	9.00	2013
GOOSE BAY, CANADA	B 1	53.32	299.64	208
IRKUTSK, USSR	B 1	52.50	104.00	861
DE BILT, THE NETHERLANDS	B 1	52.10	5.18	141
SLOUGH, UNITED KINGDOM	B 1	51.48	359.43	561
KIEV, USSR	B 1	50.50	30.50	850
DOURBES, BELGIUM	B 1	50.10	4.60	152
PRUHONICE, CZECHOSLOVAKIA	B 1	50.00	14.60	821 *
KARAGANDA, USSR	B 1	49.81	73.08	835 *
LANNION, FRANCE	B 1	48.75	356.55	327
KHABAROVSK, USSR	B 1	48.50	135.10	2190
GARCHY, FRANCE	B 1	47.28	3.07	187
ROSTOV, USSR	B 1	47.20	39.70	2191
GRAZ, AUSTRIA	B 1	47.10	15.50	214
BEKESCSABA, HUNGARY	B 1	46.67	21.17	73

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
B01 IONOSPHERE VERTICAL SOUNDINGS (continued)				
POITIERS, FRANCE	B 1	46.57	.35	464
NOVOKAZALINSK, USSR	B 1	45.76	62.12	833 *
WAKKANAI, JAPAN	B 1	45.39	141.69	664
OTTAWA, CANADA	B 1	45.10	283.85	449
SAN CARLO CANAVESE, ITALY	B 1	45.01	7.64	616
ALMA-ATA, USSR	B 1	43.25	76.92	831 *
MILLSTONE HILL, USA	B 1	42.61	288.51	403
TBILISI, USSR	B 1	41.70	44.80	2187
EBRO, SPAIN	B 1	40.82	.49	622
BOULDER, USA	B 1	40.03	254.70	66
AKITA, JAPAN	B 1	39.73	140.13	5
WALLOPS ISLAND, USA	B 1	37.94	284.53	665
ASHKHABAD, USSR	B 1	37.90	58.30	847
SEOUL, REPUBLIC OF KOREA	B 1	37.23	126.57	549 *
EL ARENOSILLO, SPAIN	B 1	37.10	353.25	160
KOKUBUNJI/TOKYO, JAPAN	B 1	35.71	139.48	324
TEHRAN, IRAN	B 1	35.70	51.40	755
VANDENBERG AFB, USA	B 1	34.73	239.43	463
CAPE ZEYGARI, CYPRUS	B 1	34.58	32.95	87
YAMAGAWA, JAPAN	B 1	31.20	130.61	684
OKINAWA, JAPAN	B 1	26.28	127.81	446
CHUNG-LI, TAIWAN, CHINA	B 1	24.91	121.24	113
AHMEDABAD, INDIA	B 1	23.00	72.60	730 *
HONG KONG	B 1	22.33	114.20	264
MAUI, USA	B 1	20.83	203.53	393
MEXICO CITY, MEXICO	B 1	19.26	260.58	401
DAKAR, SENEGAL	B 1	14.76	342.58	131
MANILA, PHILIPPINES	B 1	14.70	121.10	2097
OUGADOUGOU, UPPER VOLTA	B 1	12.37	358.47	452
KODAIKANAL, INDIA	B 1	10.20	77.50	765
IBADAN, NIGERIA	B 1	7.40	3.90	275 *
VANIMO, INDONESIA	B 1	-2.70	141.30	659
FORTALEZA, BRAZIL	B 1	-3.75	321.05	172
DARWIN, AUSTRALIA	B 1	-12.45	130.95	2009
OVEJUVO, BOLIVIA	B 1	-16.00	291.00	454 *
TAHITI, FRENCH POLYNESIA	B 1	-17.73	210.68	589
TOWNSVILLE, AUSTRALIA	B 1	-19.63	146.85	628
REUNION (PLAINE DES CAFRES)	B 1	-21.07	55.32	2333
CACHOEIRA PAULISTA, BRAZIL	B 1	-22.70	314.98	533
JOHANNESBURG, REP. OF S. AFRICA	B 1	-26.10	28.10	287
BRISBANE, AUSTRALIA	B 1	-27.53	152.92	70
NORFOLK ISLAND, AUSTRALIA	B 1	-29.03	167.97	442
MUNDARING, AUSTRALIA	B 1	-31.98	116.22	419
GRAHAMSTOWN, REP. OF S. AFRICA	B 1	-33.32	26.50	212
SYDNEY, AUSTRALIA	B 1	-34.05	150.67	2010
HERMANUS, REP. OF S. AFRICA	B 1	-34.42	19.23	244
BUENOS AIRES, ARGENTINA	B 1	-34.50	301.50	818
CANBERRA, AUSTRALIA	B 1	-35.32	149.00	84

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
B01 IONOSPHERE VERTICAL SOUNDINGS (continued)				
CONCEPCION, CHILE	B 1	-36.78	286.88	126
AUCKLAND, NEW ZEALAND	B 1	-37.00	175.00	38
HOBART, AUSTRALIA	B 1	-42.88	147.33	262
TRELEW, ARGENTINA	B 1	-43.20	294.70	815
CHRISTCHURCH, NEW ZEALAND	B 1	-43.41	172.35	112
PORT AUX FRANCAIS, KERGUELEN ISLANDS	P 1	-49.35	70.24	302
CAMPBELL ISLAND	B 1	-52.60	169.10	79
USHUAIA, ARGENTINA	B 1	-54.80	291.70	811
ARGENTINE ISLANDS	B 1	-65.25	295.73	2001
TERRE ADELIE, ANTARCTICA	B 1	-66.66	140.02	600
MAWSON, ANTARCTICA	B 1	-67.60	62.88	689
SYOWA, ANTARCTICA	B 1	-69.00	39.35	1141
SANAE, ANTARCTICA	B 1	-70.31	357.59	528
HALLEY BAY, ANTARCTICA	B 1	-75.52	333.37	227
SCOTT BASE, ANTARCTICA	B 1	-77.81	166.76	543
SCOTT BASE, ANTARCTICA	B 1	-77.81	166.76	2287
GENERAL BELGRANO, ANTARCTICA	B 1	-77.97	321.20	51
B02 TOPSIDE-VERTICAL INCIDENCE SOUNDINGS				
KASHIMA, JAPAN	B 2	35.95	140.67	299
LAUDER, NEW ZEALAND	B 2	-45.04	169.69	2090
TERRE ADELIE, ANTARCTICA	B 2	-66.66	140.02	601
B03 INCOHERENT SCATTER SOUNDINGS				
SAINT SANTIN, FRANCE	B 3	44.63	2.22	525
MILLSTONE HILL, USA	B 3	42.62	288.51	404
ARECIBO, PUERTO RICO, USA	B 3	18.35	293.25	29
JICAMARCA, PERU	B 3	-11.95	283.13	286 *
B04 OBLIQUE INCIDENCE SOUNDINGS				
TOWNSVILLE, AUSTRALIA	B 4	-19.63	146.85	629
GRAHAMSTOWN, REP. OF S. AFRICA	B 4	-33.32	26.50	939
ST. KILDA, AUSTRALIA	B 4	-34.73	138.54	524
SANAE, ANTARCTICA	B 4	-70.31	357.59	1044
B06 TOTAL ELECTRON CONTENT - SATELLITE BEACONS				
THULE, GREENLAND	B 6	76.55	291.34	607
GOOSE BAY, CANADA	B 6	55.33	299.50	209
BELSK, POLAND	B 6	51.84	20.79	54 *
BRUXELLES, BELGIUM	B 6	50.50	4.20	704
GRAZ, AUSTRIA	B 6	47.10	15.50	215
SAGAMORE HILL, USA	B 6	42.63	289.18	509
HAMILTON, USA	B 6	42.63	289.14	237
EBRO, SPAIN	B 6	40.82	.49	623
PENTELI, GREECE	B 6	38.05	23.86	906
ATHENS, GREECE	B 6	37.85	23.72	1149

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
B06 TOTAL ELECTRON CONTENT - SATELLITE BEACONS (continued)				
HIRAIISO, JAPAN	B 6	36.37	140.62	2067
KOGANEI, JAPAN	B 6	35.71	139.49	2327
TEHRAN, IRAN	B 6	35.70	51.40	757
HAIFA, ISRAEL	B 6	32.87	35.09	222
YAMAGAWA, JAPAN	B 6	31.20	130.62	2328
TAIPEI, TAIWAN, CHINA	B 6	25.20	121.50	591
LUNPING, TAIWAN, CHINA	B 6	25.00	121.10	2093
RAMEY, PUERTO RICO, USA	B 6	18.50	292.80	479
IBADAN, NIGERIA	B 6	7.40	3.90	276 *
RAROTONGA, COOK ISLANDS	B 6	-21.20	200.20	810
CACHOEIRA PAULISTA, BRAZIL	B 6	-22.70	314.98	2312
SAO JOSE DOS CAMPOS, BRAZIL	B 6	-23.21	314.14	534
SAO JOSE DOS CAMPOS, BRAZIL	B 6	-23.21	314.14	2313
ARMIDALE, AUSTRALIA	B 6	-30.50	151.50	32
AUCKLAND, NEW ZEALAND	B 6	-37.00	175.00	40
INVERCARGILL, NEW ZEALAND	B 6	-46.40	168.40	283
SYOWA, ANTARCTICA	B 6	-69.00	39.60	1142 *
B07 IONOSPHERIC ABSORPTION - METHOD A1 (PULSE ECHO)				
JULIUS/RUGEN, GDR	B 7	54.63	13.38	956
DE BILT, THE NETHERLANDS	B 7	52.10	5.18	2077
DE BILT, THE NETHERLANDS	B 7	52.10	5.18	142
DOURBES, BELGIUM	B 7	50.10	4.60	938
ROSTOV, USSR	B 7	47.20	39.70	2337
ASHKHABAD, USSR	B 7	37.93	58.37	846
ASHKHABAD, USSR	B 7	37.56	58.22	2008
UDAIPUR, INDIA	B 7	24.50	73.70	826
AHMEDABAD, INDIA	B 7	23.00	72.60	4
COLOMBO, SRI LANKA	B 7	6.90	79.87	125
SYDNEY, AUSTRALIA	B 7	-31.50	150.70	2007
BUENOS AIRES, ARGENTINA	B 7	-34.50	301.50	817
HOBART, AUSTRALIA	B 7	-42.88	147.33	2437
TRELEW, ARGENTINA	B 7	-43.20	294.70	816
B08 IONOSPHERIC ABSORPTION - METHOD A2 (RIOMETER)				
STATION NORD, GREENLAND	B 8	81.60	343.30	2165
NYAALESUND, NORWAY	B 8	79.00	12.00	711
NYAALESUND, NORWAY	B 8	78.92	11.92	718
THULE, GREENLAND	B 8	77.51	290.77	726
DANMARKSHAVN, GREENLAND	B 8	76.66	341.37	722
BJORNOYA, NORWAY	B 8	74.51	19.18	2019
BEAR ISLAND, NORWAY	B 8	74.50	19.20	709
DANEBOG, GREENLAND	B 8	74.30	339.18	2036
HEISS ISLAND, USSR	B 8	73.80		2376 *
JAN MAYEN, NORWAY	B 8	70.93	8.74	2127
SCORESBYSUND, GREENLAND	B 8	70.48	338.03	2206
CAPE ZHELANIZA, USSR	B 8	70.30		2374 *
TROMSO, NORWAY	B 8	69.70	19.00	706

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
B08 IONOSPHERIC ABSORPTION - METHOD A2 (RIOMETER)				
RAMFJORDMOEN, NORWAY	B 8	69.58	19.22	2123
GODHAVN, GREENLAND	B 8	69.26	306.49	725
NORILSK, USSR	B 8	69.00	88.00	864 *
KIRUNA, SWEDEN	B 8	67.84	20.42	313
APATITY, USSR	B 8	67.50	33.33	2436
DIXON, USSR	B 8	67.20		2375 *
SONDRÉ STROMFJORD, GREENLAND	B 8	67.02	309.28	719
FORT YUKON, USA	B 8	66.56	214.78	175
TJORNES, ICELAND	B 8	66.20	342.90	2172
ANGMAGSSALIK, GREENLAND	B 8	65.61	322.34	721
POKER FLAT, USA	B 8	65.13	212.52	466
COLLEGE, USA	B 8	64.87	212.18	203
LYCKSELE, SWEDEN	B 8	64.62	18.67	369
ARKHANGELSK, USSR	B 8	64.60	40.50	2373 *
GODTHAB, GREENLAND	B 8	64.19	308.27	723
ANDERMA, USSR	B 8	63.90		2372 *
THORSHAVN, FAEROE ISLANDS	B 8	62.03	353.24	717
NARSSARSSUAQ, GREENLAND	B 8	61.17	314.59	724
ANDOYA, NORWAY	B 8	60.28	16.02	18
UPPSALA, SWEDEN	B 8	59.80	17.60	650
BELSK, POLAND	B 8	51.84	20.79	55 *
UPICE, CZECHOSLOVAKIA	B 8	50.30	16.01	798
MCMATH-HULBERT, USA	B 8	42.66	276.74	1100
HIRAISO, JAPAN	B 8	36.37	140.62	260
TULSA, (TUL), USA	B 8	35.91	264.21	2213
HERMANUS, REP. OF S. AFRICA	B 8	-34.42	19.22	245
AUCKLAND, NEW ZEALAND	B 8	-37.00	175.00	808
PORT AUX FRANCAIS, KERGUELEN ISLANDS	B 8	-49.35	70.27	303
CAMPBELL ISLAND	B 8	-52.60	169.10	2026
MACQUARIE ISLAND	B 8	-54.50	158.95	374
USHUAIA, ARGENTINA	B 8	-54.80	291.70	813
NOVOLAZAREVSKAYA, ANTARCTICA	B 8	-66.20		2379 *
CASEY, ANTARCTICA	B 8	-66.54	110.36	2029
TERRE ADELIE, ANTARCTICA	B 8	-66.66	140.02	602 *
MOLODEZHNAJA, ANTARCTICA	B 8	-67.60		2378 *
MAWSON, ANTARCTICA	B 8	-67.60	62.88	690
DAVIS, ANTARCTICA	B 8	-68.58	77.97	136
SYOWA, ANTARCTICA	B 8	-69.00	39.35	586
SANAE, ANTARCTICA	B 8	-70.31	357.64	2108
HALLEY BAY, ANTARCTICA	B 8	-75.52	333.37	228
MIRNY, ANTARCTICA	B 8	-76.80		2377 *
GENERAL BELGRANO, ANTARCTICA	B 8	-77.97	321.20	910

B09 IONOSPHERIC ABSORPTION - METHOD A3 (CW FIELDSTRENGTH)

DOLGOSCHELIE, USSR	B 9	66.03	43.24	794 *
KEFLAVIK, ICELAND	B 9	63.96	337.28	2080
KUHLUNGSBORN, GDR	B 9	54.12	11.77	325
NORDEICH, FRG	B 9	53.57	7.10	364

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
B09 IONOSPHERIC ABSORPTION - METHOD A3 (CW FIELDSTRENGTH) (continued)				
PANSKA VES, CZECHOSLOVAKIA	B 9	50.53	14.57	822 *
GENOVA, ITALY	B 9	44.55	8.95	748
EBRO, SPAIN	B 9	40.82	.49	624
AKITA, JAPAN	B 9	39.73	140.14	6
LAJES, AZORES	B 9	38.77	333.84	2087
HIRAISO, JAPAN	B 9	36.37	140.62	261
NAVAL OCEAN SYSTEMS CENTER, USA	B 9	32.70	242.75	2111
LUNPING, TAIWAN, CHINA	B 9	25.00	121.17	367
SABANA SECA, PUERTO RICO, USA	B 9	18.45	293.78	2140
KODIAKANAL, INDIA	B 9	10.20	77.50	766
MONROVIA, LIBERIA	B 9	6.43	349.19	2107
SYDNEY, AUSTRALIA	B 9	-33.87	150.77	582
TERRE ADELIE, ANTARCTICA	B 9	-66.40	140.01	792
B10 IONOSPHERIC DRIFTS				
IRKUTSK, USSR	B10	52.50	104.00	862
COLLM, GDR	B10	51.32	13.00	2035
ROSTOV, USSR	B10	47.20	39.70	2338
URBANA, USA	B10	40.17	271.84	2051
CHUBU, JAPAN	B10	35.27	137.01	2031
UDAIPUR, INDIA	B10	24.50	73.70	2176
B11 IONOSPHERIC SCINTILLATIONS FROM SATELLITE BEACONS				
BELSK, POLAND	B11	51.84	20.79	916 *
SAGAMORE HILL, USA	B11	42.63	289.18	1158
HIRAISO, JAPAN	B11	36.37	140.63	2058
HAIFA, ISRAEL	B11	32.87	35.09	941
TAIPEI, TAIWAN, CHINA	B11	25.20	121.50	1053 *
LUNPING, TAIWAN, CHINA	B11	25.00	121.10	2284
MACQUARIE ISLAND	B11	-54.48	158.97	2439
B12 IONOSPHERIC BAC - AND FORWARD-SCATTER				
FORT YUKON, USA	B12	66.57	214.75	176
COLLEGE, USA	B12	64.86	212.15	204
YAKUTSK, USSR	B12	62.00	129.70	677
GOOSE BAY, CANADA	B12	53.32	299.64	2059
B13 WHISTLERS AND VLF EMISSIONS				
THULE AB, GREENLAND	B13	76.50	291.30	2215
HESTMONA, NORWAY	B13	66.53	12.85	1014
CARIBOU PEAK, USA	B13	65.30	212.55	467
SOGRA, USSR	B13	62.80	46.25	791 *
ANDOYA, NORWAY	B13	60.17	16.01	2028
LEICESTER, UNITED KINGDOM	B13	52.62	358.88	338
TIHANY, HUNGARY	B13	46.90	17.89	610

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
B13 WHISTLERS AND VLF EMISSIONS (continued)				
LA MOURE, USA	B13	46.56	261.36	1023
MOSHIRI, JAPAN	B13	44.36	142.27	409
MOSHIRI, JAPAN	B13	44.36	142.27	410
ROBURENT, ITALY	B13	44.30	7.88	749
NORFOLK, USA	B13	36.57	285.71	1035
SUGADAIKA, JAPAN	B13	36.51	138.35	580
KASHIMA, JAPAN	B13	35.95	140.65	300
CHUBU, JAPAN	B13	35.32	137.44	966
SAKUSHIMA, JAPAN	B13	34.73	137.05	526
BERMUDA	B13	32.26	295.12	1011
KAGOSHIMA, JAPAN	B13	31.48	130.71	290
BELEM, BRAZIL	B13	1.39	311.56	1032
RIO DE JANEIRO, BRAZIL	B13	-22.87	316.87	1029
SAO JOSE DOS CAMPOS, BRAZIL	B13	-23.20	313.50	2062
SAO PAULO, BRAZIL	B13	-23.50	313.50	759
ATIBAIA, ITAPETINGA, BRAZIL	B13	-23.50	313.50	36
DURBAN, REP. OF S. AFRICA	B13	-29.97	30.95	2081
HERMANUS, REP. OF S. AFRICA	B13	-34.42	19.23	246
DUNEDIN, NEW ZEALAND	B13	-45.79	170.48	154
PORT AUX FRANCAIS, KERGUELEN ISLANDS	B13	-49.44	70.42	304
CAMPBELL ISLAND	B13	-52.50	169.20	80
MAWSON, ANTARCTICA	B13	-67.60	62.88	2101
SYOWA, ANTARCTICA	B13	-69.00	39.35	2290
SYOWA, ANTARCTICA	B13	-69.00	39.58	587
SANAE, ANTARCTICA	B13	-70.31	357.48	529
SANAE, ANTARCTICA	B13	-70.31	357.65	2082
HALLEY BAY, ANTARCTICA	B13	-75.52	333.05	229
GENERAL BELGRANO, ANTARCTICA	B13	-77.07	321.20	2055

B14 ATMOSPHERIC RADIO NOISE

HESTMONA, NORWAY	B14	66.53	12.85	1016
KUHLUNGBORN, GDR	B14	54.12	11.77	982
UPICE, CZECHOSLOVAKIA	B14	50.30	16.01	799 *
ONDREJOV, CZECHOSLOVAKIA	B14	49.92	14.98	804 *
VSETIN, CZECHOSLOVAKIA	B14	49.21	17.59	806
ZILINA, CZECHOSLOVAKIA	B14	49.12	18.45	2186
KINGSTON, USA	B14	41.31	288.27	311
VALLEY COTTAGE, USA	B14	41.07	286.45	657
KANDILLI, TURKEY	B14	41.06	29.06	2075
EBRO, SPAIN	B14	40.82	.49	625
USHUAIA, ARGENTINA	B14	-54.80	291.70	814

B15 PARTIAL REFLECTION DATA

RAMFJORDMOEN, NORWAY	B15	69.58	19.22	708
URBANA, USA	B15	40.17	271.84	652
AHMEDABAD, INDIA	B15	23.01	72.60	735

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
C01 H-ALPHA FLARES				
IZMIRAN, USSR	C 1			2380 *
KASAKH ASTRONOMICAL INST., USSR	C 1			2381 *
MOUNT SAYAN OBSERVATORY, USSR	C 1			2382 *
MEUDON, FRANCE	C 1	48.80	2.23	400
MEUDON, FRANCE	C 1	48.80	2.23	1006
HAUTE PROVENCE, FRANCE	C 1	43.93	5.72	242
BERN, SWITZERLAND	C 1	46.85	7.27	2267
UECHT, SWITZERLAND	C 1	46.85	7.27	1067
ROME, ITALY	C 1	41.90	12.50	743
KANZELHOEHE, AUSTRIA	C 1	46.68	13.91	962
ONDREJOV, CZECHOSLOVAKIA	C 1	49.92	14.98	802
UPICE, CZECHOSLOVAKIA	C 1	50.30	16.01	797
HURBANOVO, CZECHOSLOVAKIA	C 1	47.87	18.19	273
GEORGIANA OBSERVATORY, HUNGARY	C 1	47.52	19.04	2246
ATHENS, GREECE	C 1	37.85	23.72	1150
PENTELI, GREECE	C 1	38.05	23.86	907
BUCHAREST, ROMANIA	C 1	44.41	26.05	933
KANDILLI, TURKEY	C 1	41.06	29.06	960
ISTANBUL, TURKEY	C 1	41.01	31.93	2257
TEL AVIV, ISRAEL	C 1	32.10	34.50	597
UDAIPUR, INDIA	C 1	24.10	74.00	2283
KODIAKANAL, INDIA	C 1	10.20	77.50	764
YUNNAN, CHINA	C 1	25.03	102.78	2297
PEKING, CHINA	C 1	40.10	116.33	2156
PURPLE MOUNTAIN, CHINA	C 1	32.07	118.82	2181
MANILA, PHILIPPINES	C 1	14.64	121.08	998
MITAKA/TOKYO, JAPAN	C 1	33.67	139.55	1060
CULGOORA, AUSTRALIA	C 1	-30.32	149.57	129
PALEHUA, USA	C 1	21.38	201.93	1118
HALEAKALA, USA	C 1	20.71	203.74	226
BIG BEAR, USA	C 1	34.16	243.87	57
SACRAMENTO PEAK, USA	C 1	32.78	254.68	498
SACRAMENTO PEAK, USA	C 1	32.78	254.68	502
RAMEY, PUERTO RICO, USA	C 1	18.50	292.80	1122
BUENOS AIRES, ARGENTINA	C 1	-34.55	301.27	934 *
C02 SOLAR LOCAL MAGNETIC FIELDS				
KASAKH ASTRONOMICAL INST., USSR	C 2			2383 *
MOUNT SAYAN OBSERVATORY, USSR	C 2			2384 *
SAN FERNANDO OBSERVATORY, USA	C 2	34.31	241.51	2147
BIG BEAR, USA	C 2	34.16	243.49	59
KITT PEAK, USA	C 2	31.96	248.40	980
BOULDER, USA	C 2	39.98	254.72	930

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
C03 SOLAR RADIO EVENTS, FIXED FREQUENCY				
IZMIRAN, USSR	C 3			2385 *
NANCAY, FRANCE	C 3	44.40	2.20	433
DWINGELOO, THE NETHERLANDS	C 3	52.81	6.40	1086
BERN, SWITZERLAND	C 3	46.85	7.27	2268
UECHT, SWITZERLAND	C 3	46.85	7.27	646
BLEIEN, SWITZERLAND	C 3	47.44	8.77	158
TREMSDORF, GDR	C 3	52.28	13.13	1064
TRIESTE, ITALY	C 3	45.64	13.88	1065
ONDREJOV, CZECHOSLOVAKIA	C 3	49.92	14.98	801
UPICE, CZECHOSLOVAKIA	C 3	50.30	16.91	796
TORUN, POLAND	C 3	53.10	18.55	1090
ATHENS, GREECE	C 3	37.85	23.72	1151
PENTEI, GREECE	C 3	38.05	23.86	908
KISLOVODSK, USSR	C 3	44.70	42.50	978 *
AHMEDABAD, INDIA	C 3	23.07	72.60	732
YUNNAN, CHINA	C 3	25.03	102.78	2298
IRKUTSK, USSR	C 3	52.47	104.03	858 *
PEKING, CHINA	C 3	40.10	116.33	2122
MANILA, PHILIPPINES	C 3	14.64	121.08	1000
CHUBU, JAPAN	C 3	35.27	137.01	964
HIRAISO, JAPAN	C 3	36.37	140.62	950
CULGOORA, AUSTRALIA	C 3	-30.32	149.57	130
PALEHUA, USA	C 3	21.38	201.93	1119
PENTICTON, CANADA	C 3	49.32	240.38	2264
SAN FERNANDO OBSERVATORY, USA	C 3	34.31	241.51	2152
OTTAWA, CANADA	C 3	45.96	281.93	2263
PENN STATE U, USA	C 3	40.82	282.13	775 *
SAGAMORE HILL, USA	C 3	42.63	289.18	236
SAGAMORE HILL, USA	C 3	42.63	289.18	1160
LA PAZ, BOLIVIA	C 3	-16.30	291.91	330 *
BUENOS AIRES, ARGENTINA	C 3	-34.55	301.27	827 *
ITAPETINGA(INPE), ATIBAIA, BRAZIL	C 3	-23.18	313.44	1078
BORDEAUX, FRANCE	C 3	44.84	359.47	2164

C04 SOLAR RADIO SPECTROGRAMS OF EVENTS

IZMIRAN, USSR	C 4			2386 *
BERN, SWITZERLAND	C 4	46.85	7.27	2274
BLEIEN, SWITZERLAND	C 4	47.44	8.72	159
WEISSENAU, FRG	C 4	47.46	9.35	2275
ONDREJOV, CZECHOSLOVAKIA	C 4	49.92	14.98	805
NOBEYAMA, JAPAN	C 4	35.93	128.48	441
CULGOORA, AUSTRALIA	C 4	-30.32	149.57	936
SAGAMORE HILL, USA	C 4	42.63	289.18	522

C05 SOLAR X-RAY OBSERVATIONS

BOULDER, USA	C 5			923
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STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
C06 SUDDEN IONOSPHERIC DISTURBANCES				
EBRO, SPAIN	C 6	40.82	.49	1063
DARMSTADT, FRG	C 6	54.00	7.00	2011
SARDINIA, ITALY	C 6	39.18	9.16	1018
ARCETRI, ITALY	C 6	43.75	11.26	24
KUHLUNGSBORN, GDR	C 6	54.12	11.77	983
HESTMONA, NORWAY	C 6	66.53	12.85	1015
ASCENSION ISLAND	C 6	-7.95	14.33	2411
BELSK, POLAND	C 6	51.84	20.79	917 *
NEA MAKRI, GREECE	C 6	38.10	23.18	2114
PRETORIA, REP. OF S. AFRICA	C 6	-25.73	28.27	2402
ALEXANDRIA, EGYPT	C 6	31.20	29.87	2401
KHARTOUM, SUDAN	C 6	15.61	32.54	2406
MOMBASA, KENYA	C 6	4.06	39.67	2414
LA REUNION	C 6	-20.91	55.51	2088
DIEGO GARCIA	C 6	-7.28	72.36	2040
COCOS, AUSTRALIA	C 6	-12.19	96.83	2409
YUNNAN, CHINA	C 6	25.03	102.78	2299
SINGAPORE, MALAYSIA	C 6	1.46	103.83	2416
PERTH, AUSTRALIA	C 6	-31.94	115.98	2412
CUBI POINT, PHILIPPINES	C 6	18.78	120.30	2417
TSUSHIMA, JAPAN	C 6	34.32	129.21	2174
DARWIN, AUSTRALIA	C 6	-12.38	130.97	2037
NISHINOMIYA, JAPAN	C 6	34.72	135.38	438
CHUBU, JAPAN	C 6	35.27	137.01	965
OSHIMA, JAPAN	C 6	34.81	139.37	2121
HIRAISO, JAPAN	C 6	36.37	140.62	951
INUBO, JAPAN	C 6	35.70	140.86	277
HOKKAIDO, JAPAN	C 6	45.52	141.84	2069
CARRA, AUSTRALIA	C 6	-38.47	146.93	2403
BRISBANE, AUSTRALIA	C 6	-27.03	153.17	2410
MARCUS ISLAND	C 6	24.29	153.98	2098
ATTU, USA	C 6	52.83	173.18	2405
NEW ZEALAND	C 6	-41.23	174.92	2415
KURE, JAPAN	C 6	28.39	181.71	2083
SAMOA	C 6	-14.33	189.28	2144
ANCHORAGE, USA	C 6	61.17	210.03	2005
INUVIK, CANADA	C 6	68.31	226.50	2168
SEATTLE, USA	C 6	47.60	237.67	2148
NAVAL OCEAN SYSTEMS CENTER, USA	C 6	32.70	242.75	2112
WASHINGTON, USA	C 6	38.86	258.01	2183
LA MOURE, USA	C 6	46.56	261.36	1024
AUSTIN, USA	C 6	30.90	262.34	2404
RESOLUTE BAY, CANADA	C 6	74.71	265.03	2136
ST. CLOUD, USA	C 6	45.57	265.81	574
PANAMA	C 6	9.41	280.09	2124
LATROBE, USA	C 6	40.28	280.72	334
NORFOLK, USA	C 6	36.82	285.71	1036
VALLEY COTTAGE, USA	C 6	41.07	286.45	1068
CAMBRIDGE, USA	C 6	42.39	288.86	2024

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
C06 SUDDEN IONOSPHERIC DISTURBANCES (continued)				
FROBISHER BAY, CANADA	C 6	63.76	291.46	2052
BORIN, PUERTO RICO, USA	C 6	18.50	292.87	2413
SABANA SECA, PUERTO RICO, USA	C 6	18.45	293.78	2138
GOLEO NUEVO, ARGENTINA	C 6	-43.22	294.73	2056
BERMUDA	C 6	32.26	295.12	1012
BUENOS AIRES, ARGENTINA	C 6	-34.62	301.64	2020
ST. ANTHONY, CANADA	C 6	51.36	304.37	2163
BELEM, BRAZIL	C 6	1.39	311.56	1033
ITAPETINGA(INPE), ATIBAIA, BRAZIL	C 6	-23.18	313.44	541
RIO DE JANEIRO, BRAZIL	C 6	-22.87	316.87	1030
RECIFE, BRAZIL	C 6	-8.11	325.10	2134
HALLEY BAY, ANTARCTICA	C 6	-75.52	333.37	942
LAJES, AZORES	C 6	38.77	333.84	2085
KEFLAVIK, ICELAND	C 6	63.96	337.28	2078
PERU	C 6	-16.47	342.81	2128
MONROVIA, LIBERIA	C 6	6.43	349.19	2105
LEWIS, UNITED KINGDOM	C 6	58.51	353.74	2408
ST. HELENA ISLAND	C 6	-15.94	354.33	2407
PRESTON, UNITED KINGDOM	C 6	53.81	357.41	477
LEICESTER, UNITED KINGDOM	C 6	52.62	358.88	2177
FARNBOROUGH, UNITED KINGDOM	C 6	51.28	359.25	2048
C07 SOLAR PROTONS AND ELECTRONS - DIRECT MEASUREMENTS				
BOULDER, USA	C 7			924
MURMANSK, USSR	C 7	68.95	33.05	422
RAMEY, PUERTO RICO, USA	C 7	18.52	292.90	1125
C08 SOLAR PROTONS RIOMETER				
TROMSO, NORWAY	C 8	69.70	19.20	2170
SIPLE, ANTARCTICA	C 8	-76.00	276.00	2150
THULE AB, GREENLAND	C 8	76.50	291.30	2216
HALLEY BAY, ANTARCTICA	C 8	-75.52	333.37	943
C11 SOLAR PROTONS - OTHER TYPES OF MEASUREMENTS				
HESTMONA, NORWAY	C11	66.53	12.85	2066
ASCENSION ISLAND	C11	-7.95	14.33	2428
NEA MAKRI, GREECE	C11	38.10	23.98	2115
PRETORIA, REP. OF S. AFRICA	C11	-25.73	28.27	2419
ALEXANDRIA, EGYPT	C11	31.20	29.87	2418
KHARTOUM, SUDAN	C11	15.61	32.54	2423
MOMBASA, KENYA	C11	4.06	39.67	2431
LA REUNION	C11	-20.91	55.51	2089
DIEGO GARCIA	C11	-7.28	72.36	2041
COCOS, AUSTRALIA	C11	-12.19	96.83	2426
SINGAPORE, MALAYSIA	C11	1.46	103.83	2433
PERTH, AUSTRALIA	C11	-31.94	115.98	2429

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
C11 SOLAR PROTONS - OTHER TYPES OF MEASUREMENTS (continued)				
CUBI POINT, PHILIPPINES	C11	18.78	120.30	2434
TSUSHIMA, JAPAN	C11	34.32	129.21	2175
DARWIN, AUSTRALIA	C11	-12.38	130.97	2038
HOKKAIDO, JAPAN	C11	45.52	141.84	2070
CARRA, AUSTRALIA	C11	-38.47	146.93	2420
BRISBANE, AUSTRALIA	C11	-27.03	153.17	2427
MARCUS ISLAND	C11	24.29	153.98	2099
ATTU, USA	C11	52.83	173.18	2422
NEW ZEALAND	C11	-41.23	174.92	2432
KURE, JAPAN	C11	28.39	181.71	2084
SAMOA	C11	-14.33	189.28	2145
INUVIK, CANADA	C11	68.31	226.50	2072
SEATTLE, USA	C11	47.60	237.67	2149
NAVAL OCEAN SYSTEMS CENTER, USA	C11	32.70	242.75	2113
WASHINGTON, USA	C11	38.86	258.01	2184
LA MOURE, USA	C11	46.56	261.36	2155
AUSTIN, USA	C11	30.90	262.34	2421
RESOLUTE BAY, CANADA	C11	74.71	265.03	2137
PANAMA	C11	9.41	280.09	2125
CAMBRIDGE, USA	C11	42.39	288.86	2025
FROBISHER BAY, CANADA	C11	63.75	291.46	2053
BORIN, PUERTO RICO, USA	C11	18.50	292.87	2430
SABANA SECA, PUERTO RICO, USA	C11	18.45	293.78	2139
GOLEO NUEVO, ARGENTINA	C11	-43.22	294.73	2057
BERMUDA	C11	32.26	295.12	2014
BUENOS AIRES, ARGENTINA	C11	-34.62	301.64	2022
ST. ANTHONY, CANADA	C11	51.34	304.27	2006
BELEM, BRAZIL	C11	1.39	311.56	2012
RECIFE, BRAZIL	C11	-8.11	325.10	2135
LAJES, AZORES	C11	38.77	333.84	2086
KEFLAVIK, ICELAND	C11	63.96	337.28	2079
PERU	C11	-16.47	342.81	2129
MONROVIA, LIBERIA	C11	6.43	349.19	2106
ST. HELENA ISLAND	C11	-15.94	353.33	2424
LEWIS, UNITED KINGDOM	C11	58.51	353.74	2425
FARNBOROUGH, UNITED KINGDOM	C11	51.28	359.25	2049

C13 COSMIC RAY GROUND LEVEL INCREASES

SANAE, ANTARCTICA	C13	-70.31	357.64	1047
SANAE, ANTARCTICA	C13	-70.31	357.64	1153

C14 OTHER OPTICAL FLARE OBSERVATIONS

SACRAMENTO PEAK, USA	C14	32.78	254.68	2050
SACRAMENTO PEAK, USA	C14	32.78	254.68	2076

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
D01 GEOMAGNETIC STANDARD AND RAPID RUN MEASUREMENTS				
ALERT, CANADA	D 1	82.50	297.50	7
HEISS ISLAND, USSR	D 1	80.62	58.05	2340
NYAALESUND, NORWAY	D 1	78.92	11.93	445
NYAALESUND, NORWAY	D 1	78.92	11.93	2221
THULE, GREENLAND	D 1	77.48	290.83	2281
THULE, GREENLAND	D 1	76.55	291.17	608
MOULD BAY, CANADA	D 1	76.20	240.60	412
RESOLUTE BAY, CANADA	D 1	74.60	265.10	487
BEAR ISLAND, NORWAY	D 1	74.51	19.02	50
TIXIE BAY, USSR	D 1	71.58	129.00	871
BARROW, USA	D 1	71.32	203.38	49
JAN MAYEN, NORWAY	D 1	70.93	8.74	2120
TROMSO, NORWAY	D 1	69.66	18.94	638
GODHAVN, GREENLAND	D 1	69.25	306.47	2279
CAMBRIDGE BAY, CANADA	D 1	69.10	255.00	78
ABISKO, SWEDEN	D 1	68.36	18.82	2200
MURMANSK, USSR	D 1	68.25	33.08	2346
LOVOZERO, USSR	D 1	67.97	35.02	2343
KIRUNA, SWEDEN	D 1	67.83	20.42	315
APATITY, USSR	D 1	67.50	33.33	786
SODANKYLA, FINLAND	D 1	67.37	26.63	2266
ZHIGANSK, USSR	D 1	66.70	123.30	2231
NYDA, USSR	D 1	66.60	73.00	2387 *
FORT YUKON, USA	D 1	66.56	214.78	177
WELEN, USSR	D 1	66.17	169.83	2351
POKER FLAT, USA	D 1	65.13	212.52	468
KEM, USSR	D 1	65.00	34.40	785 *
COLLEGE, USA	D 1	64.87	212.17	118
COLLEGE, USA	D 1	64.86	212.15	119
LYCKSELE, SWEDEN	D 1	64.62	18.67	370
ARKHANGELSK, USSR	D 1	64.60	40.50	2339
BAKER LAKE, CANADA	D 1	64.33	263.97	46
LEIRVOGUR, ICELAND	D 1	64.18	338.30	341
LEIRVOGUR, ICELAND	D 1	64.18	338.30	342
YELLOWKNIFE, CANADA	D 1	62.48	245.53	685
DOMBAS, NORWAY	D 1	62.07	9.12	151
YAKUTSK, USSR	D 1	62.02	129.72	867
PODKAMENNAYA TUNGUSKA, USSR	D 1	61.60	90.00	2350
NARSSARSSUAQ, GREENLAND	D 1	61.18	314.57	2280
NURMIJARVI, FINLAND	D 1	60.51	24.65	2265
HIGUT, USSR	D 1	60.50	74.00	2388 *
ANJOYA, NORWAY	D 1	60.28	16.02	19
LERWICK, UNITED KINGDOM	D 1	60.13	358.82	343
MAGADAN, USSR	D 1	60.12	151.02	868
LENINGRAD, USSR	D 1	59.95	30.70	857
UPPSALA, SWEDEN	D 1	59.80	17.60	1091
LOVO, SWEDEN	D 1	59.35	17.83	2199
FORT CHURCHILL, CANADA	D 1	58.80	265.90	115
BOROK, USSR	D 1	58.02	38.97	856

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
D01 GEOMAGNETIC STANDARD AND RAPID RUN MEASUREMENTS (continued)				
SITKA, USA	D 1	57.06	224.67	557
SVERDLOVSK, USSR	D 1	56.43	58.57	866 *
RUDE SKOV (RSV), DENMARK	D 1	55.84	12.46	2222
KAZAN, USSR	D 1	55.83	48.85	2341
BRORFELDE (BFE), DENMARK	D 1	55.63	11.67	783
MOSCOW, USSR	D 1	55.48	37.32	855
ESKDALEMUIR, UNITED KINGDOM	D 1	55.32	356.80	165
GREAT WHALE RIVER, CANADA	D 1	55.30	282.25	217
NOVOSIBIRSK, USSR	D 1	55.03	82.90	2348
MEANOOK, CANADA	D 1	54.62	246.67	1104
MINSK, USSR	D 1	54.10	26.52	875
WARNKENHAGEN, GDR	D 1	54.00	11.07	1154
WINGST, FRG	D 1	53.74	9.07	668
WINGST, FRG	D 1	53.74	9.07	669
WINGST, FRG	D 1	53.74	9.07	2108
PETROPAVLOVSK-KAMCHATSKII, USSR	D 1	53.10	158.63	2349
WITTEVEEN, THE NETHERLANDS	D 1	52.81	6.67	673
WITTEVEEN, THE NETHERLANDS	D 1	52.81	6.67	674
IRKUTSK, USSR	D 1	52.27	104.27	865
NIEMEGK, GDR	D 1	52.07	12.68	1009
VALENTIA, UNITED KINGDOM	D 1	51.93	349.75	654
RAF UPPER HEYFORD, UNITED KINGDOM	D 1	51.56	358.85	2179
GOETTINGEN, FRG	D 1	51.55	9.96	2224
LUCKY LAKE, CANADA	D 1	51.15	252.74	363
HARTLAND, UNITED KINGDOM	D 1	50.99	355.52	239
KIEV, USSR	D 1	50.72	30.30	849
DOURBES, BELGIUM	D 1	50.10	4.60	824
LVOV, USSR	D 1	49.90	23.75	830
KARAGANDA, USSR	D 1	49.82	73.08	836
GLENLEA, CANADA	D 1	49.60	262.90	2288
BUDKOV, CZECHOSLOVAKIA	D 1	49.07	14.02	819 *
VICTORIA, CANADA	D 1	48.52	236.58	660
KHABAROVSK, USSR	D 1	48.48	135.07	2342
WIEN-KOBENZL, AUSTRIA	D 1	48.26	16.32	2243
FUERSTENFELDBRUCK, FRG	D 1	48.17	11.28	182
HURBANOVO, CZECHOSLOVAKIA	D 1	47.87	18.18	807 *
NAGYCENK, HUNGARY	D 1	47.63	16.72	425
ST. JOHNS, CANADA	D 1	47.60	307.32	576
NEUCHATEL, SWITZERLAND	D 1	47.00	6.57	2220
LORING AFB, USA	D 1	46.95	292.12	358
YUZHNO-SAKHALINSK, USSR	D 1	46.95	142.72	870
TIHANY, HUNGARY	D 1	46.90	17.89	1059
ODESSA, USSR	D 1	46.78	30.88	829
CASTEL TESINO, ITALY	D 1	46.05	11.65	2260
NOVOKAZALINSK, USSR	D 1	45.77	62.12	834
ST. CLOUD, USA	D 1	45.57	265.81	2166
OTTAWA, CANADA	D 1	45.40	284.45	450
MEMAMBETSU, JAPAN	D 1	43.91	144.19	395

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
DOI GEOMAGNETIC STANDARD AND RAPID RUN MEASUREMENTS (continued)				
VLADIVOSTOK, USSR	D 1	43.68	132.17	869
ALMA-ATA, USSR	D 1	43.25	76.92	832
MCMATH-HULBERT, USA	D 1	42.66	276.74	1101
L'AQUILA, ITALY	D 1	42.38	13.31	332
PANAGJURISTE, BULGARIA	D 1	42.31	24.11	2110
TBILISI, USSR	D 1	42.08	44.70	2435
ISTANBUL-KANDILLI, TURKEY	D 1	41.04	29.04	294
EBRO, SPAIN	D 1	40.82	.49	626
COIMBRA, PORTUGAL	D 1	40.22	351.75	2201
BOULDER, USA	D 1	40.13	254.77	63
SAN PABLO-TOLEDO, SPAIN	D 1	39.55	355.65	2276
MIZUSAWA, JAPAN	D 1	39.11	141.21	2202
FREDERICKSBURG, USA	D 1	38.20	282.63	180
PENDELI, GREECE	D 1	38.05	23.86	35
GIBILMANNA, ITALY	D 1	38.00	14.02	2261
ASHKHABAD, USSR	D 1	37.95	58.10	848
SEOUL, REPUBLIC OF KOREA	D 1	37.23	126.57	550 *
FRESNO OBSERVATORY, USA	D 1	37.09	240.28	2003
ALMERIA, SPAIN	D 1	36.85	357.54	16
OBSERVATORIO DE MARINA, SPAIN	D 1	36.47	353.80	532
KAKIOKA, JAPAN	D 1	36.23	140.19	291
TULSA, (TUL), USA	D 1	35.91	264.22	2211
TEHRAN, IRAN	D 1	35.70	51.40	756
MIYAZU, JAPAN	D 1	35.32	135.11	406
KANOZAN, JAPAN	D 1	35.25	139.96	2203
GULMARG, INDIA	D 1	34.08	74.24	2061
HATIZYO, JAPAN	D 1	33.07	139.83	2219
TUCSON, USA	D 1	32.25	249.17	641
AMATSIA, ISRAEL	D 1	31.55	34.91	2218
KANOYA, JAPAN	D 1	31.42	130.88	295
SABHAWALA, INDIA	D 1	30.37	77.80	493 *
QUETTA, PAKISTAN	D 1	30.18	66.95	2242
DEL RIO OBSERVATORY, USA	D 1	29.49	259.08	2002
CANARIAS, CANARY ISLANDS	D 1	28.48	343.74	599 *
CHICHIJIMA, JAPAN	D 1	27.09	142.18	108
JAIPUR, INDIA	D 1	26.92	75.79	285
SHILLONG, INDIA	D 1	25.57	91.88	552
LUNPING, TAIWAN, CHINA	D 1	25.00	121.17	366
UJJAIN, INDIA	D 1	23.02	75.78	648
HONOLULU, USA	D 1	21.32	201.99	270
ALIBAG, INDIA	D 1	18.64	72.87	10
SAN JUAN, PUERTO RICO, USA	D 1	18.12	293.85	538
HYDERABAD, INDIA	D 1	17.42	78.55	274
PAPEETE (PAMATAI), FRENCH POLYNESIA	D 1	17.34	210.25	456
BAGUIO, PHILIPPINES	D 1	16.41	120.58	45
MANILA, PHILIPPINES	D 1	14.64	121.08	390
MBOUR, SENEGAL	D 1	14.39	343.04	1103
MUNTINLUPA, PHILIPPINES	D 1	14.38	121.02	421
GUAM	D 1	13.59	144.87	219

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
DOI GEOMAGNETIC STANDARD AND RAPID RUN MEASUREMENTS (continued)				
ANNAMALAINAGAR, INDIA	D 1	11.37	79.68	20
TILARAN, COSTA RICA	D 1	10.44	84.32	2278
KODIAKANAL, INDIA	D 1	10.23	76.95	323
ADDIS ABABA, ETHIOPIA	D 1	9.29	38.76	2285
ETAIYAPURAM, INDIA	D 1	9.20	78.00	2046
TRIVANDRUM, INDIA	D 1	8.48	76.95	637
DAVAO, PHILIPPINES	D 1	7.08	125.58	134
BANGUI, CENTRAL AFRICAN REPUBLIC	D 1	4.44	18.56	48
TUNTUNGAN, INDONESIA	D 1	3.51	98.56	2197
BUNIA - RUAMPARA, ZAIRE	D 1	1.53	30.02	77
NAIROBI, KENYA	D 1	-1.33	36.81	428
EUSEBIO, BRAZIL	D 1	-3.88	321.27	171
BINZA, ZAIRE	D 1	-4.37	15.25	61 *
TANGERANG, INDONESIA	D 1	-6.17	106.65	2223
LUANDA, ANGOLA	D 1	-8.92	13.17	2157
PORT MORESBY, NEW GUINEA	D 1	-9.42	147.15	472
KARAVIA, ZAIRE	D 1	-11.65	27.47	163 *
APIA, WESTERN SAMOA	D 1	-13.80	188.22	23
NAMPULA, MOCAMBIQUE	D 1	-15.09	39.25	2245
TSUMEB, NAMIBIA	D 1	-19.20	17.58	639
CHARTERS TOWER, AUSTRALIA	D 1	-20.10	146.30	2169
CACHOEIRA PAULISTA, BRAZIL	D 1	-22.88	314.61	535
HARTEBEESTHOEK, REP. OF S. AFRICA	D 1	-25.88	27.71	238
MAPUTO, MOZAMBIQUE	D 1	-25.92	32.58	2244
TUCUMAN, ARGENTINA	D 1	-26.80	294.80	2071
GNANGARA, AUSTRALIA	D 1	-31.78	115.95	202
HERMANUS, REP. OF S. AFRICA	D 1	-34.42	19.22	248
HERMANUS, REP. OF S. AFRICA	D 1	-34.42	19.22	249
LAS ACACIAS, ARGENTINA	D 1	-35.00	302.32	753 *
CANBERRA, AUSTRALIA	D 1	-35.31	149.00	85
CANBERRA, AUSTRALIA	D 1	-35.32	149.36	86
MARTIN DE VIVIES, AMSTERDAM ISLAND	D 1	-37.50	77.34	2248
TOOLANGI, AUSTRALIA	D 1	-37.53	145.47	615
TRELEW, ARGENTINA	D 1	-43.25	294.68	754 *
EYREWELL, NEW ZEALAND	D 1	-43.42	173.35	2047
LAUDER, NEW ZEALAND	D 1	-45.04	169.69	2091
PORT ALFRED, CROZET ISLANDS	D 1	-46.43	51.87	127
PORT AUX FRANCAIS, KERGUELEN ISLANDS	D 1	-49.35	70.21	305
CAMPBELL ISLAND	D 1	-52.50	169.20	2286
MACQUARIE ISLAND	D 1	-54.50	158.95	376
ARGENTINE ISLANDS	D 1	-65.25	295.73	28
MIRNY, ANTARCTICA	D 1	-66.52	93.02	2344
CASEY, ANTARCTICA	D 1	-66.54	110.36	91
TERRE ADELIE, ANTARCTICA	D 1	-66.67	140.00	603
MAWSON, ANTARCTICA	D 1	-67.60	62.86	691
MOLODEZHNYA, ANTARCTICA	D 1	-67.67	45.85	2345
DAVIS, ANTARCTICA	D 1	-68.58	77.97	2440
SYOWA, ANTARCTICA	D 1	-69.00	39.58	2210
SANAE, ANTARCTICA	D 1	-70.32	357.66	530

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
D01 GEOMAGNETIC STANDARD AND RAPID RUN MEASUREMENTS (continued)				
NOVOLAZAREVSKAYA, ANTARCTICA	D 1	-70.77	11.82	2347
HALLEY BAY, ANTARCTICA	D 1	-75.52	333.05	232
SIPLE, ANTARCTICA	D 1	-76.00	276.00	554
SCOTT BASE, ANTARCTICA	D 1	-77.81	166.76	544
GENERAL BELGRANO, ANTARCTICA	D 1	-77.97	321.20	911
SOUTH POLE, ANTARCTICA	D 1	-90.00	0.00	2304
D02 MAGNETOSPHERIC MICROPULSATION PHENOMENA				
HEISS ISLAND, USSR	D 2	80.62	58.05	839 *
THULE, GREENLAND	D 2	76.60	291.20	609 *
CAPE PARRY, CANADA	D 2	70.17	235.28	2154
OULU, FINLAND	D 2	65.08	25.87	453
COLLEGE, USA	D 2	64.86	212.15	121
ANDOYA, NORWAY	D 2	60.17	16.01	2017
LERWICK, UNITED KINGDOM	D 2	60.13	358.82	344
LERWICK, UNITED KINGDOM	D 2	60.13	358.82	345
BOROK, USSR	D 2	58.03	38.97	773 *
BOROK, USSR	D 2	58.03	38.33	837 *
ESKDALEMUIR, UNITED KINGDOM	D 2	55.32	356.80	166
YORK, UNITED KINGDOM	D 2	53.97	358.92	686
NIEMEGK, GDR	D 2	52.07	12.68	1010
HARTLAND, UNITED KINGDOM	D 2	51.00	355.52	241
HARTLAND, UNITED KINGDOM	D 2	50.99	355.52	240
BUDKOV, CZECHOSLOVAKIA	D 2	49.07	14.02	820
FUERSTENFELDBRUCK, FRG	D 2	48.17	11.28	183
FUERSTENFELDBRUCK, FRG	D 2	48.17	11.28	2054
NAGYCENK, HUNGARY	D 2	47.63	16.72	426
MEMAMBETSU, JAPAN	D 2	43.91	144.19	396
KINGSTON, USA	D 2	41.31	288.27	970
SAN PABLO-TOLEDO, SPAIN	D 2	39.55	355.65	2277
KAKIOKA, JAPAN	D 2	36.23	140.19	292
TULSA, (TUL), USA	D 2	35.91	264.21	2212
KANOYA, JAPAN	D 2	31.42	130.88	296
CANARIAS, CANARY ISLANDS	D 2	28.48	343.74	1054
CHICHIJIMA, JAPAN	D 2	27.09	142.18	111
CHOUTUPPAL (HYDERABAD), INDIA	D 2	17.30	78.93	2030
PAMATAI, FRENCH POLYNESIA	D 2	-17.34	210.65	2217
NGOYA, REP. OF S. AFRICA	D 2	-28.83	31.88	760
WOOMERA, AUSTRALIA	D 2	-31.10	136.78	676
BROKEN HILL, AUSTRALIA	D 2	-32.00	141.46	2000
MUNDARING, AUSTRALIA	D 2	-32.00	116.20	420
NEWCASTLE, AUSTRALIA	D 2	-32.75	151.50	434
HERMANUS, REP. OF S. AFRICA	D 2	-34.42	19.22	250
HERMANUS, REP. OF S. AFRICA	D 2	-34.42	19.23	1157
LAUNCESTON, AUSTRALIA	D 2	-41.67	147.16	335
PORT AUX FRANCAIS, KERGUELEN ISLANDS	D 2	-49.44	70.42	306 *
MACQUARIE ISLAND	D 2	-54.48	158.97	2094
MACQUARIE ISLAND	D 2	-54.50	158.95	377

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
D02 MAGNETOSPHERIC MICROPULSATION PHENOMENA (continued)				
MACQUARIE ISLAND	D 2	-54.50	158.95	379
CASEY, ANTARCTICA	D 2	-66.54	110.36	92
MIRNY, ANTARCTICA	D 2	-66.58	93.08	838
MAWSON, ANTARCTICA	D 2	-67.60	62.90	2100
DAVIS, ANTARCTICA	D 2	-68.58	77.97	139
SYOWA, ANTARCTICA	D 2	-69.00	39.58	2208
SANAE, ANTARCTICA	D 2	-70.31	357.60	2109
SANAE, ANTARCTICA	D 2	-70.31	357.64	1045
NOVOLAZAREVSKAYA, ANTARCTICA	D 2	-70.77	11.82	840 *
HALLEY BAY, ANTARCTICA	D 2	-75.52	333.05	233
SIPLE, ANTARCTICA	D 2	-76.00	276.00	555
SIPLE, ANTARCTICA	D 2	-76.00	276.00	1048
SOUTH POLE, ANTARCTICA	D 2	-90.00		2305
D03 SPACE MAGNETISM				
BOULDER, USA	D 3			926

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
E01 ALL-SKY CAMERA				
HEISS ISLAND, USSR	E 1	80.70	56.20	878 *
LONGYEARBYEN (LYR), NORWAY	E 1	79.00	15.00	2043
NYAALESUND, NORWAY	E 1	78.92	11.93	2126
CHELYUSKIN, USSR	E 1	77.80	104.30	877 *
DIXON, USSR	E 1	73.50	80.40	876 *
TIXIE BAY, USSR	E 1	71.60	128.80	2226
TROMSO, NORWAY	E 1	69.66	18.94	2132
KIRUNA, SWEDEN	E 1	67.84	20.42	316
FORT YUKON, USA	E 1	66.56	214.78	178
POKER FLAT, USA	E 1	65.13	212.52	2130
POKER FLAT, USA	E 1	65.13	212.52	470
CHATANIKA, USA	E 1	65.10	212.57	107
COLLEGE, USA	E 1	64.86	212.15	124
LYCKSELE, SWEDEN	E 1	64.62	18.67	371
YAKUTSK, USSR	E 1	62.02	129.72	2235
ANDOYA, NORWAY	E 1	60.17	16.01	2032
PORT AUX FRANCAIS, KERGUELEN ISLANDS	E 1	-49.35	70.22	307
CAMPBELL ISLAND	E 1	-52.25	169.15	82
MACQUARIE ISLAND	E 1	-54.50	158.95	380
MIRNY, ANTARCTICA	E 1	-66.60	93.00	879 *
TERRE ADELIE, ANTARCTICA	E 1	-66.67	140.00	604
MAWSON, ANTARCTICA	E 1	-67.61	62.88	693
DAVIS, ANTARCTICA	E 1	-68.58	77.97	140
SYOWA, ANTARCTICA	E 1	-69.00	39.58	2209
SANAE, ANTARCTICA	E 1	-70.30	357.66	781
NOVOLAZAREVSKAYA, ANTARCTICA	E 1	-70.80	11.80	880 *
VOSTOK, ANTARCTICA	E 1	-78.40	106.90	881 *
SOUTH POLE, ANTARCTICA	E 1	-90.00		570
E02 VISUAL OBSERVATIONS				
PORT AUX FRANCAIS, KERGUELEN ISLANDS	E 2	-49.35	70.22	967
DUMONT D'URVILLE, ANTARCTICA	E 2	-66.67	140.00	1055
E03 OTHER OPTICAL TECHNIQUES				
LONGYEARBYEN, NORWAY	E 3	79.00	15.00	2034
LONGYEARBYEN, NORWAY	E 3	79.00	15.00	2033
TIXIE BAY, USSR	E 3	71.60	128.80	2228
TIXIE BAY, USSR	E 3	71.60	128.80	2229
KIRUNA, SWEDEN	E 3	67.84	20.42	317
POKER FLAT, USA	E 3	65.11	212.52	2044
POKER FLAT, USA	E 3	64.86	212.15	2045
LYCKSELE, SWEDEN	E 3	64.62	18.67	373
YAKUTSK, USSR	E 3	62.00	129.70	2233
ANDOYA, NORWAY	E 3	60.17	16.01	2027
ANDOYA, NORWAY	E 3	60.17	16.01	2021
LENINGRAD, USSR	E 3	59.95	30.70	787 *
PARATUNKA, USSR	E 3	52.58	158.14	788 *
BATTELLE, USA	E 3	46.40	240.40	489

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
E03 OTHER OPTICAL TECHNIQUES				
PORT AUX FRANCAIS, KERGUELEN ISLANDS	E 3	-49.35	70.22	968
DUMONT D'URVILLE, ANTARCTICA	E 3	-66.67	140.00	1056
SANAE, ANTARCTICA	E 3	-70.31	357.65	1046
SANAE, ANTARCTICA	E 3	-70.32	357.66	2205
E04 RADIO AND RADAR OBSERVATIONS				
MALVIK, NORWAY	E 4	63.40	10.70	2096
HANKASALMI, FINLAND	E 4	62.50	26.90	2065
UPPSALA, SWEDEN	E 4	59.80	17.60	2310
WICK, UNITED KINGDOM	E 4	58.50	356.90	2311
KUHLUNGSBORN, GDR	E 4	54.12	11.77	984
SLOPE POINT, NEW ZEALAND	E 4	-44.67	169.03	2151
SYOWA, ANTARCTICA	E 4	-69.00	39.35	588
MCMURDO, ANTARCTICA	E 4	-77.75	167.50	548

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
FO1 NEUTRON MONITORS AND SUPERMONITORS				
OKTYOMTSKY, USSR	F 1			2391 *
ALERT, CANADA	F 1	82.50	297.67	8
THULE, GREENLAND	F 1	76.50	291.30	2358
TIXIE BAY, USSR	F 1	71.60	129.00	843
NORILSK, USSR	F 1	69.00	88.00	874 *
INUVIK, CANADA	F 1	68.35	226.28	281
APATITY, USSR	F 1	67.50	33.33	21
OULU, FINLAND	F 1	65.05	25.47	2182
YAKUTSK, USSR	F 1	62.02	129.72	678
TURKU, FINLAND	F 1	60.40	22.60	2117
MAGADAN, USSR	F 1	60.10	151.00	2389 *
SVERDLOVSK, USSR	F 1	58.34	56.20	2392 *
SVERDLOVSK, USSR	F 1	56.73	61.07	2393 *
IZMIRAN, USSR	F 1	55.47	37.32	853
MOSCOW, USSR	F 1	55.19	37.11	2352
NOVOSIBIRSK, USSR	F 1	54.80	83.00	2390 *
KIEL, FRG	F 1	54.30	10.10	309
LEEDS, UNITED KINGDOM	F 1	53.82	358.40	336
GOOSE BAY, CANADA	F 1	53.27	299.60	210
IRKUTSK, USSR	F 1	52.28	104.02	872
CALGARY, CANADA	F 1	51.08	245.90	790 *
KIEV, USSR	F 1	50.72	30.30	851
DOURBES, BELGIUM	F 1	50.10	4.60	153
LOMNICKY STIT, CZECHOSLOVAKIA	F 1	49.20	20.22	355
PREDIGSTUHL, FRG	F 1	47.70	12.88	475
INNSBRUCK, AUSTRIA	F 1	47.32	11.38	2207
JUNGFRAUJOCH, SWITZERLAND	F 1	46.55	7.98	289
DEEP RIVER, CANADA	F 1	46.10	282.50	145
MT. WASHINGTON, USA	F 1	44.30	288.70	418
ALMA-ATA, USSR	F 1	43.25	76.92	11 *
DURHAM, USA	F 1	43.10	289.17	157
BAGNERES, FRANCE	F 1	43.08	.15	42
ROME, ITALY	F 1	41.90	12.52	492
TBILISI, USSR	F 1	41.72	44.80	2395 *
TASHKENT, USSR	F 1	41.33	69.61	594 *
NEWARK, USA	F 1	39.70	284.30	2355
MORIOKA, JAPAN	F 1	39.70	141.13	407
CLIMAX, USA	F 1	39.37	253.82	117
PEKING, CHINA	F 1	39.08	116.27	2119
ATHENS, GREECE	F 1	37.96	23.70	784
FUKUSHIMA, JAPAN	F 1	37.68	140.45	184
MT. NORIKURA, JAPAN	F 1	36.11	137.55	415
TOKYO, JAPAN	F 1	35.72	139.72	612
GULMARG, INDIA	F 1	34.07	74.42	221
REWA, INDIA	F 1	24.32	81.17	488
MEXICO CITY, MEXICO	F 1	19.33	260.82	402
HUANCAYO, PERU	F 1	-12.03	284.67	271
DARWIN, AUSTRALIA	F 1	-12.42	130.87	2039
LA PAZ, BOLIVIA	F 1	-15.30	291.91	2146
CHACALTAY, BOLIVIA	F 1	-16.35	291.87	102 *

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
F01 NEUTRON MONITORS AND SUPERMONITORS (continued)				
TSUMEB, NAMIBIA	F 1	-19.20	17.58	2173
POTCHEFSTROOM, REP. OF S. AFRICA	F 1	-26.66	27.08	473
BRISBANE, AUSTRALIA	F 1	-27.43	153.08	712
HERMANUS, REP. OF S. AFRICA	F 1	-34.42	19.22	256
HOBART, AUSTRALIA	F 1	-42.88	147.33	713
HOBART, AUSTRALIA	F 1	-42.90	147.33	2444
MT. WELLINGTON, AUSTRALIA	F 1	-42.92	147.20	2445
PORT AUX FRANCAIS, KERGUELEN ISLANDS	F 1	-49.35	70.22	308
TERRE ADELIE, ANTARCTICA	F 1	-66.67	140.02	605
MAWSON, ANTARCTICA	F 1	-67.60	62.88	714
SANAE, ANTARCTICA	F 1	-70.31	357.64	531
MCMURDO, ANTARCTICA	F 1	-77.90	166.60	2353
SOUTH POLE, ANTARCTICA	F 1	-90.00		2357
F02 IONIZATION CHAMBERS				
TIXIE BAY, USSR	F 2	71.60	128.80	2227
YAKUTSK, USSR	F 2	62.02	129.72	679
MT. NORIKURA, JAPAN	F 2	36.11	137.55	416
TOKYO, JAPAN	F 2	35.75	139.72	613
KOCHI, JAPAN	F 2	33.55	133.49	2042
HONG KONG	F 2	22.42	114.20	269
F03 MESON TELESCOPE				
OKTYOMTSKY, USSR	F 3			2399 *
ALERT, CANADA	F 3	82.50	297.67	9
INUVIK, CANADA	F 3	68.35	226.28	282
APATITY, USSR	F 3	67.50	33.33	22
OULU, FINLAND	F 3	65.05	25.47	2185
YAKUTSK, USSR	F 3	62.02	129.72	681
TURKU, FINLAND	F 3	60.40	22.60	2118
MAGADAN, USSR	F 3	60.10	151.00	2397 *
NOVOSIBIRSK, USSR	F 3	54.80	83.00	2398 *
GOOSE BAY, CANADA	F 3	53.27	299.60	211
IRKUTSK, USSR	F 3	52.28	104.02	873
BUDAPEST, HUNGARY	F 3	47.49	18.96	740
INNSBRUCK, AUSTRIA	F 3	47.32	11.38	2232
DEEP RIVER, CANADA	F 3	46.10	282.50	146
BOLOGNA, ITALY	F 3	44.50	11.35	2015
ALMA-ATA, USSR	F 3	43.25	76.92	13
NEWARK, USA	F 3	39.70	284.50	2356
MATSUSHIRO, JAPAN	F 3	36.53	138.02	2104
MATSUMOTO, JAPAN	F 3	36.25	137.97	2103
MT. NORIKURA, JAPAN	F 3	36.11	137.55	417
MISATO, JAPAN	F 3	36.06	137.83	2102
TOKYO, JAPAN	F 3	35.75	139.72	2225
SAKASHITA, JAPAN	F 3	35.58	137.53	2143
TAKEYAMA, JAPAN	F 3	35.22	139.62	592
EMBUDO, USA	F 3	35.20	253.32	164

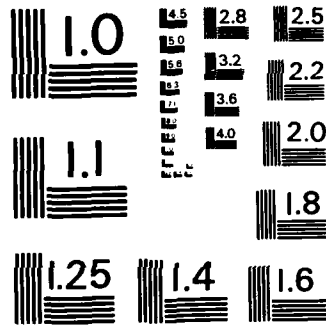
STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
F03 MESON TELESCOPE (continued)				
NAGOYA, JAPAN	F 3	35.15	136.97	424
SOCORRO, USA	F 3	34.04	253.07	563
MEXICO CITY, MEXICO	F 3	19.33	260.82	1007
CHACALTAYA, BOLIVIA	F 3	-16.31	291.80	103 *
POATINA, AUSTRALIA	F 3	-41.82	146.88	2447
CAMBRIDGE, AUSTRALIA	F 3	-42.85	147.42	2446
HOBART, AUSTRALIA	F 3	-42.88	147.33	715
MAWSON, ANTARCTICA	F 3	-67.60	62.88	823
MCMURDO, ANTARCTICA	F 3	-77.90	166.60	2354
F04 BALLOON MEASUREMENTS				
MURMANSK, USSR	F 4	68.95	33.05	1008
APATITY, USSR	F 4	67.50	33.33	2269
MOSCOW, USSR	F 4	55.93	37.52	408
ALMA-ATA, USSR	F 4	43.25	76.92	14 *
ALMA-ATA, USSR	F 4	43.25	76.92	15
MIRNY, ANTARCTICA	F 4	-66.57	92.92	405

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
G01 AIRGLOW				
ABERDEEN, UNITED KINGDOM	G 1	57.15	357.87	1
ZVENIGOROD, USSR	G 1	55.70	36.80	1162 *
VICTORIA, CANADA	G 1	48.46	236.70	1093
TSIMLJANSK, USSR	G 1	47.70	42.00	1161 *
HAUTE PROVENCE, FRANCE	G 1	43.92	5.72	243
LAUREL RIDGE, USA	G 1	40.16	280.84	767
ASHKHABAD, USSR	G 1	37.90	58.40	844 *
NIIGATA, JAPAN	G 1	37.70	138.82	739
KISO, JAPAN	G 1	35.80	137.63	321
CANARIAS, CANARY ISLANDS	G 1	28.48	343.72	1106
ARECIBO, PUERTO RICO, USA	G 1	18.35	293.25	31
ARECIBO, PUERTO RICO, USA	G 1	18.35	293.25	207
AREQUIPA, PERU	G 1	-16.50	288.50	2314
CACHOEIRA PAULISTA, BRAZIL	G 1	-22.70	315.00	536
EL LEONCITO, ARGENTINA	G 1	-31.80	290.70	762 *
GRAHAMSTOWN, REP. OF S. AFRICA	G 1	-33.32	26.50	2004
ADELAIDE, AUSTRALIA	G 1	-34.60	138.40	777
BEVERIDGE, AUSTRALIA	G 1	-37.47	144.93	771
PORT AUX FRANCAIS, KERGUELEN ISLANDS	G 1	-49.35	70.22	969
DUMONT D'URVILLE, ANTARCTICA	G 1	-66.67	140.00	1057
MAWSON, ANTARCTICA	G 1	-67.62	62.87	2292
SANAE, ANTARCTICA	G 1	-70.30	357.59	782

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
H03 ATMOSPHERIC OZONE				
CAIRNS, AUSTRALIA	H 3	-12.47	130.83	2023
BRISBANE, AUSTRALIA	H 3	-27.50	152.90	71
PERTH, AUSTRALIA	H 3	-31.56	115.50	459
MELBOURNE, AUSTRALIA	H 3	-37.71	144.97	2016
HOBART, AUSTRALIA	H 3	-42.90	147.20	1156
MACQUARIE ISLAND	H 3	-54.48	158.97	2095
H06 INFRASONIC WAVES				
MCMURDO, ANTARCTICA	H 6	-77.75	167.50	2309
H07 UPPER ATMOSPHERE AERONOMY				
URBANA, USA	H 7	40.17	271.84	2063
URBANA, USA	H 7	40.17	271.84	2064
URBANA, USA	H 7	40.17	271.84	2068
LAUDER, NEW ZEALAND	H 7	-45.04	169.69	2073

2.4 Station Deletions

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
ADDIS ABABA, ETHIOPIA	D02	9.03	38.77	2
ADELAIDE ISLAND	D01	-67.76	291.08	3
AHMEDABAD, INDIA	B08	23.01	72.60	734
AHMEDABAD, INDIA	B13	23.01	72.60	736
AHMEDABAD, INDIA	C04	23.01	72.60	731
AHMEDABAD, INDIA	D01	23.01	72.60	737
AHMEDABAD, INDIA	F01	23.01	72.60	738
AHMEDABAD, INDIA	F03	23.01	72.60	733
AMBERLEY, NEW ZEALAND	D01	-43.16	172.75	17
ARCETRI, ITALY	A04	43.75	11.25	1079
ARCETRI, ITALY	A08	43.75	11.25	1083
ARCETRI, ITALY	B06	43.75	11.25	1081
ARCETRI, ITALY	B11	43.75	11.25	1082
ARCETRI, ITALY	C01	43.75	11.25	1080
ARCETRI, ITALY	C03	43.75	11.25	1084
ARCTIC VILLAGE, USA	D01	68.13	214.43	25
ARCTIC VILLAGE, USA	E01	68.13	214.43	26
ARECIBO PUERTO RICO, USA	B06	18.35	293.25	30
ARGENTINE ISLANDS	B01	-65.25	295.73	27
ARRIVAL HEIGHTS, ANTARCTICA	E01	-77.83	166.65	545
ARRIVAL HEIGHTS, ANTARCTICA	E03	-77.83	166.65	546
ARRIVAL HEIGHTS, ANTARCTICA	E03	-77.83	166.65	547
ASHKHABAD, USSR	B10	37.93	58.37	845
ASPENDALE, AUSTRALIA	G01	-38.02	145.07	33
ATHENS, GREECE	C06	37.85	23.72	1152
AUCKLAND, NEW ZEALAND	D02	-36.93	174.47	41
BALERMA, SPAIN	B01	36.75	357.17	47
BEAR ISLAND, NORWAY	B13	74.50	19.20	710
BELEM, BRAZIL	B14	1.39	311.56	1034
BERMUDA	B14	32.26	295.12	1013
BEVERIDGE, AUSTRALIA	B01	-37.47	144.93	56
BEVERIDGE, AUSTRALIA	B08	-37.47	144.93	772
BOULDER, USA	A08	40.10	254.75	63
BOULDER, USA	B13	40.00	254.74	1026
BOULDER, USA	B14	40.00	254.74	1028
BOULDER, USA	C01	39.98	254.72	929
BOULDER, USA	C03	40.10	254.75	919
BOULDER, USA	C06	40.00	254.74	1027
BOULDER, USA	D02	40.14	254.76	69
BOULDER, USA	D02	39.98	254.72	925
BRUXELLES, BELGIUM	B08	50.50	4.20	703
BUCHAREST, ROMANIA	A02	44.41	26.05	931
CAMDEN, AUSTRALIA	D02	-32.75	151.50	716



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
CAMPBELL ISLAND	D02	-52.50	169.20	81
CAMPBELL ISLAND	E02	-52.55	169.15	83
CAPRI F, ITALY	A04	40.55	14.22	768
CAPRI F, ITALY	A06	40.55	14.22	770
CAPRI F, ITALY	C01	40.55	14.22	769
CASEY, ANTARCTICA	B01	-66.29	110.53	89
CASEY, ANTARCTICA	B08	-66.29	110.53	90
CASEY, ANTARCTICA	E01	-66.54	110.36	93
CASEY, ANTARCTICA	E04	-66.54	110.36	94
CASTLE ROCK, USA	D01	37.23	237.87	95
CATANIA, ITALY	A01	37.50	15.08	99
CATANIA, ITALY	A05	37.50	15.08	96
CATANIA, ITALY	C01	37.50	15.08	97
CHATANIKA, USA	B03	65.10	212.55	104
CHATANIKA, USA	B08	65.10	212.57	106
CHUBU, JAPAN	B14	35.27	137.01	963
CLARK LAKE, USA	A14	33.34	243.72	116
COLLEGE, USA	D01	18.20	293.85	205
COLLEGE, USA	D02	64.86	212.17	120
COLLEGE, USA	E04	64.87	212.18	122
DAR ES SALAAM, TANZANIA	D01	-6.77	39.22	133
DAVIS, ANTARCTICA	B08	-68.58	77.96	135
DAVIS, ANTARCTICA	B13	-68.58	77.96	137
DAVIS, ANTARCTICA	C08	-68.58	77.96	937
DAVIS, ANTARCTICA	D01	-68.58	77.96	138
DE BILT, THE NETHERLANDS	B09	52.10	5.18	143
DE BILT, THE NETHERLANDS	B10	52.10	5.18	144
DENVER, USA	F01	39.75	255.00	147
DENVER, USA	F03	39.75	255.00	1052
DJIBOUTI, REP. OF DJIBOUTI	B01	11.51	42.83	148
DJIBOUTI, REP. OF DJIBOUTI	B08	11.52	42.83	150
DOORBES, BELGIUM	B08	50.10	4.60	702
DOORBES, BELGIUM	F03	50.10	4.60	701
DUNEDIN, NEW ZEALAND	D02	-45.79	170.48	155
DWINGELOO, THE NETHERLANDS	A08	52.81	6.40	1085
DWINGELOO, THE NETHERLANDS	C04	52.81	6.40	1087
EARLYBURN, UNITED KINGDOM	D02	55.73	356.77	1088
EBRO, SPAIN	A04	40.82	0.49	620
EBRO, SPAIN	C01	40.82	0.49	1062
EBRO, SPAIN	D02	40.82	0.49	627
EDELSON AFB, USA	D01	64.70	213.00	1107
EL ARENOSILLO, SPAIN	B06	37.10	353.25	161
ESKDALEMUIR, UNITED KINGDOM	D02	55.2	56.80	167

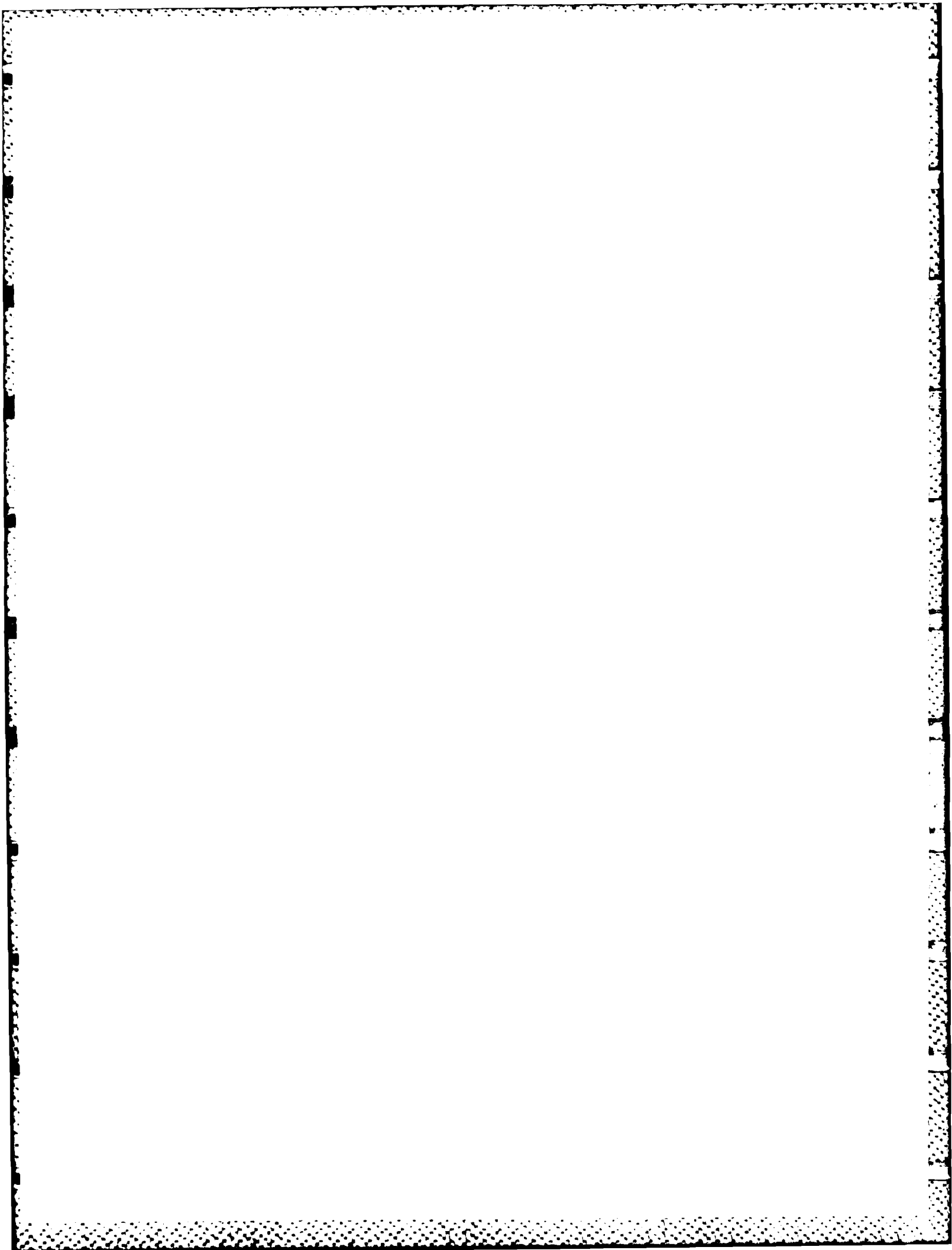
STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
ESKIMO POINT, CANADA	D01	61.10	265.93	168
FORT SMITH, CANADA	D01	60.00	248.00	174
FORT YUKON, USA	E01	66.56	214.78	179
FREDERICKSBURG, USA	D01	38.20	282.63	181
FUJIGANE, JAPAN	A14	35.41	138.61	779
GARCHY, FRANCE	B10	47.28	3.07	188
GENERAL BELGRANO, ANTARCTICA	B13	-77.80	321.75	52
GENERAL BELGRANO, ANTARCTICA	E01	-77.97	321.20	912
GENERAL BELGRANO, ANTARCTICA	E02	-77.97	321.20	913
GENERAL BELGRANO, ANTARCTICA	E03	-77.97	321.20	914
GENERAL BELGRANO, ANTARCTICA	F01	-77.97	321.20	915
GENOVA-MT. CAPELLINO, ITALY	B01	44.60	9.00	491
GENOVA, ITALY	B07	44.55	8.95	747
GILLAM, CANADA	D01	56.35	265.32	190
GRAHAMSTOWN, REP. OF S. AFRICA	D01	-33.32	26.50	213
GREAT WHALE RIVER, CANADA	D02	55.26	282.22	218
GUAM	D01	13.59	144.87	220
GULMARG, INDIA	C06	34.07	74.42	940
HALEAKALA, USA	A04	20.71	203.74	223
HALEAKALA, USA	A06	20.71	203.74	224
HALEAKALA, USA	A07	20.71	203.74	225
HALLEY BAY, ANTARCTICA	B13	-75.52	333.37	230
HALLEY BAY, ANTARCTICA	B13	-75.52	333.37	231
HALLEY BAY, ANTARCTICA	E01	-75.52	333.22	234
HAMILTON, USA	A08	42.25	289.00	945
HARVARD, USA	C04	30.63	256.05	173
HERMANUS, REP. OF S. AFRICA	B14	-24.42	19.22	247
HIRAISO, JAPAN	B07	36.37	140.63	259
HOBART, AUSTRALIA	B13	-42.50	142.20	251
HONG KONG	B06	22.33	114.20	265
HONG KONG	B11	22.28	114.13	952
HONG KONG	D01	22.36	114.22	267
INUBO, JAPAN	B13	35.70	140.85	776
INUVIK, CANADA	B08	68.25	226.70	278
INUVIK, CANADA	D01	68.25	226.70	279
INUVIK, CANADA	E01	68.25	226.70	280
KAP TOBIN, GREENLAND	B08	70.42	338.02	720
KENORA, CANADA	B01	49.79	265.51	671
KIRUNA, SWEDEN	B04	67.80	20.40	971
KIRUNA, SWEDEN	B13	67.83	20.42	314
KIRUNA, SWEDEN	E04	67.83	20.33	318
KUHLUNGSBORN, GDR	B10	54.12	11.77	981
LA MOURE, USA	B14	46.56	261.36	1025

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
LANNION, FRANCE	B06	48.68	356.56	328
LA PAZ, BOLIVIA	A08	-16.30	291.91	329
LA POSTA, USA	A08	32.40	243.50	985
LA POSTA, USA	A09	32.40	243.50	331
LA POSTA, USA	B01	32.40	243.50	986
LA POSTA, USA	B04	32.40	243.50	987
LA POSTA, USA	B09	32.40	243.50	988
LA POSTA, USA	C03	32.40	243.50	989
LA POSTA, USA	C06	32.40	243.50	990
LA POSTA, USA	D01	32.40	243.50	991
L'AQUILA, ITALY	D02	42.38	13.31	333
LEICESTER, UNITED KINGDOM	B10	52.00	359.00	340
LINDAU, FRG	B12	51.65	10.13	351
LINDAU-HARZ, FRG	B01	51.65	10.12	348
LITTLETON, USA	C06	39.63	255.02	350
LOGRONO, SPAIN	D01	42.45	357.50	352
LOMNICKY STIT, CZECHOSLOVAKIA	G01	49.18	20.22	356
LONDON (ONTARIO), CANADA	B06	42.59	278.86	357
LOUVAIN-LA-NEUVE, BELGIUM	B06	50.75	4.57	360
LYCKSELE, SWEDEN	E03	64.62	18.67	372
MACQUARIE ISLAND	D01	-54.50	158.95	378
MAKAPUU PT, USA	B13	21.31	202.35	1020
MAKAPUU PT, USA	B14	21.31	202.35	1022
MAKAPUU PT, USA	C06	21.31	202.35	1021
MALVERN, UNITED KINGDOM	B03	52.13	357.67	381
MANILA, PHILIPPINES	A01	14.52	121.00	388
MANILA, PHILIPPINES	C04	14.64	121.08	1001
MANILA, PHILIPPINES	C06	14.52	121.00	999
MANILA, PHILIPPINES	D02	14.64	121.08	1002
MARION ISLAND	B01	-46.85	37.87	391
MARION ISLAND	D01	-46.88	37.85	392
MAWSON, ANTARCTICA	D01	-67.60	62.86	692
MAWSON, ANTARCTICA	E04	-67.61	62.88	1102
MCMATH-HULBERT, USA	A01	42.66	276.74	1073
MCMATH-HULBERT, USA	A04	42.66	276.74	1074
MCMATH-HULBERT, USA	A05	42.66	276.74	1075
MCMATH-HULBERT, USA	C01	42.66	276.74	1076
MCMATH-HULBERT, USA	C06	42.66	276.74	1077
MEUDON, FRANCE	A04	48.80	2.23	398
MIRNY, ANTARCTICA	E03	-66.57	92.92	882
MOULD BAY, CANADA	B08	76.20	240.60	411
MOULD BAY, CANADA	E01	76.20	240.60	413
MURPHY DOME, USA	E01	64.50	211.45	423

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
NAIROBI, KENYA	B01	-1.33	36.81	427
NANCAY, FRANCE	A09	44.40	2.20	432
NEWPORT, USA	D02	48.26	242.88	435
NOBEYAMA, JAPAN	A10	35.93	138.48	439
NORFOLK, USA	B14	36.82	285.71	1037
NORWAY HOUSE, CANADA	D01	53.98	262.17	443
NURMIJARVI, FINLAND	B12	60.51	24.65	444
ONDREJOV, CZECHOSLOVAKIA	A08	49.92	14.98	800
ONDREJOV, CZECHOSLOVAKIA	B08	49.92	14.98	803
OTTAWA, CANADA	D02	45.20	284.50	451
PALEHUA, USA	A01	21.38	201.93	455
PALEHUA, USA	A02	21.38	201.93	1114
PALEHUA, USA	A04	21.38	201.93	1115
PALEHUA, USA	A06	21.38	201.93	1116
PALEHUA, USA	A08	21.38	201.93	1117
PALEHUA, USA	C06	21.38	201.93	1120
PARAMARIBO, SURINAM	B01	5.82	304.78	457
PARAMARIBO, SURINAM	D01	5.81	304.78	458
PENN STATE U, USA	A08	40.82	282.13	774
PENTELEI, GREECE	A05	38.05	23.86	903
PENTELEI, GREECE	C08	38.05	23.86	909
PIARCO, TRINADAD	B13	10.60	298.65	1041
PIARCO, TRINADAD	B14	10.60	298.65	1043
PIARCO, TRINADAD	C06	10.60	298.65	1042
PIC DU MIDI, FRANCE	F01	42.93	0.25	461
PING-CHENG, TAIWAN, CHINA	B14	24.95	121.23	462
POITIERS, FRANCE	B13	46.60	0.30	465
POKER FLAT, USA	D02	65.13	212.54	469
PORT ALFRED, CROZET ISLANDS	G01	-46.43	51.87	128
PORT MORESBY, NEW GUINEA	B01	-9.41	147.15	471
POTSDAM, GDR	A06	52.38	13.07	1139
POTSDAM, GDR	C02	52.38	13.07	1140
RAMEY, USA	B09	18.52	292.90	1124
RAMEY, USA	C06	18.50	292.80	481
RANKIN INLET, CANADA	D01	62.63	268.08	484
RAROTONGA, COOK ISLANDS	B01	-21.30	200.10	485
RAROTONGA, COOK ISLANDS	B11	-21.20	200.20	810
RIO DE JANEIRO, BRAZIL	B14	-22.87	316.87	1031
ROBURENT, ITALY	D01	44.30	7.88	490
ROBURENT, ITALY	D02	44.30	7.88	750
ROME, ITALY	C03	41.90	12.50	746
SACHS HARBOUR, CANADA	B08	72.00	235.00	494
SACHS HARBOUR, CANADA	E01	72.00	235.00	496

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
SAGAMORE HILL, USA	C06	42.63	289.18	511
ST. JOHNS, CANADA	B01	47.60	307.30	575
SANAE, ANTARCTICA	B08	-70.31	357.65	527
SAN JUAN, PUERTO RICO, USA	D01	18.12	293.85	539
SAO PAULO, BRAZIL	B08	-23.50	313.50	758
SARDINIA, ITALY	B13	39.18	9.16	1017
SARDINIA, ITALY	B14	39.18	9.16	1019
SASKATOON, CANADA	E01	52.21	252.81	542
SEOUL, KOREA	F01	52.06	5.07	551
SIDMOUTH, UNITED KINGDOM	D02	50.67	356.75	553
SIPLE, ANTARCTICA	E01	-76.00	276.00	556
SKALNATE PLESO, CZECHOSLOVAKIA	A01	49.19	20.25	558
SKALNATE PLESO, CZECHOSLOVAKIA	A02	49.19	20.25	1049
SKALNATE PLESO, CZECHOSLOVAKIA	A04	49.19	20.25	1050
SKALNATE PLESO, CZECHOSLOVAKIA	C01	49.19	20.25	1051
SLOUGH, UNITED KINGDOM	C03	51.49	359.44	559
SLOUGH, UNITED KINGDOM	A08	51.48	359.43	560
SODANKYLA, FINLAND	D02	67.32	26.63	564
SOUTH GEORGIA, ANTARCTICA	B01	-54.27	323.50	566
SOUTH GEORGIA, ANTARCTICA	D01	-54.28	323.52	567
SOUTH GEORGIA, ANTARCTICA	D02	-54.28	323.52	568
SOUTH POLE, ANTARCTICA	B08	-90.00	0.	569
SOUTH UIST, UNITED KINGDOM	D01	57.36	352.61	572
STONYHURST, UNITED KINGDOM	D01	53.84	357.53	577
STONYHURST, UNITED KINGDOM	D02	53.84	357.53	578
SUGADAIRA, JAPAN	A14	36.51	138.35	778
SULPHUR MOUNTAIN, CANADA	F01	51.20	244.39	789
SUTHERLAND, S. AFRICA	A01	-33.93	18.48	565
SUTHERLAND, S. AFRICA	G01	-32.38	20.81	581
SYDNEY, AUSTRALIA	A03	-33.87	150.77	582
TAHITI, FRENCH POLYNESIA	B01	-17.70	210.70	590
TANANARIVE, MADAGASCAR	B13	-18.92	47.55	1038
TANANARIVE, MADAGASCAR	B14	-18.92	47.55	1040
TANANARIVE, MADAGASCAR	C06	-18.55	47.55	593
TANANARIVE, MADAGASCAR	C06	-18.92	47.55	1039
TEHRAN, IRAN	A01	35.70	51.47	1108
TEHRAN, IRAN	A02	35.70	51.47	1109
TEHRAN, IRAN	A04	35.70	51.47	1110
TEHRAN, IRAN	A06	35.70	51.47	1111
TEHRAN, IRAN	C01	35.70	51.47	1112
TEHRAN, IRAN	C06	35.70	51.47	1113
THOMPSON, CANADA	D01	55.72	262.12	606
TIHANY, HUNGARY	B14	46.90	17.89	1058

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
TOKYO, JAPAN	A04	35.67	139.54	611
TOLEDO, SPAIN	D01	39.88	355.95	614
TOLEDO, SPAIN	D02	39.88	355.95	1061
TORINO, ITALY	B08	45.05	7.75	751
TORINO, ITALY	B13	45.05	7.75	752
TORINO, ITALY	C06	45.05	7.67	617
TOYOKAWA, JAPAN	B13	34.82	137.39	633
TRIESTE, ITALY	A10	45.64	13.88	636
TRIESTE, ITALY	C03	45.64	13.88	1066
TROMSO, NORWAY	B13	69.70	19.00	707
TUCSON, USA	D01	32.25	249.17	640
UCCLE, BELGIUM	C01	50.80	4.35	643
UECHT, SWITZERLAND	A04	46.85	7.27	645
UECHT, SWITZERLAND	C03	46.85	7.27	647
UPICE, CZECHOSLOVAKIA	A08	50.30	16.01	795
UPPSALA, SWEDEN	B06	59.80	17.60	649
UPPSALA, SWEDEN	B12	59.80	17.60	651
USHUAIA, ARGENTINA	B07	-54.80	291.70	812
UTRECHT, THE NETHERLANDS	F01	52.06	5.07	653
UTRECHT, THE NETHERLANDS	F03	52.08	5.13	700
VALENTIA, IRELAND	D02	51.93	349.75	655
VANDENBERG AFB, USA	B01	34.72	239.43	658
VELETA, SPAIN	G01	37.10	356.58	88
VOSTOK, ANTARCTICA	B08	-78.45	106.87	662
VOSTOK, ANTARCTICA	D02	-78.45	106.87	663
WALLOPS ISLAND, USA	B08	37.94	284.53	1069
WALLOPS ISLAND, USA	B09	37.94	284.53	1070
WALLOPS ISLAND, USA	D01	37.94	284.53	1071
WARNKENHAGEN, DDR	D02	54.00	11.07	1155
WELLINGTON, NEW ZEALAND	B11	-41.23	174.92	809
WELLINGTON, NEW ZEALAND	B13	-41.23	174.92	763
WESTON, USA	D01	42.43	288.68	667
WINGST, FRG	D02	53.74	9.07	1072
WINKFIELD, UNITED KINGDOM	B02	51.45	359.30	670
WINNIPEG, CANADA	D01	49.63	262.87	672
WITTEVEEN, THE NETHERLANDS	D02	52.81	6.67	675
YORK, UNITED KINGDOM	D01	53.97	358.92	761
YORK, UNITED KINGDOM	D02	53.95	358.95	687
ZARIA, NIGERIA	D01	11.15	7.65	688



**3. CURRENT STATUS OF
SOLAR-TERRESTRIAL MONITORING ACTIVITIES**

3. CURRENT STATUS OF SOLAR-TERRESTRIAL MONITORING ACTIVITIES

One of the charges to the MONSEE Steering Committee is to ascertain the "health" of the solar-terrestrial monitoring activities in the community as a whole. This entails the following functions:

(a) The identification of areas where established monitoring activities have decreased, without an acceptable replacement, to the point where the nonavailability of these data is detrimental to the future solar-terrestrial research activities, and

(b) The identification of areas where new measurements and/or techniques are classified as monitoring activities essential for the advancement of scientific knowledge.

Until now it was difficult to provide an adequate assessment of the vitality of the entire area of solar-terrestrial monitoring, primarily because of the lack of a homogeneous data base. With the compilation of this second edition of the MONSEE Directory we can directly compare the data summarized from the first MONSEE Directory to ascertain if the various solar-terrestrial disciplines are being adequately monitored. Although we recognize that there are still some stations not included in this second edition, nevertheless, these two publications provide the most comprehensive data base of solar-terrestrial research monitoring activities available.

The original MONSEE Directory, published in 1977, contained station and equipment information on 1032 sensors. This second edition of the MONSEE Directory contains information for 1163 sensors. On the surface, with 131 additional entries in this second MONSEE Directory, the stability of solar-terrestrial monitoring looks relatively good; however, this is not the case. In preparing this second directory, we had an active campaign to include stations in operation in 1976 but not listed in the first edition; we found 213 sensors in that category. We identified 1245 sensors in operation in 1976 compared with 1124 sensors presumably in operation in 1984. (There were a total of 39 sensors, added for this edition, for which no start date could be determined; these sensors are not included in this statistical study.) Thus, there has been a net decrease of 121 sensors (that is ~10 percent). Table 2 summarizes these results by discipline; Table 3 presents detailed information for each subdiscipline. Users of the data in Table 3 are cautioned that the percentages shown are, in some cases, based on very small numbers, such as a 100 percent increase in subdiscipline C14 (which has a total of only two stations). Note that included in the 1124 sensors listed in this directory are 84 sensors listed in the first directory for which we did not receive any confirmation or updating information for this directory. Although for the purpose of this exercise we included these sensors as "currently in

operation", most of them probably are no longer in operation since no response was received to any of the five individual mailings. Therefore, the approximate 10 percent decrease in monitoring sensors is a minimum estimate; the actual decrease may be in the range of 12 to 14 percent.

An inspection of Table 2 shows that the total number of solar-terrestrial physics stations has decreased in the past eight years. Decreases are evident in most disciplines; however, a significant increase occurred in the number of flare-associated event sensors where 41 and 40 newly opened OMEGA (U.S. Coast Guard) stations were added to subdisciplines C06 and C11 respectively.

Table 2. Relative Change in Sensors for Solar-Terrestrial Research Monitoring (1976-1984)

	Total (Pre-1977)	Current No. in operation	Relative Change Since 1977
A. Solar and Interplanetary Phenomena	219	182	-17%
B. Ionospheric Phenomena	368	293	-20%
C. Flare-Associated Events	159	206	+30%
D. Geomagnetic Variations	295	254	-14%
E. Aurora	66	52	-21%
F. Cosmic Rays	107	105	-2%
G. Airglow	28	21	-25%
H. Miscellaneous	<u>3</u>	<u>11</u>	<u>+8</u>
	1245	1124	-9.7%

Table 3. Relative Change in Sensors by Subdisciplines for Solar-Terrestrial Research Monitoring (1976-1984)

A. Solar and Interplanetary Phenomena	In 1st Edition (1976)	New Listing (pre-1977)	Total (pre-1977)	New Stations (1977 - 1984)	Deleted Stations	Current Number in Operation	Relative Change since 1976	% Change from 1976	New Listings With No Date	Total Number in Directory
A01 Sunspot Positions, Areas, and Classification	27	9	36	1	7	30	-6	-17%	3	33
A02 Sunspot Numbers	21	8	29	1	4	26	-3	-10%	1	27
A03 Solar Magnetic Fields	9	5	14	0	1	13	-1	-7%	1	14
A04 H-Alpha Observations (other than flares)	28	3	31	2	11	22	-9	-29%	2	24
A05 Calcium Plages	9	0	9	0	3	7*	-3	-33%		7*
A06 Solar Maps, Prominences, Filaments	18	1	19	2	5	16	-3	-16%		16
A07 Optical Observations of the Corona	8	1	9	0	1	8	-1	-11%	1	9
A08 Total Radio Flux Measurements	24	8	32	2	11	24*	-9	-28%	2	26*
A09 Radio and Radar Maps of Solar Disk	4	0	4	0	2	2	-2	-50%		2
A10 Radio East-West Scans of Solar Disk	8	1	9	0	2	7	-2	-22%		7
A11 Solar X-ray and UV Background Levels	1	0	1	0	0	1	0	0		1
A12 Energetic Solar Protons and Solar Electrons	1	1	2	0	0	2	0	0		2
A14 Comet Tails, Interplanetary Scintillations, Zodiacal Light	7	0	7	0	3	4	-3	-43%		4
A16 Total Solar Radiation	10	7	17	2	0	18*	+2	+12%	2	20
A17 Interplanetary Magnetic Fields	0	0	0	2	0	2	+2			2
Totals	175	0	219	2	0	182				194

*One station was moved from C01 to A05 (only flare observations to constant observation).

One station was moved from A16 to A08

Table 3. Relative Change in Sensors by Subdisciplines for Solar-Terrestrial Research Monitoring (1976-1984) (Contd)

B. Ionospheric Phenomena	In 1st Edition (1976)	New Listing (pre-1977)	Total (pre-1977)	New Stations (1977 - 1984)	Deleted Stations	Current Number in Operation	Relative Change since 1976	% Change from 1976	New Listings With No Date	Total Number in Directory
B01 Ionosphere Vertical Soundings	106	18	124	7	18	113	-11	-9%	1	114
B02 Topside-Vertical Incidence Soundings	3	1	4	0	1	3	-1	-25%		3
B03 Incoherent Scatter Soundings	6	0	6	0	2	4	-2	-33%		4
B04 Oblique Incidence Soundings	6	0	6	0	2	4	-2	-33%		4
B06 Total Electron Content - Satellite Beacons	28	1	29	6	8	27	-2	-7%		27
B07 Ionospheric Absorption - Method A1 (Pulse echo)	12	3	15	2	3	14	-1	-7%		14
B08 Ionospheric Absorption - Method A2 (Riometer)	54	9	63	2	19	46	-17	-27%	9	55
B09 Ionospheric Absorption - Method A3 (CW Fieldstrength)	16	1	17	4	4	17	0			17
B10 Ionospheric Drifts	6	4	10	1	5	6	-4	-40%		6
B11 Ionospheric Scintillations from Satellite Beacons	8	1	9	2	4	7	-2	-22%		7
B12 Ionospheric Back- and Forward-Scatter	6	1	7	0	3	4	-3	-43%		4
B13 Whistlers and VLF Emissions	46	6	52	2	19	35	-17	-33%		35
B14 Atmospheric Radio Noise	23	0	23	1	14	10	-13	-57%	1	11
B15 Partial Reflection Data	3	0	3	0	0	3	0			3
Totals	323		368			293				304

Table 3. Relative Change in Sensors by Subdisciplines for Solar-Terrestrial Research Monitoring (1976-1984) (Contd)

C. Flare-Associated Events	In 1st Edition (1976)	New Listing (pre-1977)	Total (pre-1977)	New Stations (1977 - 1984)	Stations Deleted	Current Number in Operation	Relative Change since 1976	% Change from 1976	New Listings With No Date	Total Number in Directory
C01 H-Alpha Flares	35	5	40	2	9	32*	-8	-20%	3	35
C02 Solar Local Magnetic Fields	4	2	6	0	1	5	-1	-17%	1	6
C03 Solar Radio Events, Fixed Frequency	32	7	39	0	7	32	-7	-18%	1	33
C04 Solar Radio Spectrograms of Events	9	2	11	0	4	7	-3	-27%	1	8
C05 Solar X-ray Observations	1	0	1	0	0	1	-	-		1
C06 Sudden Ionospheric Disturbances	37	7	44	42	16	70	+26	+59%		70
C07 Solar Protons and Electrons - Direct Measurement	3	0	3	0	0	3	-	-		3
C08 Solar Protons Riometer	3	1	4	2	2	4	-	-		4
C11 Solar Protons - Other Types of Measurements	0	8	8	40	0	48	+40	+500%		48
C13 Cosmic Ray Ground Level Increases	2	0	2	0	0	2	-	-		2
C14 Other Optical Flare Observations	0	1	1	1	0	2	+1	+100%		2
Totals	126	1	159			206				212

*One station was moved from C01 to A05(only flare observations to constant observation).

Table 3. Relative Change in Sensors by Subdisciplines for Solar-Terrestrial Research Monitoring (1976-1984) (Contd)

	In 1st Edition (1976)	New Listing (pre-1977)	Total (pre-1977)	New Stations (1977 - 1984)	Stations Deleted	Current Number in Operation	Relative Change since 1976	% Change from 1976	New Listings With No Date	Total Number in Directory
D. Geomagnetic Variations										
D01 Geomagnetic Standard and Rapid Run Measurements	174	45	219	20	38	201	-18	-8%	201	
D02 Magnetospheric Micropulsation Phenomena	69	6	75	6	29	52	-23	-31%	1	53
D03 Space Magnetism	1	0	1	0	0	1	-		1	
Totals	244	51	295	26	67	254			201	255
E. Aurora										
E01 All-Sky Camera	32	6	38	1	12	27	-11	-29%	1	28
E02 Visual Observations	4	0	4	0	2	2	-2	-50%	2	2
E03 Other Optical Techniques	13	4	17	3	5	15	-2	-12%	3	18
E04 Radio and Radar Observations	7	0	7	5	4	8	+1	+14%	8	8
Totals	56	10	66	9	23	52			56	56

Table 3. Relative Change in Sensors by Subdisciplines for Solar-Terrestrial Research Monitoring (1976-1984) (Contd)

	In 1st Edition (1976)	New Listing (pre-1977)	Total (pre-1977)	New Stations (1977 - 1984)	Deleted Stations	Current Number in Operation	Relative Change since 1976	% Change from 1976	New Listings With No Date	Total Number in Directory
F. Cosmic Rays										
F01 Neutron Monitors and Supermonitors	50	16	66	3	7	62	-4	-6%	1	63
F02 Ionization Chambers	4	0	4	2	0	6	+2	+50%	3	6
F03 Meson Telescope	22	9	31	4	4	31	0			34
F04 Balloon Measurements	5	1	6	0	0	6	-			6
Totals	81	26	107	9	11	105				109
G. Airglow										
G01 Airglow	27	1	28	1	5	21*	-7	-25%	1	22*
H. Miscellaneous										
H03 Atmospheric Ozone	0	2	2	1	0	6*	+4	+200%		6*
H06 Infrasonic Waves	0	1	1	0	0	1	0			1
H07 Upper Atmosphere Aeronomy	0	0	0	4	0	4	+4	-		4
Totals	0	3	3	5	0	11				11

*3 stations moved to H03 from G01

4. STATION ENTRIES AND MAPS BY DISCIPLINE

A. Solar and Interplanetary Phenomena

A. Solar and Interplanetary Phenomena

Below is a list of the six maps contained in this discipline:

A01 Sunspot Positions, Areas, and Classification

A02 Sunspot Numbers

A03 Solar Magnetic Fields

A04 H-Alpha Observations (other than flares)

A05 Calcium Plages

A06 Solar Maps, Prominences, Filaments

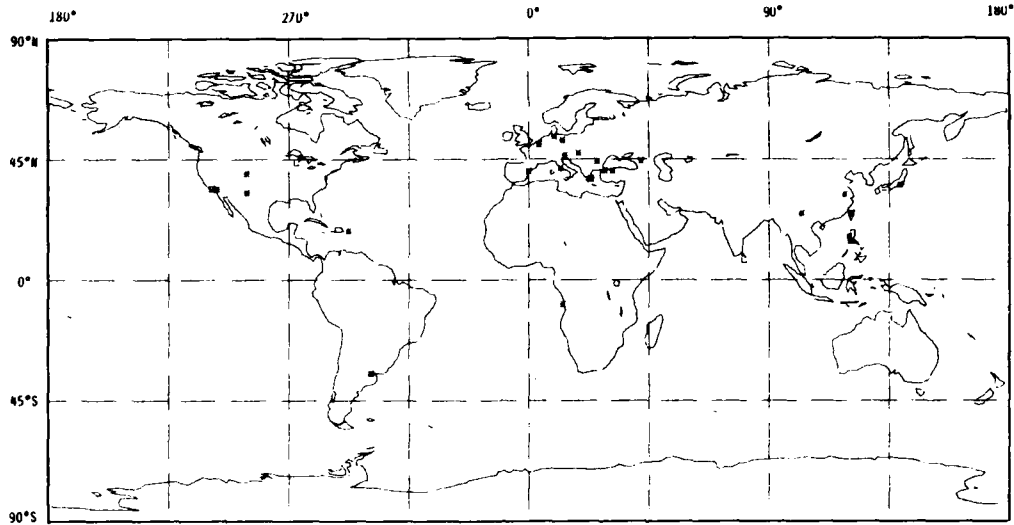
A07 Optical Observations of the Corona

A08 Total Radio Flux Measurements

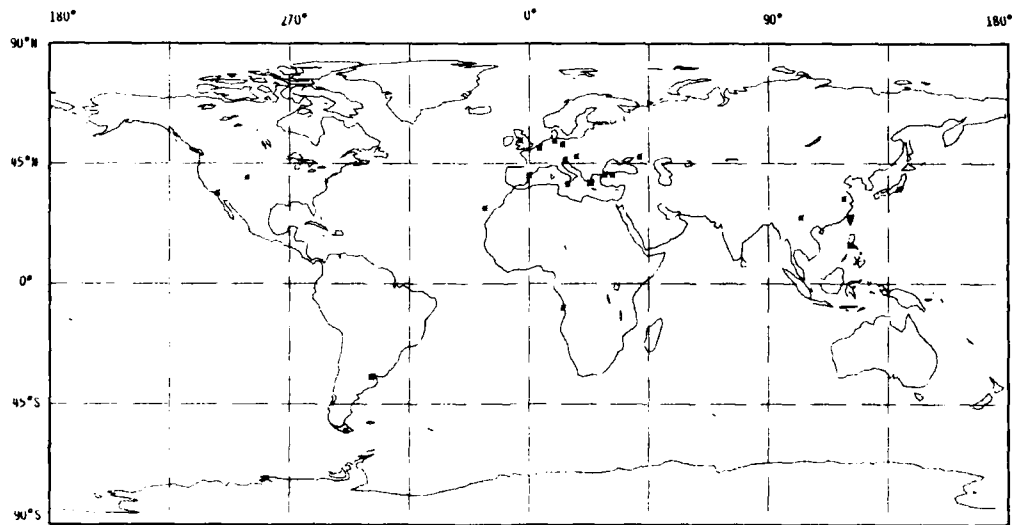
A16 Total Solar Radiation

**Note that some of the maps have incorporated more than one subdiscipline.
Each of the maps is clearly labelled.**

A.1 Maps

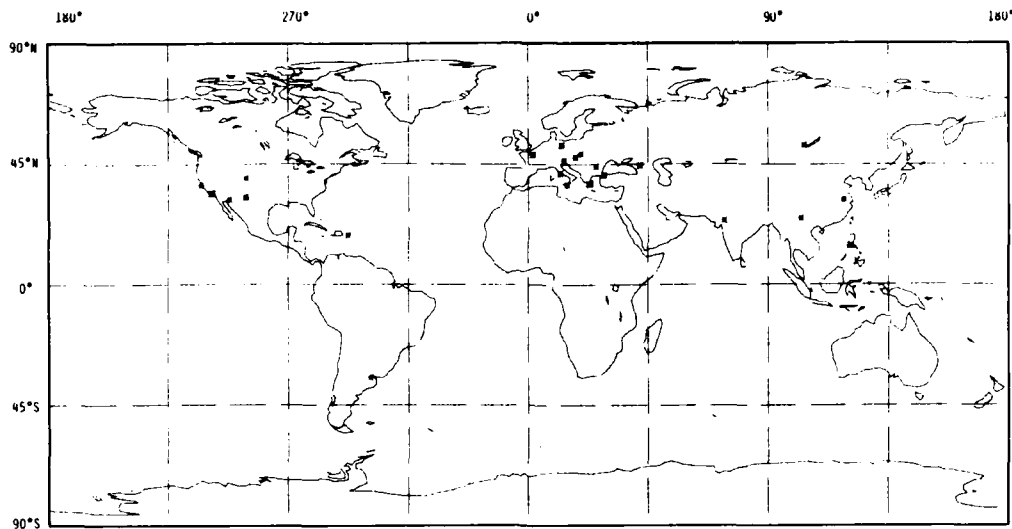


A01 SUNSPOT POSITIONS, AREAS, AND CLASSIFICATIONS



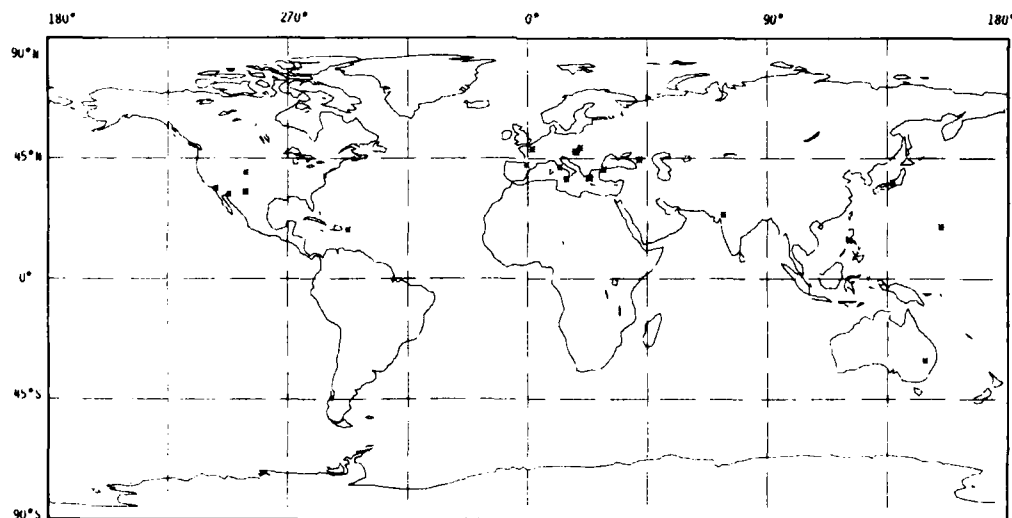
A02 SUNSPOT NUMBERS

A.1 Maps (Cont.)



A03 SOLAR MAGNETIC FIELDS

A04 H-ALPHA OBSERVATIONS (OTHER THAN FLARES)

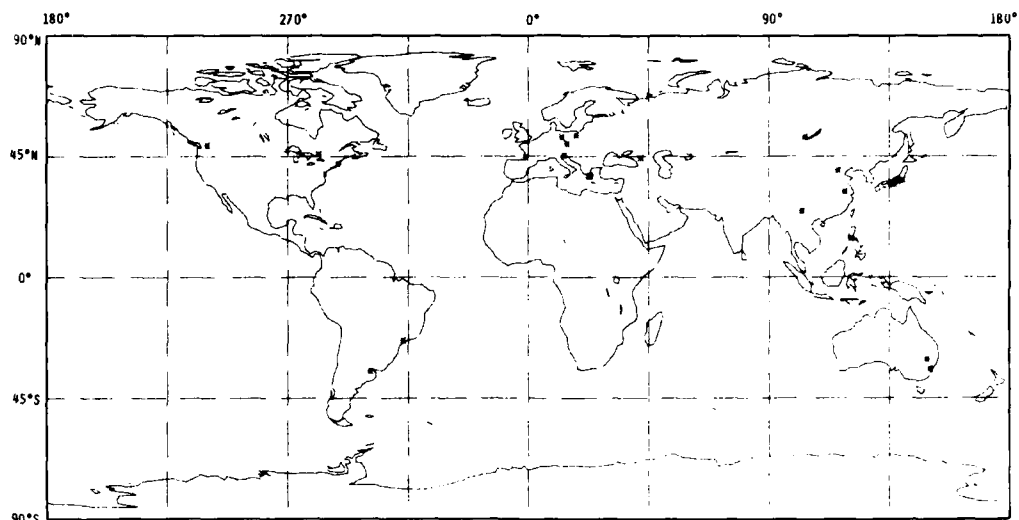


A05 CALCIUM PLAGES

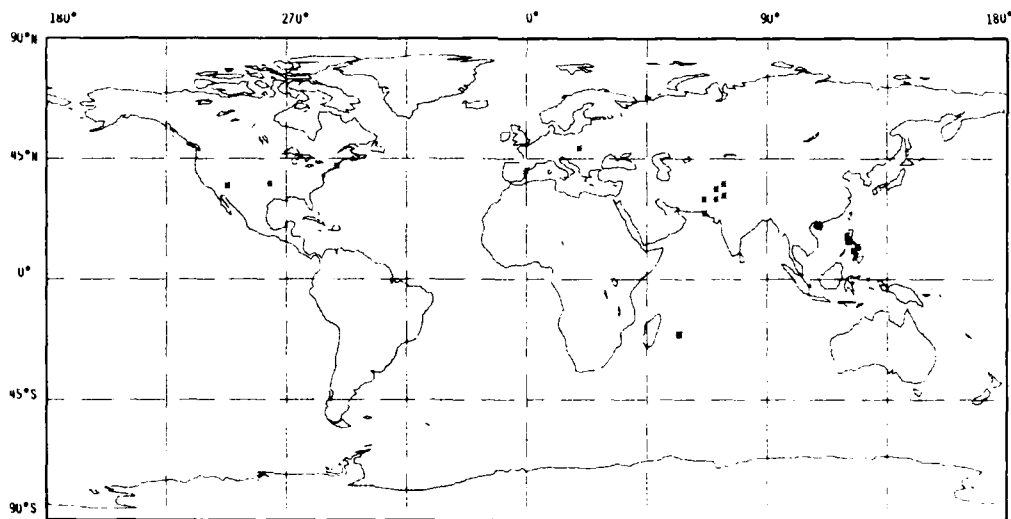
A06 SOLAR MAPS, PROMINENCES, FILAMENTS

A07 OPTICAL OBSERVATIONS OF THE CORONA

A.1 Maps (Cont.)



A08 TOTAL RADIO FLUX MEASUREMENTS



A16 TOTAL SOLAR RADIATION

A01 Sunspot Positions, Areas, and Classification

 ATHENS, GREECE

ITEM: 206
 DATE: 15/07/83

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 37.85
 STATION LONGITUDE ----- E 23.72
 ALTERNATE NAMES ----- Det 3, 2d Weather Wing
 DATES OF OPERATION ----- 12/1965 to present
 OBSERVING SCHEDULE ----- The solar observatory moved from the heart of Athens (near the Acropolis) to Pendelli Hill (10 miles NE of the old site) in May 1973. Limited, daily sunrise to sunset optical patrol terminated during Sep. 76. Limited patrol has been conducted since then. O/A 1 Oct 79, limited daily patrol hours will be 06 - 14Z.
 INSTRUMENT DESCRIPTION ----- Unitron 10 cm optical telescope (white light) mounted on Raddon WS-250 H-Alpha telescope.
 RAW DATA ----- Film (H-Alpha), drawings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Logs
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Det 7, 4th Weather Wing
 APO
 New York City, NY 09223
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- National Observatory of Athens
 Thessalon (306)
 Athens
 Greece
 ADDITIONAL COMMENTS ----- Data are the property of the National Observatory of Athens (NOA). Sunspot data transmission to WDC began March 1981.

 BIG BEAR, USA

ITEM: 2325
 DATE: 01/08/83

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 34.16
 STATION LONGITUDE ----- E 243.49
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Full disk calcium and white light observations, 1 or 2 frames daily.
 RAW DATA ----- Digital recording and 35 mm film
 DATA REDUCTION PRACTICE ----- Calcium data reduced on computer
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tabular and photographs
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- H. Zirin
 California Inst. of Technology 264-33
 1201 E. California Blvd.
 Pasadena, CA 91125
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Observatory address: Big Bear Solar Observatory,
 North Shore Drive, Big Bear City, California, USA 92314.

 BAGUIO, PHILIPPINES

ITEM: 44
 DATE: 15/07/83

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 16.41
 STATION LONGITUDE ----- E 120.63
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Photographs through red filter, 4 inch aperture refractor with 25 mm f. l. eyepiece for enlargement of image. Image is about 90 mm diameter.
 RAW DATA ----- 4" x 5" Kodalith
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- SOLAR MAPS AND ACTIVITY by Manila Observatory
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Manila Observatory
 P.O. Box 1731
 Manila
 Philippines
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No supplemental equipment at Baguio station.

 BOULDER, USA

ITEM: 64
 DATE: 10/05/84

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 39.98
 STATION LONGITUDE ----- E 254.72
 ALTERNATE NAMES ----- Boulder Observatory
 SOLTECHWARN
 DATES OF OPERATION ----- 06/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- White Light Telescope-daily sunspot drawings, original equipment (CRITERION) operated independently. 07/1967, CRITERION telescope piggy backed onto H-alpha telescope. Normal procedure: sunspot drawing, coded reports.
 RAW DATA ----- Sunspot drawings, coded reports
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Sunspot drawings, coded reports
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA, Boulder, Colorado USA 80303)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
 WDC: R/E/SE2
 325 Broadway
 Boulder, CO 80303
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data are part of U.S. Flare Patrol Network.

A01 Sunspot Positions, Areas, and Classification (Cont.)

 BUCHAREST, ROMANIA

ITEM: 72
 DATE: 01/02/84

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 44.41
 STATION LONGITUDE ----- E 26.05
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Heliograph (photosphere), refractor 13/195 cm with solar camera giving a 9 cm solar image.

RAW DATA ----- Photographic plates
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Lists, tables, films, photographic prints
 DATA ROUTINELY PUBLISHED ----- OBSERVATIONS SOLAIRES, IAU QBSA

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Meudon (Sunspot Index Data Center) (Brussels)

DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Emilia Tifrea
 Center of Astronomy & Space Sciences
 Str. Cutitul de Argint 5
 Bucharest 75212
 Romania

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 2 months.

 DILIMAN, PHILIPPINES

ITEM: 2270
 DATE: 22/04/83

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 14.68
 STATION LONGITUDE ----- E 121.07
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 15 cm Refractor, 250 cm FL, equatorial mounting, projection eyepiece 40 mm FL.

RAW DATA ----- Total solar image projection drawing 20.3 cm.
 DATA REDUCTION PRACTICE ----- Stonyhurst discs over drawing and coordinate of spots/groups read.

REGULAR REDUCED DATA AVAILABLE AFTER ----- 5 days after the end of the month
 FORM OF REDUCED DATA ----- Tables (See additional comments)
 DATA ROUTINELY PUBLISHED ----- BULLETIN OF ASTRONOMICAL OBSERVATIONS: Yearly

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES: the yearly publication
 ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Observatory
 National Geophysical & Astronomical Office
 PAGASA
 1424 Quezon Avenue
 Quezon City
 The Philippines

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Reduced data is published in the Bulletin of Astronomical Observation in three tables:
 Table I: Relative Sunspot Number
 Table II: Position and Classification of Sunspot Groups
 Table III: Solar Rotation and Evolution of Sunspot Groups

 BUENOS AIRES, ARGENTINA

ITEM: 74
 DATE: 24/02/76

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- S 34.55
 STATION LONGITUDE ----- E 58.22
 ALTERNATE NAMES ----- San Miguel
 DATES OF OPERATION ----- 01/1948 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Equatorial Mounted Refractor, 18cm aperture, 2.5m focal distance, 2 frames during the day.

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- San Miguel
 Observatorio Nacional de Fisica Cosmica
 Av. Mitre 3130
 San Miguel, Buenos Aires 1661
 Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

 ERRO, SPAIN

ITEM: 618
 DATE: 15/07/83

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 40.82
 STATION LONGITUDE ----- E 1.49
 ALTERNATE NAMES ----- Tortosa
 DATES OF OPERATION ----- 01/1905 to present
 OBSERVING SCHEDULE ----- Operation intermittent
 INSTRUMENT DESCRIPTION ----- REGULAR
 Equatorial photographic telescope (Mailhat), sunspot position, area and evolution, daily photograph (diameter 10 cm)

RAW DATA ----- Photographic plates
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Bolotin del Observatorio del Ebro (fotofisica) published since 1910

DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- YES: Zurich-Daily Ursigram (USSPS) to Meudon

DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio del Ebro
 Roquetes
 Tarragona
 Spain

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Sep 1936-1939

A01 Sunspot Positions, Areas, and Classification (Cont.)

.....
 GEORGIANA OBSERVATORY, HUNGARY

 DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 47.52
 STATION LONGITUDE ----- E 19.04
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1980 to present
 OBSERVING SCHEDULE ----- All year, whenever weather permits
 INSTRUMENT DESCRIPTION ----- Solar photos are usually made by the following telescopes: 317.5/4762 mm Cassegrain-reflector, 100/2000 mm refractor. Sunspots are projected usually with a 105/1575 mm refractor onto a screen for establishing their position. Limb flares and prominences are observed in H-alpha either by a 60/800 mm special prominence scope or by a 152/1524 mm refractor with an effective focal length of 4572 mm (Barlow system). At present this refractor is not used because it will be altered to be a special prominence scope. Sunspot and prominence dimensions are scaled by filar or optical micrometers.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Occasionally: Communications of the Georgiana Observatory, Prominence Series
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES; through the Observatory
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Peter Hedervari
 H. 1023 Budapest
 11 Arpad Fejedelem utja 40-41
 Hungary
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Limb prominence and flare observations are sent systematically to the Naval Observatory, Washington DC; Mitaka Observatory, Tokyo, Japan, and Ondrejov Observatory, Ondrejov, Czechoslovakia.
 Two new refractors are presently under construction: one with an aperture of 250 mm and a focal length of 4000 mm, the other is a Newtonian-reflector, 317.5/1428 mm.

.....
 ISTANBUL, TURKEY

 DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 41.01
 STATION LONGITUDE ----- E 31.93
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR: Every day, once per day
 INSTRUMENT DESCRIPTION ----- Aperture: 13 cm
 Focal length: 200 cm
 Disc Diameter: 25 cm

RAW DATA ----- Hand drawings of sunspots and photospheric faculae
 DATA REDUCTION PRACTICE ----- Determination of heliographic coordinates by means of discs of Stonyhurst.
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Sunspot positions, classifications, sunspot groups and numbers.
 DATA ROUTINELY PUBLISHED ----- yearly: "Publication of the Istanbul Institute, University Observatory"
 Monthly
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- University Observatory
 University - Istanbul
 Turkey
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Areas of sunspots will be sent at the beginning of 1984.

.....
 HAMBURG

 DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 53.44
 STATION LONGITUDE ----- E 9.58
 ALTERNATE NAMES ----- Planetarium Hamburg
 DATES OF OPERATION ----- 06/1947 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Palomar f. 75/1200 mm Refractor, 40 day rotation cycle as described in ANTIWOMIE HEI "AUGUSCHT". A new kind of sunspot stereoscope which make it impossible to count spots twice. Observations are made in a few groups of Amateur Astronomers in Germany and Greece with different kinds of instruments.

RAW DATA ----- Drawings, lists
 DATA REDUCTION PRACTICE ----- REGULAR - SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Lists, graphical plots
 DATA ROUTINELY PUBLISHED ----- Quarterly bulletin GVA Section Sonne, Sternkrieger GVA, Sterne und Weltraum Dusseldorf Germany

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Andreas Saul
 Gesellschaft fur volkstumliche Astronomie eV
 Section Sonne
 Sternstr. 12
 Hamburg 2000
 FRG
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 12 months. Data sent to Vds Berlin, Germany and Olbers Gesellschaft Bremen. Participants include Eugenedes Foundation, M. Papatheassiou, Athens, Greece, Aliso Olbers Gesellschaft Bremen, Volkssternwarte Darmstadt, and Wilhelm Forster Sternwarte Berlin in Germany. No response received to inquiry for updating material in 1983.

.....
 ANKARA, TURKEY

 DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 41.06
 STATION LONGITUDE ----- E 29.06
 ALTERNATE NAMES ----- Istanbul
 DATES OF OPERATION ----- 1947 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar observations Zeiss Jena Refractor 20/107 cm objective. Solar image diameter 25 cm.

RAW DATA ----- White paper, 25 cm diameter
 DATA REDUCTION PRACTICE ----- REGULAR - SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- YES, yearly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Roshorus University
 Kandilli Observatory
 Heliophysics Service
 Cengelkoy, Istanbul
 Turkey
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available immediately.

A01 Sunspot Positions, Areas, and Classification (Cont.)

 MANILA, PHILIPPINES

 ITEM: 383
 DATE: 15/07/83

 DISCIPLINE ----- A01 Sunspot Positions, Areas and Classifications
 STATION LATITUDE ----- N 14.64
 STATION LONGITUDE ----- E 121.08
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 4 inch aperture refractor with enlarged
 image through eyepiece until 1973; image now
 taken on 35 mm film with prime focus through
 neutral filter.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Teletype messages, films, maps
 DATA ROUTINELY PUBLISHED ----- SOLAR MAPS AND ACTIVITY FROM
 MANILA OBSERVATORY
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Manila Observatory
 P.O. Box 1231
 Manila
 Philippines
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Form of reduced data--teletype message to U.S.A.F.
 for number and areas; original film; included with
 Map of Sun in Ca II (K) for every day (published
 monthly, to solar observatories). Duplicate in-
 strument at Baguio (Philippines) N16.41 E120.63.

 MOUNT SAYAN OBSERVATORY, USSR

 ITEM: 2359
 DATE:

 DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Solar telescope with panorama magnetograph.
 Coronagraph (LMR).
 RAW DATA ----- Photoheliograms of sunspots, drawings
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-8 catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-8.

 MITAKA/TOKYO, JAPAN

 ITEM: 2249
 DATE: 18/07/83

 DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 35.67
 STATION LONGITUDE ----- E 139.55
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1939 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 8 inch refractor (drawings)
 4 inch refractor (photographs)
 RAW DATA ----- Drawings and sheet films
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Sunspot drawings and photographs
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Solar Physics Division
 Tokyo Astronomical Observatory
 Mitaka, Tokyo 181
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MOUNT WILSON OBSERVATORY, USA

 ITEM: 2239
 DATE: 05/07/83

 DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 34.22
 STATION LONGITUDE ----- E 242.06
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- Early morning or whenever the sky is clear
 INSTRUMENT DESCRIPTION ----- f/150 telescope with an objective - 30 cm.
 RAW DATA ----- Drawings
 DATA REDUCTION PRACTICE ----- Data is sorted into groups and then
 classified.
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA,
 US Dept of Commerce, Boulder,
 CO USA 80303)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Through WDC-A
 ADDRESS FOR INFORMATION ABOUT STATION ----- John M. Adkins
 Solar Department
 813 Santa Barbara Street
 Pasadena, CA 91101
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

A01 Sunspot Positions, Areas, and Classification (Cont.)

 MULEMBA, ANGOLA

ITEM: 993
 DATE: 26/02/75

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- S 8.79
 STATION LONGITUDE ----- E 13.31
 ALTERNATE NAMES ----- Mulemba Space Center Solar Station
 Estacao Solar do Cen Espac Mulemba
 Luanda

DATES OF OPERATION ----- 09/1973 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Integral light heliograph, 3 mirrors, with heliostat tower, with possibility of direct sun observation, projection, photography, equipment for sunspot heliographic position determination. Future program is installation of H-alpha filter.

RAW DATA ----- Photographic paper, drawings, graphs, lists
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Photographic paper, drawings, graphs, lists
 DATA ROUTINELY PUBLISHED ----- Annual report to Angola Government
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Centro Espacial Da Mulemba
 Luanda
 Angola
 West Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month. Data are on photographic paper when the size of sunspots justifies this, also drawings of the same and graphs of Wolf numbers, as well as lists of sunspot relative numbers from which are derived the graphs (monthly). No response received to inquiry for updating material in 1980 or 1983.

 POTSDAM, GDR

ITEM: 1136
 DATE: 01/06/83

DISCIPLINE ----- A01 Sunspot Positions and Classifications
 STATION LATITUDE ----- N 52.38
 STATION LONGITUDE ----- E 13.07
 ALTERNATE NAMES ----- Sonnenobservatorium Einsteinurm
 DATES OF OPERATION ----- 1943 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- (1) Refractor (f = 195 cm, d = 13 cm)
 (2) Tower telescope (f = 1400 cm, d = 60 cm)

RAW DATA ----- 1) Drawings
 2) Photographic plates
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Tables, maps
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. K. Pflug
 Zentralinst. fur Solar-Terrestrische
 Physik
 Telegrafenberg
 Potsdam DDR-1500
 GDR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 PENTELL, GREECE

ITEM: 901
 DATE: 15/07/83

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 38.05
 STATION LONGITUDE ----- E 23.96
 ALTERNATE NAMES ----- Athens
 Natl Observatory of Athens
 DATES OF OPERATION ----- 05/1965 to present
 OBSERVING SCHEDULE ----- Station moved
 REGULAR
 INSTRUMENT DESCRIPTION ----- Optical Telescope, white light observations, a 4 inch refractor.

RAW DATA ----- Drawings
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Drawings
 DATA ROUTINELY PUBLISHED ----- GEOPHYSICS AND SPACE DATA BULLETIN
 Space Physics Lab, AFGL
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Neudon
 ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Institute
 National Observatory of Athens
 Athens 306
 Greece
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 0.5 months. Station moved 5/1973 from M37.97 E23.72.

 PURPLE MOUNTAIN, CHINA

ITEM: 2167
 DATE: 01/03/84

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 32.07
 STATION LONGITUDE ----- E 118.82
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 020 cm refractor
 RAW DATA ----- Drawings
 DATA REDUCTION PRACTICE ----- Manual
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Chinese Solar-Geophysical Data
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Purple Mountain Observatory
 Academia Sinica
 Nanjing
 China
 ADDRESS FOR INFORMATION ABOUT DATA ----- Mr. Xie Gaofeng
 Purple Mountain Observatory
 Academia Sinica
 Nanjing
 China
 ADDITIONAL COMMENTS -----

A01 Sunspot Positions, Areas, and Classification (Cont.)

 RAMEY, PUERTO RICO, USA

ITEM: 478
 DATE: 13/07/83

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 18.50
 STATION LONGITUDE ----- E 292.80
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- AN/PNO-7 Solar Optical Telescope System. White light telescope for sunspots (projection method).
 NOTE: no white light (sunspot) photography.
 Film, photographic prints, forms, drawings

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Film, photographic prints, plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Det 3, 3rd Weather Wing (MAC)
 c/o Postmaster
 FPO
 Miami, FL 34050
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- USA
 National Geophysical &
 Solar-Terrestrial Data Center
 NOAA/EDS
 Boulder, CO 80303
 USA

ADDITIONAL COMMENTS ----- AN/PNO-7 is the official Air Force name for the SOON telescope system.

 SACRAMENTO PEAK, USA

ITEM: 500
 DATE: 01/09/83

DISCIPLINE ----- A01 Sunspot Position, Areas, and Classifications
 STATION LATITUDE ----- N 32.78
 STATION LONGITUDE ----- E 254.68
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- White light patrol telescope, 5 inch dia., 60 inch FL telescope, achromatic lens, no other optics except Schott OGS & VG9 filter. Observes sunrise to 2400 UT. Rates: Normal = 1 picture every 10 minutes, Flare rate = 1 picture every 10 seconds, 35 mm camera.
 Film - original negatives

RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables listing time of events and solar location
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA

ADDITIONAL COMMENTS ----- Station operates in conjunction with H-alpha flare patrol. Special purpose data usually available after 1 month.

 ROME, ITALY

ITEM: 741
 DATE: 01/01/80

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
 STATION LATITUDE ----- N 41.90
 STATION LONGITUDE ----- E 12.50
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 11 cm refractor

RAW DATA -----
 DATA REDUCTION PRACTICE ----- Drawings and Photos
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Bulletins
 DATA ROUTINELY PUBLISHED ----- SOLAR PHENOMENA
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. Torelli
 Osservatorio Astronomico de Roma
 Via del Parco Mellini, 84
 Rome 00136
 Italy

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 SAN FERNANDO OBSERVATORY, USA

ITEM: 2133
 DATE: 09/01/84

DISCIPLINE ----- A01 Sunspot Position, Areas, and Classifications
 STATION LATITUDE ----- N 34.31
 STATION LONGITUDE ----- E 241.51
 ALTERNATE NAMES ----- SFO/CSUN
 DATES OF OPERATION ----- 04/1969 to present
 OBSERVING SCHEDULE ----- IRRREGULAR (Programatic)
 INSTRUMENT DESCRIPTION ----- 61/28 cm vacuum telescope and spectroheliograph, 70 mm film or 512 diode array; 15 cm full disk H-alpha telescope, 15 cm white-light telescope, 1.5 m radio dish at 10.7 cm.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- 70 mm film (calibrated), film and digital intensity for spot areas.
 REGULAR REDUCED DATA AVAILABLE AFTER ----- As needed for sponsored programs
 FORM OF REDUCED DATA ----- MONTHS
 DATA ROUTINELY PUBLISHED ----- Film and magnetic tape
 DATA SENT TO WDC-A ----- On request, when available
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. A. Chapman
 Dept. of Physics and Astronomy
 CSUN
 Northridge, CA 91330
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- SFO/CSUN
 14031 San Fernando Road
 Sylmar, CA 91342
 USA

ADDITIONAL COMMENTS ----- Allied staff are: Dr. A. D. Herzog
 Dr. J. K. Lawrence
 Dr. P. M. Richter
 Elevation is 1217.2 feet above sea-level.

A01 Sunspot Positions, Areas, and Classification (Cont.)

SAN MIGUEL, ARGENTINA

ITEM: 2321
DATE: 13/07/83

DISCIPLINE ----- A01 Sunspot Position, Areas, and Classifications
STATION LATITUDE ----- S 34.52
STATION LONGITUDE ----- E 301.24
ALTERNATE NAMES ----- Observatorio Nacional de Fisica Cosmica
DATES OF OPERATION ----- 07/1952 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Zeiss refractor, aperture 180 mm, reduced to 130 mm. Focal length 2450 mm. Objective filter for visual: D-9, for photographs: D-3.
RAW DATA ----- Manuscripts of visual observations for Wolf-Numbers; 35 mm film for positions.
DATA REDUCTION PRACTICE ----- Monthly
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Ing. Tomas Paneth S.J.
Dept. Fisica Solar
Centro Espacial San Miguel
Av. Mitre 3100
1663 San Miguel
Argentina
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Radio routine has been cancelled.

TASHKENT, USSR

ITEM: 2360
DATE:

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
STATION LATITUDE ----- N
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- 130 mm refractor AFR-3. Image diameter = 75 mm.
RAW DATA ----- White light photographs
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

TAIPEI, TAIWAN, CHINA

ITEM: 2271
DATE: 15/07/83

DISCIPLINE ----- A01 Sunspot Position, Areas, and Classifications
STATION LATITUDE ----- N 25.03
STATION LONGITUDE ----- E 121.51
ALTERNATE NAMES ----- C.M.B.
DATES OF OPERATION ----- 01/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 4-inch equatorial refractor.
RAW DATA ----- Sunspot number and area
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- Report on Sunspot Observation (semi-annual)
DATA SENT TO WDC-A ----- YES: twice a year
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Director
64 Kung Yuan Road
Taipei, Taiwan
China
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

UCCLE, BELGIUM

ITEM: 644
DATE: 01/01/80

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
STATION LATITUDE ----- N 50.80
STATION LONGITUDE ----- E 4.35
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1940 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Merz-Grubb Refractor and Zeiss heliograph on Equatorial Solar Table, sunspot pos/area/class, Merz-Grubb 180 mm Foc 2450 mm, solar 250 mm Heliograph Zeiss Tema AS 130/1950 9x12 plates. Drawings 250 mm, 9x12 photographic plates
RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, computer printouts
DATA ROUTINELY PUBLISHED ----- OBSERVATIONS PHOTOSPHERIQUES 1-A, - Communications de 100s, Royal de Belgique, - Bulletin Astronomique Observ. Royal de Belgique
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. Koectelenbergh
Observatoire Royal de Belgique, DRPS
Avenue Circulaire No. 3
Bruxelles B1180
Belgium
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 1 month. No response received to inquiry for updating material in 1983.

A01 Sunspot Positions, Areas, and Classification (Cont.)

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*****
YUNNAN, CHINA
*****
ITEM: 2293
DATE: 11/07/83

DISCIPLINE ----- A01 Sunspot Positions, Areas, and Classifications
STATION LATITUDE ----- N 25.03
STATION LONGITUDE ----- E 102.78
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1956 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Equatorial mounted refractor, 13 cm aperture,
                               image diameter 17.4 cm for drawing.
RAW DATA ----- Drawings, tables, computer printouts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- MONTHLY SOLAR ACTIVITY OF YUNNAN
                               OBSERVATORY

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Li Wei-Bao
                                           Solar Division
                                           Yunnan Observatory
                                           Kunming
                                           China
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
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A02 Sunspot Numbers

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*****
ATHENS, GREECE
*****
ITEM: 1145
DATE: 15/07/83

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 37.85
STATION LONGITUDE ----- E 23.72
ALTERNATE NAMES ----- Det 3, 2nd Weather Wing
DATES OF OPERATION ----- 12/1965 to present
OBSERVING SCHEDULE ----- The optical observatory moved from the
                          heart of Athens (near the Acropolis) to Pendellis
                          Hill (10 miles NE of the old site) in May 1973.
                          Limited
                          Daily sunrise to sunset optical patrol terminated
                          during Sep 1976. Limited patrol has been conducted
                          since then. OJA 1 Oct 79, limited daily patrol
                          hours will be 06 -14Z.
INSTRUMENT DESCRIPTION ----- Unitron 10 cm optical telescope (white light)
                          mounted on the Razdon MS-250 H-alpha telescope.
RAW DATA ----- Drawings
DATA REDUCTION PRACTICE ----- Film, strip charts, drawings
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
FORM OF REDUCED DATA ----- REGULAR
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO MDC-A ----- YES
DATA SENT TO MDC-B ----- YES
DATA SENT TO MDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Det 7, 4th Weather Wing
                          APO
                          New York, NY 09223
                          USA
ADDRESS FOR INFORMATION ABOUT DATA ----- NOAA, Thessalon (306) Athens, Greece
ADDITIONAL COMMENTS ----- Data are the property of the National Observatory
                          of Athens (NOA). Sunspot data transmission to
                          MDC began March 1983.
    
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*****
BOULDER, USA
*****
ITEM: 920
DATE: 10/05/84

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 39.98
STATION LONGITUDE ----- E 254.72
ALTERNATE NAMES ----- Boulder Observatory
                          SOLFERWARR
DATES OF OPERATION ----- 06/1965 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- White Light Telescope, daily sunspot drawings,
                          original equipment (CRITERION) operated independ-
                          ently. In July 1967 CRITERION telescope piggy-
                          backed onto H-alpha telescope. Normal procedure
                          sunspot drawing, coded reports
RAW DATA ----- Sunspot drawings, coded reports
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Sunspot drawings, coded reports
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO MDC-A ----- YES
DATA SENT TO MDC-B ----- YES
DATA SENT TO MDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
                          NOAA R/E/SE2
                          325 Broadway
                          Boulder, CO 80303
                          USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data are part of the US Operational Flare
                          Patrol Network.
    
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*****
BIG BEAR, USA
*****
ITEM: 2326
DATE: 01/08/83

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 34.16
STATION LONGITUDE ----- E 243.49
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1969 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Full disk calcium and white light observations,
                          1 or 2 frames daily.
RAW DATA ----- Digital recording and 35 mm film
DATA REDUCTION PRACTICE ----- Calcium data reduced on computer
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tabular and photographs
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO MDC-A ----- YES
DATA SENT TO MDC-B ----- YES
DATA SENT TO MDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- M. Zirin
                          California Inst. of Technology 264-33
                          1201 E. California Blvd.
                          Pasadena, CA 91125
                          USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Observatory address: Big Bear Solar Observatory,
                          North Shore Drive, Big Bear City, California, USA 92314.
    
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*****
BUENOS AIRES, ARGENTINA
*****
ITEM: 75
DATE: 24/02/76

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- S 34.55
STATION LONGITUDE ----- E 301.27
ALTERNATE NAMES ----- San Miguel
DATES OF OPERATION ----- 01/1940 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Equatorial Mounted Refractor, 18cm aperture, 2.5m
                          focal distance, 2 frames during the day.
RAW DATA ----- Film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO MDC-A ----- YES
DATA SENT TO MDC-B ----- YES
DATA SENT TO MDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- San Miguel
                          Observatorio Nacional de Fisica Cosmica
                          Av. Mitre 3100
                          San Miguel, Buenos Aires 1663
                          Argentina
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating
                          material in 1980 or 1983.
    
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A02 Sunspot Numbers (Cont.)

CANARIAS, CANARY ISLANDS

ITEM: 598
DATE: 01/01/75

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 28.48
STATION LONGITUDE ----- E 343.72
ALTERNATE NAMES ----- Tenerife
DATES OF OPERATION ----- 01/1970 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- REGULAR
Rezdow 250 Solar Telescope. Since 08/1972 40 cm
Vacuum telescope in use. Probably beginning in
1976 both will be in use. Purpose is to obtain
high resolution of sunspots in white light, and
occasionally filtergrams in H-alpha. Not on a
routine program, although trying to cover as many
days as possible.
RAW DATA ----- 35 mm film (Scale 5.5 arcsec/mm)
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Instituto Universitario de Astrofisica
Universidad de La Laguna
La Laguna, Tenerife
Spain
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response to inquiry for updating material in
1980 or 1983.

DILIMAN, THE PHILIPPINES

ITEM: 2273
DATE: 22/04/83

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 14.65
STATION LONGITUDE ----- E 121.07
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 15 cm Refractor: 250 cm focal length,
equatorial mounting, projection eyepiece
with 40 mm focal length.
RAW DATA ----- Total solar image, 20.3 cm, projection
and drawing of sunspots
DATA REDUCTION PRACTICE ----- Visual count of sunspots in the drawings
REGULAR REDUCED DATA AVAILABLE AFTER ----- Available 5 days after the end of each month
FORM OF REDUCED DATA ----- Tabulated in time, image quality, number
of groups/spots in northern and southern
hemispheres, daily Wolf number
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-R ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES: 1975 to present
ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Observatory
National Geophysical & Astronomical Office
PAGASA
1424 Quezon Avenue
Quezon City
The Philippines
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Reduced data is sent monthly to the WDC stations.

CATANIA, ITALY

ITEM: 100
DATE: 01/08/83

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 37.50
STATION LONGITUDE ----- E 15.08
ALTERNATE NAMES -----
DATES OF OPERATION ----- 4/1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Refractor 15 cm/223 cm
RAW DATA ----- Drawings, tables, computer printouts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables, computer printouts
DATA ROUTINELY PUBLISHED ----- Pub. of Catania Astrophys. Obs.
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. P. Maffei, Director
Osservatorio Astrofisico
Catania
Italy
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data are usually available immediately.

EBRO, SPAIN

ITEM: 619
DATE: 15/07/83

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 40.82
STATION LONGITUDE ----- E 0.49
ALTERNATE NAMES ----- Tortosa
DATES OF OPERATION ----- 01/1905
OBSERVING SCHEDULE ----- Operation Intermittent
INSTRUMENT DESCRIPTION ----- Equatorial (visual, photographic) telescope,
sunspot numbers, daily photograph and visual
projection
RAW DATA ----- Photographic plates
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- YES: Zurich-Daily Urstrom (USSPS) to
Meudon
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio del Ebro
Roquetes
Tarragona
Spain
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- The sunspot numbers were obtained from the daily
photographs since 1943.

A02 Sunspot Numbers (Cont.)

 HAMBURG, FRG

ITEM: 944
 DATE: 04/01/84

DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 53.64
 STATION LONGITUDE ----- E 9.96
 ALTERNATE NAMES ----- Planetarium Hamburg, Germany
 Gesellschaft Volkstumliche Astron
 DATES OF OPERATION ----- 06/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 150/2225 mm refractor, 75/1200 mm refractor.
 Two C8, 200/4000 Brachyt. Daystar H-alpha
 Filter. Spectral equipment for observing
 prominences. A few amateur astronomers
 send observations to the German Sun-Observer
 Organization.

RAW DATA ----- Drawings, lists
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- List, graphical plots
 DATA ROUTINELY PUBLISHED ----- Sternkrieger GvA, SUNNE
 Germany

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ges. f. volkst. Astronomie eV
 Section Sonne
 Hindenburgstr 01
 2000 Hamburg 60
 FRG

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Participants: Eugenides Foundation, M. Paphthassidou,
 Athens, Greece; Oibers Gesellschaft, Bremen, Germany;
 Volkssternwarte, Darmstadt, Germany; Wilhelm Forster
 Sternwarte, Berlin, Germany. Data regularly sent to
 VdS Berlin, Germany and Oibers Gesellschaft, Bremen
 and "Sonne".

 ISTANBUL, TURKEY

ITEM: 2256
 DATE: 01/08/83

DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 41.01
 STATION LONGITUDE ----- E 31.93
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR: Every day, once per day
 INSTRUMENT DESCRIPTION ----- Aperture: 13 cm
 Focal Length: 200 cm
 Disc Diameter: 25 cm

RAW DATA ----- Hand drawings of sunspots and
 photospheric faculae
 DATA REDUCTION PRACTICE ----- Determination of heliographic coordinates
 by means of discs of Stonyhurst
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Sunspot positions, classifications,
 sunspot groups and numbers
 DATA ROUTINELY PUBLISHED ----- Yearly: "Publication of the Istanbul
 University Observatory"
 YES: monthly

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- YES
 University Observatory
 University - Istanbul
 Turkey

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Areas of sunspots will be sent at the beginning
 of 1984.

 HURBANOVO, CZECHOSLOVAKIA

ITEM: 954
 DATE: 01/01/80

DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 47.87
 STATION LONGITUDE ----- E 18.19
 ALTERNATE NAMES ----- Slovak Center/Amateur Astronomy
 DATES OF OPERATION ----- 09/1968 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 The photosphere is observed visually (sunspot
 drawings) and photographically by means of a
 Zeiss Coude refractor 150/2250 mm. Relative
 numbers are tabulated.

RAW DATA ----- Drawings, photographic plates
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA, QUARTERLY
 BULLETIN ON SOLAR ACTIVITY
 YES

DATA SENT TO WDC-A ----- YES: Meudon
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Bohus'ev Lukac
 The Slovak Center of Amateur Astronomy
 Komarnanska x 65
 Hurbanovo 538 947 01
 Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Co-investigator: Milan Belik. Observations were
 intermittent from 1. 1972 to 12/1973.
 No response received to inquiry for updating material
 in 1983.

 KANDILLI, TURKEY

ITEM: 957
 DATE: 15/07/83

DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 41.06
 STATION LONGITUDE ----- E 29.06
 ALTERNATE NAMES ----- Istanbul
 DATES OF OPERATION ----- 1947 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar observations, Zeiss Zena refractor
 20/307 cm. Objective solar image diameter
 25 cm.

RAW DATA ----- Drawings
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kandilli Observatory
 Heliophysics Service
 Cengelkoy, Istanbul
 Turkey

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available immediately.

A02 Sunspot Numbers (Cont.)

 KANZELHOEHE, AUSTRIA

ITEM: 961
 DATE: 03/01/84

DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 46.68
 STATION LONGITUDE ----- E 13.91
 ALTERNATE NAMES ----- Sonnenobss der Univ Graz
 DATES OF OPERATION ----- 05/1944 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Patrol Telescope, 11/165 cm objective, solar
 image diameter 25 cm, projection drawings; spec-
 ular photographs of interesting spot groups.

RAW DATA ----- Drawings, tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Uccle
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Sonnenobservatorium Kanzelhoehe
 Universitaet Graz
 Sattendorf
 A-9520
 Austria
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Gaps after 1955: 8/1966-1/1967 and 5/1967-4/1968.

 LUNPING, TAIWAN, CHINA

ITEM: 904
 DATE: 11/01/84

DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 25.00
 STATION LONGITUDE ----- E 121.17
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Geco Telescope with heliostat system, by the
 method of projection to observed sunspots, one
 observation for each fine day.

RAW DATA ----- Drawings, film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Report of Lunping Observatory, Sunspot:
 published by Telecommunication Lab,
 M.O.C., Taiwan, China
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Y. M. Huang
 Telecommunication Laboratories, M.O.C.,
 P.O. Box 71
 Chung-Li 320
 Taiwan, China
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LUANDA, WEST AFRICA

ITEM: 362
 DATE: 26/02/75

DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- S 8.79
 STATION LONGITUDE ----- E 13.31
 ALTERNATE NAMES ----- Estacao Solar do Sentro
 Espacial da Mulemba
 Mulemba Space Center, Solar Station
 14/09/1973 to present
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Integral light heliograph, 3 mirror helio-
 graph with heliostat tower, with possibility
 of direct sun observation. Projection pho-
 tography and equipment for sunspots helio-
 graphic position determination. Future pro-
 grammed installation of H filter.

RAW DATA ----- Photographic paper, drawings,
 graphs, lists
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Graphs, photographic paper,
 drawings, lists
 DATA ROUTINELY PUBLISHED ----- Data is published at the end of each
 year in the annual report to the
 Angolas Government.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Centro Espacial Da Mulemba
 C. P. 1366-C
 Luanda, Angola
 West Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data are on photographic paper and drawings when the
 size of sunspots justifies this; also graphs of Wolf
 numbers and lists of relative sunspot numbers from
 which the monthly graphs are derived. Special pur-
 pose data usually available after 1 month.
 No response to inquiry for updating material in
 1980 or 1983.

 MANILA, PHILIPPINES

ITEM: 995
 DATE: 22/07/83

DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 14.65
 STATION LONGITUDE ----- E 121.07
 ALTERNATE NAMES ----- PAGASA Astronomical Observatory
 DATES OF OPERATION ----- 01/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Refracting Telescope, 15 cm with 250 cm focal
 length, equatorially mounted. Solar image is
 projected onto an 8 inch circle and sunspots
 drawn and counted. Observation time is around
 0000 UT daily.

RAW DATA ----- Drawings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tabular form
 DATA ROUTINELY PUBLISHED ----- BULLETIN OF ASTRONOMICAL OBSERVA-
 TIONS (PAGASA) annual
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Uccle
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Observatory
 Natl Geophysical & Astronomical Service
 PAGASA, P.O. Box 2277
 Manila
 Philippines
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Although a months data is reduced and available
 after 1 months time, it is not published separately.
 It will be contained in the annual Bulletin.

A02 Sunspot Numbers (Cont.)

 MITAKA, TOKYO, JAPAN

 ITEM: 2250
 DATE: 18/07/83
 DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 35.67
 STATION LONGITUDE ----- E 139.55
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1939 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 8 inch refractor (drawings)
 4 inch refractor (photographs)
 RAW DATA ----- Drawings and sheet film
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Monthly bulletin of Solar Phenomena
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Solar Physics Division
 Tokyo Astronomical Observatory
 Mitaka, Tokyo 181
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 POTSDAM, GDR

 ITEM: 1137
 DATE: 01/08/83
 DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 52.38
 STATION LONGITUDE ----- E 13.07
 ALTERNATE NAMES ----- Sonnenobservatorium Einsteinurm
 DATES OF OPERATION ----- 1943 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Refractor (f = 195 cm, d = 13 cm)
 RAW DATA ----- Drawings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES (C1)
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- U+K. Pflug
 Zentralinst. fur Solar-Terrestrische
 Physik
 Telegrafenberg
 Potsdam DDR-1500
 GDR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 HENTIFI, GREECE

 ITEM: 401
 DATE: 15/07/83
 DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 38.05
 STATION LONGITUDE ----- E 23.06
 ALTERNATE NAMES ----- Athens
 DATES OF OPERATION ----- 05/1965 to present
 Station moved
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Optical telescope, white light observations,
 a 4 inch refractor.
 RAW DATA ----- Drawings
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Drawings
 DATA ROUTINELY PUBLISHED ----- GEOPHYSICS AND SPACE DATA BULLETIN
 Space Physics Lab, AFGL
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES: *Neuton*
 ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Institute
 National Observatory of Athens
 Athens 106
 Greece
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 0.5 months.
 Station moved 5/1973 from N37,97 E23,72.

 PRESTON, UNITED KINGDOM

 ITEM: 476
 DATE: 01/01/80
 DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 53.77
 STATION LONGITUDE ----- E 35.30
 ALTERNATE NAMES ----- Jeremiah Horrocks Obs
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Sunspot drawings (8 inch refractor)
 RAW DATA ----- Drawings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- N
 DATA SENT TO WDC-C ----- N
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. V. Barocas
 Jeremiah Horrocks & Wilfred Hall Obs.
 Moor Park
 Preston, Lancashire PR1 6AD
 England
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

A02 Sunspot Numbers (Cont.)

ITEM: 2171
DATE: 01/03/84

PURPLE MOUNTAIN, CHINA

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 32.07
STATION LONGITUDE ----- E 118.82
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 020 cm refractor
RAW DATA ----- Drawings
DATA REDUCTION PRACTICE ----- Manual
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- Chinese Solar-Geophysical Data
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Purple Mountain Observatory
Academia Sinica
Nanjing
China

ADDRESS FOR INFORMATION ABOUT DATA ----- Mr. Xie Geofang
Purple Mountain Observatory
Academia Sinica
Nanjing
China

ADDITIONAL COMMENTS -----

ITEM: 2272
DATE: 15/07/83

TAIPEI, TAIWAN, CHINA

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 25.03
STATION LONGITUDE ----- E 121.51
ALTERNATE NAMES ----- C.W.B.
DATES OF OPERATION ----- 01/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 4-inch equatorial refractor.
RAW DATA ----- Sunspot number and area
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- Report on Sunspot Observation (semi-annual)
DATA SENT TO WDC-A ----- YES: twice a year
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Director
64 Kung Yuan Road
Taipei
Taiwan, China

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS -----

ITEM: 2322
DATE: 1/07/83

SAN MIGUEL, ARGENTINA

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- S 34.52
STATION LONGITUDE ----- E 301.24
ALTERNATE NAMES ----- Observatorio Nacional de Fisica Cosmica
DATES OF OPERATION ----- 07/1952 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Zeiss refractor, aperture 180 mm, reduced to 130 mm, focal length 2450 mm, objective filter for visual; D=5, for photographs; D=3.
RAW DATA ----- Manuscripts of visual observations for Wolf-Numbers; 35 mm film for positions.
DATA REDUCTION PRACTICE ----- Monthly
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Ing. Tomas Paneth S.J.
Dept. Fisica Solar
Centro Especial San Miguel
Av. Mitre 3100
1663 San Miguel
Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- Radio routine has been cancelled.

ITEM: 2161
DATE: 23/02/77

TSMILJANSK, USSR

DISCIPLINE ----- A02 Sunspot Numbers
STATION LATITUDE ----- N 47.70
STATION LONGITUDE ----- E 42.00
ALTERNATE NAMES ----- REPSTAT
UES Agromet
DATES OF OPERATION ----- 4/1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard magnetometer
Spectroheliograph
H-alpha Cinema Flame Patrol
Pyranometer with galvanometric recorder (Kipp & Zonen). Recording and measurement of total solar radiation. Thermoelectric sensor connected to printing galvanometric recorder. Schedule of observation is from 2100 GMT to 1200 GMT.
Refractor 15 cm/223 cm
RAW DATA ----- Drawings, tables, comp. printouts
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables, computer printouts
DATA ROUTINELY PUBLISHED ----- RADIANT ENERGY AND SUNSHINE published by PAGASA. Monthly summary of hourly and daily radiation values.
Pub. of Catania Astrophys. Obs.
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: Meudon
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. N. V. Pushkov
IZMIRAN
PO Akademgorodok
Moscow Region, Northern Samar
142 092
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- National Radiation Center
PAGASA
1424 Quezon Blvd. Ext.
Quezon City, Victoria 3004
Philippines

ADDITIONAL COMMENTS ----- Data reduced regularly 10/1970-3/1975. Data since 3/1975 expected to be reduced in early 1976. Special purpose data are usually available immediately.

A02 Sunspot Numbers (Cont.)

 UCCLE, BELGIUM

 ITEM: 642
 DATE: 01/01/80
 DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 50.80
 STATION LONGITUDE ----- E 4.35
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1940 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Merz Grubb Refractor ou Equatorial Solar Table
 160 mm, foc 2450 mm, solar image 250 mm on pro-
 jection sheet.
 RAW DATA ----- Drawing, 9x12 plates from Zeiss
 heliograph
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED ----- OBSERVATIONS PHOTOSPHERIQUES 1-A,
 + Communications de l'Obs. Royal de
 Belgique, + Bulletin Astronomique
 Observ. Royal de Belgique
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Dr. A. Koockelenbergh
 Observatoire Royal de Belgique, DRPS
 Avenue Circulaire No. 3
 Bruxelles B.1180
 Belgium
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- On the same equatorial table: Zeiss heliograph of
 130 mm, 1950 mm foc, 9x12 plates, Scientia-Agfa
 Gevaert 10 E56. Special purpose data available af-
 ter 1 month.
 No response received to inquiry for updating material
 in 1983.

 USHUAIA, ARGENTINA

 ITEM: 2308
 DATE: 13/07/83
 DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- S 54.80
 STATION LONGITUDE ----- E 291.70
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 12/1983 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 3 "La Jolla Science" riometers (27, 30 and 35 MHz)
 RAW DATA ----- Paper bands, pen recordings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Computer data sheets
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- LIARA
 Av. Libertador 327
 1638 Vte. Lopez
 Buenos Aires
 Argentina
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 YUNNAN, CHINA

 ITEM: 2294
 DATE: 25/11/83
 DISCIPLINE ----- A02 Sunspot Numbers
 STATION LATITUDE ----- N 25.03
 STATION LONGITUDE ----- E 102.78
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1956 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Refractor 13 cm/195 cm, image diameter 17.4 cm
 for observation.
 RAW DATA ----- Drawing, tables, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED ----- MONTHLY SOLAR ACTIVITY OF YUNNAN
 OBSERVATORY
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Li Mei-Bo
 Solar Division
 Yunnan Observatory
 Kunming
 China
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

A03 Solar Magnetic Fields

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.....
ITEM: 2361
DATE: 29/04/75
.....
DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N 50.47
STATION LONGITUDE ----- E 44.17
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Solar magnetic fields in sunspots, daily visual
measurements, active magnetic fields in active
regions with a bidirectional magnetograph.
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Drawings, maps
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. V. I. Teplov
DZIZMIR 66001
P.O. Box 4
Izmir 33
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response to inquiry for updating material
in 1980.

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.....
KASAKH ASTRONOMICAL INST., USSR
DATE:
.....
DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- High altitude station (3000 m), Coronagraph
(0.45 m dia, F=8 m), He-alpha filter (small),
Solar image size = 160 mm, vector magnetograph;
horizontal solar telescope AC-5,
Filtergrams, Zeiss coronagraph
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA -----

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ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and IAG-B3. No confirmation or additional information was received upon inquiry to World Data Center-B.

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.....
IZMIRAN, USSR
DATE:
.....
DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- Restricted by weather conditions
INSTRUMENT DESCRIPTION ----- Tower solar telescope with birefringent, H-
alpha-filter "doton" (the band of 0.25A moved
over He-alpha contour within ± 1.0A per 0.25A).
Spectrograph.
RAW DATA ----- Spectrograms for measuring sunspot magnetic
fields.
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA -----

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.....
KISLOVODSK, USSR
DATE: 29/04/75
.....
DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N 44.70
STATION LONGITUDE ----- E 42.60
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Coronagraphs with objectives of 20 and 43 cms.
RAW DATA ----- Photos, tables, charts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tables, photos
DATA ROUTINELY PUBLISHED ----- SOLAR DATA (Pulkovo Obs),
Zurich Quarterly Solar Bulletin
YES
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Kislovodsk Station of Pulkovo Obs
P.O. Box 1
Kislovodsk 357741
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response to inquiry for updating material in
1980.

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ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and IAG-B3. No confirmation or additional information was received upon inquiry to World Data Center-B.

A03 Solar Magnetic Fields (Cont.)

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*****
ITEM: 224
DATE: 1970/3/3
*****
DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N 21.46
STATION LONGITUDE ----- E 149.249
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- Intermittent observation
INSTRUMENT DESCRIPTION ----- 140cm Schmidt telescope
1.27m solar photospheric magnetograph, a 51P
honeywell magnetic type magnetograph, 1 arcsecond
pixel, and a magnetic field observatory since
4/1970 (previously magnetic field lines are given
in separate form which is transmitted by phone to
NAB-DC, Brewster Center)
RAW DATA ----- 8mm magnetic tape, computer
printsouts, full disk observations
DATA REDUCTION PRACTICE ----- 8mm
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
FORM OF REDUCED DATA ----- 8mm
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
    Mt. Wilson National Observatory
    4711, Box 28752
    Pasadena, CA 91126
    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Investigator's reference. Special purpose data
usually available immediately.
    
```

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*****
ITEM: 2244
DATE:
*****
MOUNT SAYAN OBSERVATORY, USSR
*****
DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Solar telescope with panorama magnetograph,
    Coronagraph (12MIR),
    Photonegograms of sunspots, drawings
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
*****
ADDRESS FOR INFORMATION ABOUT DATA -----
*****
ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
    directory from information contained in a World Data
    Center-B catalog and UAG-83.
    No confirmation or additional information was received
    upon inquiry to World Data Center-B.
    
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*****
ITEM: 237
DATE: 01/10/83
*****
MOUNT WILSON OBSERVATORY, USA
*****
DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N 34.22
STATION LONGITUDE ----- E 242.06
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1957 to present
OBSERVING SCHEDULE ----- Early morning or whenever the sky is clear
INSTRUMENT DESCRIPTION ----- f/150 telescope with an objective = 30 cm.
RAW DATA ----- Magnetic tape
DATA REDUCTION PRACTICE ----- Computer plot
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4/30 MONTHS
FORM OF REDUCED DATA ----- Plots
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA,
    US Dept of Commerce, Boulder,
    CO USA 80303)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- Through WDC-A
ADDRESS FOR INFORMATION ABOUT STATION ----- John M. Adkins
    Solar Department
    813 Santa Barbara Street
    Pasadena, CA 91101
    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
ITEM: 2240
DATE: 05/07/83
*****
MOUNT WILSON OBSERVATORY, USA
*****
DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N 34.22
STATION LONGITUDE ----- E 242.06
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1957 to present
OBSERVING SCHEDULE ----- Early morning or whenever the sky is clear
INSTRUMENT DESCRIPTION ----- f/150 telescope with an objective = 30 cm.
RAW DATA ----- Magnetic tape
DATA REDUCTION PRACTICE ----- Computer plot
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4/30 MONTHS
FORM OF REDUCED DATA ----- Plots
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA,
    US Dept of Commerce, Boulder,
    CO USA 80303)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- Through WDC-A
ADDRESS FOR INFORMATION ABOUT STATION ----- John M. Adkins
    Solar Department
    813 Santa Barbara Street
    Pasadena, CA 91101
    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```


A03 Solar Magnetic Fields (Cont.)

 POTSDAM, GDR

ITEM: 474
 DATE: 01/08/83

DISCIPLINE ----- A03 Solar Magnetic Fields
 STATION LATITUDE ----- N 52.38
 STATION LONGITUDE ----- E 13.07
 ALTERNATE NAMES ----- Sonnenobservatorium Einsteinurm
 DATES OF OPERATION ----- 1) 1946 to present, 2) 1972 to present
 OBSERVING SCHEDULE ----- OCCASIONAL
 INSTRUMENT DESCRIPTION ----- Tower telescope (f = 1400 cm, d = 60 cm) with
 grating spectrograph (f = 1200 cm, grating 14 cm
 x 15 cm) containing
 1) device for photographic Zeeman spectrograms
 for Fe I 6303 A
 2) magnetograph for Fe 5253 A

RAW DATA ----- 1) Photographic film
 2) Analog paper records, digital records

DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- 1) Tables, graphical plots
 2) Tables, maps

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. K. Pflug
 Zentralinst fur Solar-Terrestrische
 Physik
 Telegrafenberg
 Potsdam DDR-1500
 GDR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SACRAMENTO PEAK, USA

ITEM: 501
 DATE: 01/09/83

DISCIPLINE ----- A03 Solar Magnetic Fields
 STATION LATITUDE ----- N 32.70
 STATION LONGITUDE ----- E 254.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1967 to present
 OBSERVING SCHEDULE ----- OCCASIONAL
 INSTRUMENT DESCRIPTION ----- Doppler-Zeeman Analyzer. Non-saturating double
 slit analyzer. Observing schedule is occasional,
 used mostly for active regions. Occasionally
 used for velocities.

RAW DATA ----- Digital magnetic tape, computer
 printouts, drawings
 Special

DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Computer printouts, drawings, digital
 magnetic tape

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Jack Zirker
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA

ADDITIONAL COMMENTS ----- Special purpose data usually available after 1 month.

 ROME, ITALY

ITEM: 745
 DATE: 01/01/80

DISCIPLINE ----- A03 Sunspot Magnetic Fields
 STATION LATITUDE ----- N 41.90
 STATION LONGITUDE ----- E 12.50
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solat tower, objective lens 45 cm diameter
 and grating spectrograph

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Bulletins
 DATA ROUTINELY PUBLISHED ----- SOLAR PHENOMENA
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Maria Torelli
 Osservatorio Astronomico di Roma
 Via del Parco Mellini, 84
 Rome 00136
 Italy

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

 SAN FERNANDO OBSERVATORY, USA

ITEM: 2141
 DATE: 09/01/84

DISCIPLINE ----- A03 Solar Magnetic Fields
 STATION LATITUDE ----- N 34.31
 STATION LONGITUDE ----- E 241.51
 ALTERNATE NAMES ----- SFO/CSUN
 DATES OF OPERATION ----- 04/1969 to present
 OBSERVING SCHEDULE ----- IRREGULAR (Programatic)
 INSTRUMENT DESCRIPTION ----- 61/28 cm vacuum telescope and spectroheliograph,
 70 mm film or 512 diode array; 15 cm full disk
 H-alpha telescope, 15 cm white-light telescope,
 1.5 m radio dish at 10.7 cm.

RAW DATA ----- 70 mm film (calibrated), film and
 digital intensity for spot areas.
 As needed for sponsored programs

DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Film and magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- On request, when available
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. G. A. Chapman
 Dept. of Physics and Astronomy
 CSUN
 Northridge, CA 91330
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- SFO/CSUN
 14031 San Fernando Road
 Sylmar, CA 91342
 USA

ADDITIONAL COMMENTS ----- Allied staff are: Dr. A. D. Herzog
 Dr. J. K. Lawrence
 Dr. P. H. Richter
 Elevation is 1217.2 feet above sea-level

A03 Solar Magnetic Fields (Cont.)

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*****
STANFORD, USA
*****
ITEM: 573
DATE: 06/07/83

DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N 37.41
STATION LONGITUDE ----- E 237.83
ALTERNATE NAMES ----- Stanford Solar Observatory
DATES OF OPERATION ----- 07/1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Babcock Solar Magnetograph. Synoptic observa-
tions from sunrise to sunset.

RAW DATA ----- Digital magnetic tape
DATA REDUCTION PRACTICE ----- Daily
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape
DATA ROUTINELY PUBLISHED ----- Solar Geophysical Data/NOAA
DATA SENT TO MDC-A ----- Monthly
DATA SENT TO MDC-B -----
DATA SENT TO MDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Philip H. Scherrer
Inst. for Plasma Res.,
Stanford University
Via Grespi
Stanford, CA 94305 USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data can be obtained in near real time.

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*****
YUNNAN, CHINA
*****
ITEM: 2295
DATE: 25/11/83

DISCIPLINE ----- A03 Solar Magnetic Fields
STATION LATITUDE ----- N 25.03
STATION LONGITUDE ----- E 102.78
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Horizontal spectrograph, solar image 42 cm, FeI
6173A for sunspots magnetic fields, daily photographic
measurements.

RAW DATA ----- Drawing, photographic plates
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Map of sunspot magnetic fields
DATA ROUTINELY PUBLISHED ----- MONTHLY SOLAR ACTIVITY OF YUNNAN OBSERVATORY
DATA SENT TO MDC-A -----
DATA SENT TO MDC-B -----
DATA SENT TO MDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Ding You-Ji
Solar Division
Yunnan Observatory
Kunming
China
ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. Zhen Shu-Hua
Solar Division
Yunnan Observatory
Kunming
China
ADDITIONAL COMMENTS -----

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A04 H-Alpha Observations (other than flares)

 ATHENS, GREECE

ITEM: 1146
 DATE: 15/07/83

DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
 STATION LATITUDE ----- N 37.85
 STATION LONGITUDE ----- E 23.72
 ALTERNATE NAMES ----- Det 3, 2nd Weather Wing
 DATES OF OPERATION ----- 12/1965 to present
 OBSERVING SCHEDULE ----- Limited
 The solar observatory moved from the heart of Athens (near the Acropolis) to Pendelli Hill (10 miles NE of the old site) in May 1973.
 Daily sunrise to sunset optical patrol terminated in Sept. 1976. Limited optical patrol has been conducted since. O/A 1 Oct 79, daily optical patrol hours will be 06 - 14Z.
 Instrument Description ----- Razzow WS-250 Optical Telescope (H-alpha)

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Loqs
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Det 7, 4th Weather Wing
 APO
 New York, NY 09223
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- NOAA
 Thessalon (306)
 Athens
 Greece
 ADDITIONAL COMMENTS ----- Data are the property of the National Observatory of Athens (NOA).

 BUCHAREST, ROMANIA

ITEM: 932
 DATE: 01/01/80

DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
 STATION LATITUDE ----- N 44.41
 STATION LONGITUDE ----- E 26.05
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha Filter, photographic patrol of the chromosphere with 1/2A Hale Filter (refractor 100/150 cm) with 15 and 40 mm diameter image of the sun.

RAW DATA ----- Film, photographic plate
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, film, photographic prints
 DATA ROUTINELY PUBLISHED ----- OBSERVATIONS SOLAIRES, SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Meudon
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Calin Popovici
 Astronomical Observatory
 Cutitul de argint 5
 Bucharest
 Romania
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 2 months.
 No response received to inquiry for updating material in 1983.

 BOULDER, USA

ITEM: 927
 DATE: 10/05/84

DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
 STATION LATITUDE ----- N 39.98
 STATION LONGITUDE ----- E 254.72
 ALTERNATE NAMES ----- Boulder Observatory
 SOLTERWARRN
 DATES OF OPERATION ----- 05/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha Telescope (Razzow W120), eyepiece, TV monitor, 35 mm film, Daily photos.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- NONE MONTHS
 FORM OF REDUCED DATA ----- 35 mm film, prints
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
 NOAA R/E/SE2
 325 Broadway
 Boulder, CO 80303
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 BUENOS AIRES, ARGENTINA

ITEM: 76
 DATE: 24/02/76

DISCIPLINE ----- A04 H-alpha Observations (other than flares)
 STATION LATITUDE ----- S 34.55
 STATION LONGITUDE ----- E 301.27
 ALTERNATE NAMES ----- San Miguel
 DATES OF OPERATION ----- 01/1968 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha spectroheliograph, Gregory axis, 30 cm aperture in solar tower 12 m high, 3 frames during the day.

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Photographic paper
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- San Miguel
 Observatorio Nacional de Fisica Cosmica
 San Miguel, Buenos Aires 1663
 Argentina
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Some minor interruptions due to mechanical and electronic problems. No response to inquiry for updating material in 1980 or 1983.

A04 H-Alpha Observations (other than flares) (Cont.)

 CATANIA, ITALY

 ITEM: 101
 DATE: 13/01/84
 DISCIPLINE ----- A04 H-alpha Observations (other than flares)
 STATION LATITUDE ----- N 37.90
 STATION LONGITUDE ----- E 15.08
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Refractors 15/180 and 15/230, H-alpha, Halle and
 Zeiss filters, K2,3,2
 RAW DATA ----- Films, drawings, tables, computer
 printouts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED ----- Publications of the Catania Astro-
 physical Observatory
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Meudon
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. A. Zappala
 Istituto di Astronomia
 Catania 95125
 Italy
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose observations are usually available
 immediately.

 ZHIRAN, USSR

 ITEM: 2365
 DATE:
 DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- Restricted by weather conditions
 INSTRUMENT DESCRIPTION ----- Tower solar telescope with birefringent, H-
 alpha-filter "Opton" (the band of 0.25A moved
 over H-alpha contour within $\pm 1.0A$ per 0.25A).
 Spectrograph.
 RAW DATA ----- Spectrograms for measuring sunspot magnetic
 fields.
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 KURBANOVIC, CZECHOSLOVAKIA

 ITEM: 953
 DATE: 01/01/80
 DISCIPLINE ----- A04 H-Alpha observations (other than flares)
 STATION LATITUDE ----- N 47.87
 STATION LONGITUDE ----- E 14.19
 ALTERNATE NAME ----- Slovak Center/Amateur Astronomy
 DATES OF OPERATION ----- 09/1968 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- Spectroheliograph for measurements of the H-alpha
 line width.
 RAW DATA ----- Photographic plate, film, strip
 chart, tables, drawings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES: Meudon
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Bohuslav Lukac
 The Slovak Center of Amateur Astronomy
 Pansudsanska 165
 Hurbanovo SKM 947 01
 Czechoslovakia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Co-investigator: Milan Belak. Observations were
 intermittent from 11/1972 to 11/1973.
 No response received to inquiry for updating material
 in 1983.

 KANDILLI, TURKEY

 ITEM: 959
 DATE: 01/02/84
 DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
 STATION LATITUDE ----- N 41.06
 STATION LONGITUDE ----- E 29.06
 ALTERNATE NAMES ----- Istanbul
 DATES OF OPERATION ----- 1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Zeiss refractor 15/225 cm. AS objective
 0.25A H-alpha Zeiss filter
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Bosphorus University
 Kandilli Observatory
 Heliophysics Service
 Cengelkoy, Istanbul
 Turkey
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available immediately.

A04 H-Alpha Observations (other than flares) (Cont.)

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*****
KANZELHOEHE, AUSTRIA
*****
ITEM: 298
DATE: 03/01/84

DISCIPLINE ----- A04 H-alpha Observations (other than flares)
STATION LATITUDE ----- N 46.68
STATION LONGITUDE ----- E 13.91
ALTERNATE NAMES ----- Sonnenobs Kanzelhoeh
DATES OF OPERATION ----- 05/1972 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Patrol Telescope with 0.7A H-alpha filter, 10 cm
diameter objective, 0.7A H-alpha filter (Lyot
type), 15 mm image diameter changed to 22 mm
in the future, 24x36 mm-sq film format, maximum
6 frames/min.

RAW DATA ----- Film
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tables, photographic prints
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Sonnenobservatorium Kanzelhoeh
Universitaet Graz
Sattendorf A-9520
Austria

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
KISLOVODSK, USSR
*****
ITEM: 973
DATE: 01/01/80

DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
STATION LATITUDE ----- N 44.70
STATION LONGITUDE ----- E 42.50
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Photoheliograph 10 cm, spectroheliograph 25 cm,
photographic observations

RAW DATA ----- Photos, tables, charts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tables, photos
DATA ROUTINELY PUBLISHED ----- SOLAR DATA (Pulkovo Obs)
Zurich Quarterly Solar Bulletin

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- Kislovodsk Station of Pulkovo Obs.
P.O. Box 1
Kislovodsk 35774;
USSR
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
KASAKH ASTRONOMICAL INST., USSR
*****
ITEM: 2366
DATE:

DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
STATION LATITUDE ----- N
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- High altitude station (~3000 m), Coronagraph
(0.53 cm, F = 8 m), H-alpha filter "Halle".
Solar image size = 160 mm, Vector magnetograph;
Horizontal solar telescope AQI-5,
Filtergrams, Zeiss coronagraph

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----
    
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*****
MANILA, PHILIPPINES
*****
ITEM: 384
DATE: 15/07/83

DISCIPLINE ----- A04 H-alpha Observations (other than flares)
STATION LATITUDE ----- N 14.64
STATION LONGITUDE ----- E 121.08
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1963 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- H-alpha Vacuum Spectroheliograph--16 inch helio-
stat vertical projection with 3 inch (75 mm)
image on entrance slit, 15 000 B and L replica
grating, plane.

RAW DATA ----- Photographic (negative)
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Photographic prints, tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Manila Observatory
P.O. Box 1231
Manila
Philippines
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

A04 H-Alpha Observations (other than flares) (Cont.)

```

.....
PENTELI, GREECE
.....
ITEM: 902
DATE: 15/07/83

DISCIPLINE ----- A04 H-alpha Observations (other than flares)
STATION LATITUDE ----- N 38.05
STATION LONGITUDE ----- E 23.86
ALTERNATE NAMES ----- Athens
DATES OF OPERATION ----- 05/1965 to present
OBSERVING SCHEDULE ----- Station moved
INSTRUMENT DESCRIPTION ----- REGULAR
Razdow H-alpha Telescope, visual and photographic
H-alpha patrol, a 10 inch refractor for the
H-alpha patrol and photographic observation (one
picture per minute).
RAW DATA ----- Film
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
FORM OF REDUCED DATA ----- 0.5 MONTHS
REGULAR REDUCED DATA AVAILABLE AFTER -----
DATA ROUTINELY PUBLISHED ----- Tables, films, photographic paper
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES Meudon
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Institute
National Observatory of Athens
Athens 316
Greece
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 1.5 months.
Station moved in 5/1965 from N37.07 124.72.
    
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.....
PURPLE MOUNTAIN, CHINA
.....
ITEM: 2190
DATE: 01/07/84

DISCIPLINE ----- A04 H-alpha Observations (other than flares)
STATION LATITUDE ----- N 32.07
STATION LONGITUDE ----- E 118.82
ALTERNATE NAMES -----
DATES OF OPERATION ----- REGULAR
OBSERVING SCHEDULE ----- 0600-0830 UT, daily
INSTRUMENT DESCRIPTION ----- Lyot-type chromospheric telescope
(aperture 140 mm)
RAW DATA ----- Cinematographic films
DATA REDUCTION PRACTICE ----- Manual
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Monthly tablp
DATA ROUTINELY PUBLISHED ----- Solar-Geophysical Data (NOAA)
Chinese Solar-Geophysical Data
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Purple Mountain Observatory
Academia Sinica
Nanjing
China
ADDRESS FOR INFORMATION ABOUT DATA ----- Mr. Xie Guofeng
Purple Mountain Observatory
Academia Sinica
Nanjing
China
ADDITIONAL COMMENTS -----
    
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.....
PURPLE MOUNTAIN, CHINA
.....
ITEM: 2190
DATE: 01/07/84

DISCIPLINE ----- A04 H-alpha Observations (other than flares)
STATION LATITUDE ----- N 32.07
STATION LONGITUDE ----- E 118.82
ALTERNATE NAMES -----
DATES OF OPERATION ----- REGULAR
OBSERVING SCHEDULE ----- 0600-0830 UT, daily
INSTRUMENT DESCRIPTION ----- Lyot-type chromospheric telescope
(aperture 140 mm)
RAW DATA ----- Cinematographic films
DATA REDUCTION PRACTICE ----- Manual
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Monthly tablp
DATA ROUTINELY PUBLISHED ----- Solar-Geophysical Data (NOAA)
Chinese Solar-Geophysical Data
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Purple Mountain Observatory
Academia Sinica
Nanjing
China
ADDRESS FOR INFORMATION ABOUT DATA ----- Mr. Xie Guofeng
Purple Mountain Observatory
Academia Sinica
Nanjing
China
ADDITIONAL COMMENTS -----
    
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.....
PURPLE MOUNTAIN, CHINA
.....
ITEM: 2190
DATE: 01/07/84

DISCIPLINE ----- A04 H-alpha Observations (other than flares)
STATION LATITUDE ----- N 32.07
STATION LONGITUDE ----- E 118.82
ALTERNATE NAMES -----
DATES OF OPERATION ----- REGULAR
OBSERVING SCHEDULE ----- 0600-0830 UT, daily
INSTRUMENT DESCRIPTION ----- Lyot-type chromospheric telescope
(aperture 140 mm)
RAW DATA ----- Cinematographic films
DATA REDUCTION PRACTICE ----- Manual
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Monthly tablp
DATA ROUTINELY PUBLISHED ----- Solar-Geophysical Data (NOAA)
Chinese Solar-Geophysical Data
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Purple Mountain Observatory
Academia Sinica
Nanjing
China
ADDRESS FOR INFORMATION ABOUT DATA ----- Mr. Xie Guofeng
Purple Mountain Observatory
Academia Sinica
Nanjing
China
ADDITIONAL COMMENTS -----
    
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A04 H-Alpha Observations (other than flares) (Cont.)

 ROME, ITALY

 ITEM: 744
 DATE: 01/01/80
 DISCIPLINE ----- A04 H-alpha Observations (other than flares)
 STATION LATITUDE ----- N 41.90
 STATION LONGITUDE ----- E 12.50
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha Spectroheliograph, 6563A, 12 cm refractor
 RAW DATA ----- Photographs
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Yes
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Maria Forelli
 Osservatorio Astronomico di Roma
 Via del Parco Mellini, 84
 Rome 00136
 Italy
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 SAN FERNANDO OBSERVATORY, USA

 ITEM: 2142
 DATE: 09/01/84
 DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
 STATION LATITUDE ----- N 34.31
 STATION LONGITUDE ----- E 241.51
 ALTERNATE NAMES ----- SF0/CSUN
 DATES OF OPERATION ----- 04/1969 to present
 OBSERVING SCHEDULE ----- IRREGULAR (Programatic.)
 INSTRUMENT DESCRIPTION ----- 61/28 cm vacuum telescope and spectroheliograph, 70 mm film or 512 diode array; 15 cm full disk H-alpha telescope, 15 cm white-light telescope, 1.5 m radio dish at 10.7 cm.
 RAW DATA ----- 70 mm film (calibrated), film and digital intensity for spot areas.
 DATA REDUCTION PRACTICE ----- As needed for sponsored programs
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Film and magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- On request, when available
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. A. Chapman
 Dept. of Physics and Astronomy
 CSUN
 Northridge, CA 91330
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- SF0/CSUN
 14031 San Fernando Road
 Sylmar, CA 91342
 USA
 ADDITIONAL COMMENTS ----- Allied staff are: Dr. A. D. Herzog
 Dr. J. K. Lawrence
 Dr. P. H. Richter
 Elevation is 1217.2 feet above sea-level.

 SACRAMENTO PEAK, USA

 ITEM: 1126
 DATE: 01/09/83
 DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
 STATION LATITUDE ----- N 32.7R
 STATION LONGITUDE ----- E 254.6R
 ALTERNATE NAMES ----- Sac Peak
 DATES OF OPERATION ----- 1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 1) 810 Dome Spectroheliograph; double pass monochromator, 4 inch solar image, daily 03, H-alpha, CaK spectroheliograms; occasionally schedule continues observations when activity level is high. 2) 30 cm coelostat telescope, 4 inch achromatic image, feeds spectroheliograph, Littrow spectrograph. 3) 40 cm coru-agraph (began operating 1964) Spectroheliograph, Littrow spectrograph, coronal emission line photometer and Universal spectrograph.
 RAW DATA ----- 4 inch solar image on film
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA
 ADDITIONAL COMMENTS ----- CaK pictures sent daily to NOAA SEL Forecast center in Boulder, CO.

 UDAIPUR, INDIA

 ITEM: 2018
 DATE: 22/07/83
 DISCIPLINE ----- A04 H-Alpha Observations (other than flares)
 STATION LATITUDE ----- N 24.10
 STATION LONGITUDE ----- E 74.00
 ALTERNATE NAMES ----- Solar Observatory
 DATES OF OPERATION ----- 12/1978 to present
 OBSERVING SCHEDULE ----- On controlled days
 INSTRUMENT DESCRIPTION ----- 15 cm aperture optical telescope, H-alpha-filter and multislit spectrograph for H-alpha
 RAW DATA ----- H-alpha time lapse photographic data
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- No
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- A. Bhatnagar, Director
 Udaipur Solar Observatory
 11 Vidya Marg
 Udaipur-313001
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- If international campaign is required for Solar-Terrestrial programme, this station can participate.

A05 Calcium Plaques

 BIG BEAR, USA

ITEM: 58
 DATE: 01/08/83

DISCIPLINE ----- A05 Calcium Plaques
 STATION LATITUDE ----- N 34.16
 STATION LONGITUDE ----- E 243.49
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Full disk calcium and white light observations,
 1 or 2 frames daily.

RAW DATA ----- Digital recording and 35 mm film
 DATA REDUCTION PRACTICE ----- Calcium data reduced on computer
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tabular and photographs
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- M. Zirin
 California Inst. of Technology 264-33
 1201 E. California Blvd.
 Pasadena, CA 91125
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Observatory address: Big Bear Solar Observatory,
 North Shore Drive, Big Bear City, California, USA 92314.

 KISLOVODSK, USSR

ITEM: 974
 DATE: 29/04/75

DISCIPLINE ----- A05 Calcium Plaques
 STATION LATITUDE ----- N 44.70
 STATION LONGITUDE ----- E 42.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Photoheliograph 10 cm, spectroheliograph 25 cm,
 photographic observations

RAW DATA ----- Photos, tables, charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, photos
 DATA ROUTINELY PUBLISHED ----- SOLAP DATA (Pulkovo Obs)
 Zurich Quarterly Solar Bulletin
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kislovodsk Station of Pulkovo Obs.
 P.O. Box 1
 Kislovodsk 353741
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1980.

 KANDILLI, TURKEY

ITEM: 959
 DATE: 01/02/84

DISCIPLINE ----- A05 Calcium Plaques
 STATION LATITUDE ----- N 41.06
 STATION LONGITUDE ----- E 29.06
 ALTERNATE NAMES ----- Istanbul
 DATES OF OPERATION ----- 1969 to present
 INSTRUMENT DESCRIPTION ----- Solar Observations, 0.3A CaK filter

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Boghazici University
 Kandilli Observatory
 Helio physics Service
 Cengelkoy, Istanbul
 Turkey

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available immediately.

 MANILA, PHILIPPINES

ITEM: 996
 DATE: 15/07/84

DISCIPLINE ----- A05 Calcium Plaques
 STATION LATITUDE ----- N 14.64
 STATION LONGITUDE ----- E 121.08
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1963 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Vacuum Spectroheliograph, H-alpha and Ca II (K),
 16 inch heliostat vertical projection with 3 inch
 (75 mm) image on entrance slit, 15 000 H and L
 replica gratings, slant.

RAW DATA ----- Photographs (negatives)
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Photographic prints, tables
 DATA ROUTINELY PUBLISHED ----- PHOTOGRAPHIC MAP OF THE SUN IN
 Calcium (monthly), PHOTOGRAPHIC
 JOURNAL OF SUN (Rome)
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Manila Observatory
 P.O. Box 1231
 Manila
 Philippines

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Also available: 10 inch refractor with Halle-Lyot
 filter and 4 inch refractor for white light photos.
 Special purpose data available immediately. Tabular
 data are sent to WDC-A and USAF Weather Wing.

A05 Calcium Plages (Cont.)

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*****
ITEM: 1004
MEUDON, FRANCE DATE: 01/10/83
*****

DISCIPLINE ----- A05 Calcium Plages
STATION LATITUDE ----- N 48.80
STATION LONGITUDE ----- E 2.23
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1920 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Spectroheliograph, Ca K spectroheliograms taken
                                at center of the bandpass 0.15A, 1 photo/day,
                                87 mm phi., and at K plus or minus 1.25A from line
                                center (KIV), 1 photo/day, 87 mm phi.

RAW DATA ----- Photographic film 13x18 cm
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
FORM OF REDUCED DATA ----- Cartes Synoptiques
DATA ROUTINELY PUBLISHED ----- CARTES SYNOPTIQUES DE LA CHROMO-
                                SPHERE (Paris Observatory)

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dept d'Astronomie Solaire et Planetaire
                                                Observatoire de Meudon, DASOP
                                                Place Jules Jansen
                                                Meudon, Hauts de Seine 92190
                                                France
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
ITEM: 1127
SACRAMENTO PEAK, USA DATE: 01/09/83
*****

DISCIPLINE ----- A05 Calcium Plages
STATION LATITUDE ----- N 32.78
STATION LONGITUDE ----- E 294.68
ALTERNATE NAMES ----- Sac Peak
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 1) Big Dome Spectroheliograph, double pass mono-
                                chromator, 4 inch solar image recorded on film.
                                Normal schedule is daily D3, H-alpha, CaK spectro-
                                heliograms, more often if active sun. 2) 30 cm
                                coelostat telescope, 4 inch achromatic image. Feed
                                spectroheliograph, Littrow spectrograph. 3) 40
                                cm coronagraph (began operating 1964). Spectro-
                                heliograph, Littrow spectrograph. 40 cm corona-
                                graph also feeds coronal emission line photometer
                                and Universal spectrograph.

RAW DATA ----- 4 inch solar image on film
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
                                                Sacramento Peak Observatory
                                                Sunspot, NH 88349
                                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. Lou B. Gilliam
                                                Sacramento Peak Observatory
                                                Sunspot, NH 88349
                                                USA
ADDITIONAL COMMENTS ----- CaK and H-alpha pictures sent daily to NOAA SEL Forecast
                                Center in Boulder, Colorado.
    
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*****
ITEM: 742
ROME, ITALY DATE: 01/01/80
*****

DISCIPLINE ----- A05 Calcium Plages
STATION LATITUDE ----- N 41.90
STATION LONGITUDE ----- E 12.50
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 12 cm refractor and filter 3934A

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Maria Torelli
                                                Observatorio Astronomico di Roma
                                                Via del Parco Mellini, 84
                                                Rome 00136
                                                Italy
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
                                in 1983.
    
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A06 Solar Maps, Prominences, Filaments

 ATHENS, GREECE

 DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
 STATION LATITUDE ----- N 37.95
 STATION LONGITUDE ----- E 23.72
 ALTERNATE NAMES ----- Jet 3, 2nd Weather Wing
 DATES OF OPERATION ----- 1/2/1965 to present
 OBSERVING SCHEDULE ----- The solar observatory moved from the heart of Athens (near the Acropolis) to Simgelli Hill (14 miles NE of the old city) in May 1971.
 INSTRUMENT DESCRIPTION ----- Limited
 RAW DATA ----- Daily survey to sunspot patrol was terminated during Sep 76. Limited patrol has been conducted since then.
 DATA REDUCTION PRACTICE ----- (Y) Jet 3, limited daily patrol will be 06 - 14Z.
 FORM OF REDUCED DATA ----- RAZDOW (50cm) Optical Telescope (H-alpha).
 REGULAR REDUCED DATA AVAILABLE AFTER ----- Film, drawings
 FORM OF REDUCED DATA ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- 10.25
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Jet 3, 4th Weather Wing
 New York, NY 04223
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- NOAA
 Thompson (30K)
 Athens
 Greece
 ADDITIONAL COMMENTS ----- Data are the property of the National Observatory of Athens, Greece.

ITEM: 1147
 DATE: 15/12/84

 CATANIA, ITALY

 DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
 STATION LATITUDE ----- N 37.50
 STATION LONGITUDE ----- E 15.08
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha/Halle and Zeiss Filters, refractors 15/180 and 15/200.
 RAW DATA ----- Film, drawings, tables, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED ----- Publication of the Catania Astrophysical Observatory
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES Meudon
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. A. Zappala
 Institut di Astronomia
 95125 Catania
 Italy
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available immediately.

ITEM: 935
 DATE: 01/02/84

 BOULDER, USA

 DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
 STATION LATITUDE ----- N 39.98
 STATION LONGITUDE ----- E 254.72
 ALTERNATE NAMES ----- Boulder Observatory
 SOLICWARN
 DATES OF OPERATION ----- 05/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha Telescope (Razdow W120), eyepiece, TV monitor.
 RAW DATA ----- 35 mm film, Daily photos.
 DATA REDUCTION PRACTICE ----- 35 mm film
 REGULAR REDUCED DATA AVAILABLE AFTER ----- NONE MONTHS
 FORM OF REDUCED DATA ----- 35 mm film, prints
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
 NOAA R/E/SE2
 325 Broadway
 Boulder, CO 80303
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 928
 DATE: 10/05/84

 CULGOORA, AUSTRALIA

 DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
 STATION LATITUDE ----- S 30.32
 STATION LONGITUDE ----- E 149.56
 ALTERNATE NAMES ----- Culgoora Radioheliograph
 DATES OF OPERATION ----- 1968 to present
 OBSERVING SCHEDULE ----- Regular: 2230 to 0500 UT, daily
 INSTRUMENT DESCRIPTION ----- Circular array, 3 km in diameter containing 96 aerials. Makes radio maps of the sun once each second. Operating frequencies are 43, 80, 160 and 327 MHz. Spatial resolution for the maps range from 7.1 to 0.93 minutes arc, depending upon frequency.
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- As required
 REGULAR REDUCED DATA AVAILABLE AFTER ----- No regular data reduction practice
 FORM OF REDUCED DATA ----- Contour maps, time histories of flux, polarization and position for all sources located.
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. R. Robinson
 CSIRO Division of Radiophysics
 P.O. Box 76
 Epping NSW 2121
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 2307
 DATE: 01/06/84

A06 Solar Maps, Prominences, Filaments (Cont.)

 GEORGINA OBSERVATORY, HUNGARY

ITEM: 9247
 DATE: 22/01/83

DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
 STATION LATITUDE ----- N 47,52
 STATION LONGITUDE ----- E 19,04
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1980 to present
 OBSERVING SCHEDULE ----- All year: whenever weather permits
 INSTRUMENT DESCRIPTION ----- Solar photos are usually made by the following telescopes: 317,5/4762 mm Cassegrain-reflector, 110/500 mm teleobjective with an effective focus of 1000 or 1500 mm (in Barlow system), 100/1000 mm Maksutov-assegrain with an effective focus of 2000 or 3000 mm (Barlow), 140/2000 mm refractor. Sunspots are projected usually with a 120/1200 mm refractor onto a screen for establishing their position. Limb flares and prominences are observed in H-alpha either by a 60/800 mm special prominence scope or by a 152/1524 mm refractor with an effective focal length of 4512 mm (Barlow system). At present this refractor is not used because it will be altered to be a special prominence scope. Sunspot and prominence dimensions are stated by filar or optical micrometers.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Occasionally: Communications of the Georgina Observatory, Prominence Series
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES: through the Observatory
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Peter Hedervari
 H. 1123 Budapest
 11 Arpad fejedelem utja 40-41
 Hungary
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data is also sent to the Naval Observatory, Washington DC, Mieka Observatory, Tokyo, and Ondrejov Observatory, Trebovy.
 The communications of the Georgina Observatory is only limitedly available; it is basically published for a few observatories and WDC-A.

 HURBANOVIA, CZECHOSLOVAKIA

ITEM: 955
 DATE: 01/01/80

DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
 STATION LATITUDE ----- N 47,27
 STATION LONGITUDE ----- E 14,19
 ALTERNATE NAMES ----- Slovak Center/Amateur Astronomy
 DATES OF OPERATION ----- 09/1968 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 The photosphere is observed visually (faculae) and photographically by means of a Zeiss Coude refractor 150/2250 mm. Relative numbers are tabulated.

RAW DATA ----- Photographic plate, film, drawings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES: Meudon
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Bohuslav Lukac
 The Slovak Center for Amateur Astronomy
 Komarnenska s 65
 Hurbanovo 538 947 01
 Czechoslovakia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Co-investigator: Milan Belic. Observations were submitted from 11/1972 to 12/1973.
 No response received to inquiry for updating material in 1983.

 KISLOVODSK, USSR

ITEM: 975
 DATE: 29/04/75

DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
 STATION LATITUDE ----- N 44,70
 STATION LONGITUDE ----- E 42,50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Photoheliograph 10 cm, spectroheliograph 25 cm, photographic observations

RAW DATA ----- Photos, tables, charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, photos
 DATA ROUTINELY PUBLISHED ----- SOLAR DATA (Solkovno Obs)
 Zurich Quarterly Solar Bulletin
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kislovodsk Station of Pulkovo Obs
 P.O. Box 1
 Kislovodsk 357741
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980.

 KITT PEAK, USA

ITEM: 974
 DATE: 12/07/83

DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
 STATION LATITUDE ----- N 31,94
 STATION LONGITUDE ----- E 109,40
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1970 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 FITT disk He I UPSHA maps taken on a second priority basis with magnetograms on a 517 channel magnetograph, 45 cm vacuum telescope. Velocity maps occasionally taken.

RAW DATA ----- film, magnetic tape, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- film, digital magnetic tape, photographic maps
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. J. Harvey or Dr. W. Livingston
 Kitt Peak National Observatory
 P.O. Box 26732
 Tucson, AZ 85726
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available immediately. Observations were made monthly from 12/1970, made daily since 4/1973.
 Program supported by NOAA and NASA.

A06 Solar Maps, Prominences, Filaments (Cont.)

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.....
A06 Solar Maps, Prominences, Filaments
.....
DISCIPLINE ..... A06 Solar Maps, Prominences, Filaments
STATION LATITUDE ..... N 49.18
STATION LONGITUDE ..... E 20.22
ALTERNATE NAMES ..... Astronomical Institute Skalnaté Pleso
DATES OF OPERATION ..... 07/1965 to present
OBSERVING SCHEDULE ..... REGULAR
INSTRUMENT DESCRIPTION ..... 20/300 cm Zeiss coronagraph (two pieces). Photo-
graphically-prominences in H-alpha, spectrum
of prominences. In active regions more obser-
vations are made during day according to the
special program.
.....
RAW DATA ..... Film
DATA REDUCTION PRACTICE ..... REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ..... 1 MONTHS
FORM OF REDUCED DATA ..... Tables, photographic paper
DATA ROUTINELY PUBLISHED ..... SOLNECHNYE DANNYE (USSR)
DATA SENT TO WDC-A ..... YES
DATA SENT TO WDC-B ..... YES
DATA SENT TO WDC-C ..... YES
DATA AVAILABLE ON REQUEST ..... YES
ADDRESS FOR INFORMATION ABOUT STATION --- Vojtech Rusin
Astronomical Institute
Slovak Academy of Sciences
059 60 Tatranska Lomnica 154
Czechoslovakia
Same as above
.....
ADDRESS FOR INFORMATION ABOUT DATA ..... Same as above
ADDITIONAL COMMENTS ..... Co-investigator Milan Rybansky
.....

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A06 Solar Maps, Prominences, Filaments
.....
DISCIPLINE ..... A06 Solar Maps, Prominences, Filaments
STATION LATITUDE ..... N 49.18
STATION LONGITUDE ..... E 20.22
ALTERNATE NAMES ..... Astronomical Institute Skalnaté Pleso
DATES OF OPERATION ..... 07/1965 to present
OBSERVING SCHEDULE ..... REGULAR
INSTRUMENT DESCRIPTION ..... 20/300 cm Zeiss coronagraph (two pieces). Photo-
graphically-prominences in H-alpha, spectrum
of prominences. In active regions more obser-
vations are made during day according to the
special program.
.....
RAW DATA ..... Film
DATA REDUCTION PRACTICE ..... REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ..... 1 MONTHS
FORM OF REDUCED DATA ..... Tables, photographic paper
DATA ROUTINELY PUBLISHED ..... SOLNECHNYE DANNYE (USSR)
DATA SENT TO WDC-A ..... YES
DATA SENT TO WDC-B ..... YES
DATA SENT TO WDC-C ..... YES
DATA AVAILABLE ON REQUEST ..... YES
ADDRESS FOR INFORMATION ABOUT STATION --- Vojtech Rusin
Astronomical Institute
Slovak Academy of Sciences
059 60 Tatranska Lomnica 154
Czechoslovakia
Same as above
.....
ADDRESS FOR INFORMATION ABOUT DATA ..... Same as above
ADDITIONAL COMMENTS ..... Co-investigator Milan Rybansky
.....

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OBSERVATORY LOMNICKY STIT, CZECHOSLOVAKIA
.....
DISCIPLINE ..... A06 Solar Maps, Prominences, Filaments
STATION LATITUDE ..... N 49.18
STATION LONGITUDE ..... E 20.22
ALTERNATE NAMES ..... Astronomical Institute Skalnaté Pleso
DATES OF OPERATION ..... 07/1965 to present
OBSERVING SCHEDULE ..... REGULAR
INSTRUMENT DESCRIPTION ..... 20/300 cm Zeiss coronagraph (two pieces). Photo-
graphically-prominences in H-alpha, spectrum
of prominences. In active regions more obser-
vations are made during day according to the
special program.
.....
RAW DATA ..... Film
DATA REDUCTION PRACTICE ..... REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ..... 1 MONTHS
FORM OF REDUCED DATA ..... Tables, photographic paper
DATA ROUTINELY PUBLISHED ..... SOLNECHNYE DANNYE (USSR)
DATA SENT TO WDC-A ..... YES
DATA SENT TO WDC-B ..... YES
DATA SENT TO WDC-C ..... YES
DATA AVAILABLE ON REQUEST ..... YES
ADDRESS FOR INFORMATION ABOUT STATION --- Vojtech Rusin
Astronomical Institute
Slovak Academy of Sciences
059 60 Tatranska Lomnica 154
Czechoslovakia
Same as above
.....
ADDRESS FOR INFORMATION ABOUT DATA ..... Same as above
ADDITIONAL COMMENTS ..... Co-investigator Milan Rybansky
.....

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.....
OBSERVATORY LOMNICKY STIT, CZECHOSLOVAKIA
.....
DISCIPLINE ..... A06 Solar Maps, Prominences, Filaments
STATION LATITUDE ..... N 49.18
STATION LONGITUDE ..... E 20.22
ALTERNATE NAMES ..... Astronomical Institute Skalnaté Pleso
DATES OF OPERATION ..... 07/1965 to present
OBSERVING SCHEDULE ..... REGULAR
INSTRUMENT DESCRIPTION ..... 20/300 cm Zeiss coronagraph (two pieces). Photo-
graphically-prominences in H-alpha, spectrum
of prominences. In active regions more obser-
vations are made during day according to the
special program.
.....
RAW DATA ..... Film
DATA REDUCTION PRACTICE ..... REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ..... 1 MONTHS
FORM OF REDUCED DATA ..... Tables, photographic paper
DATA ROUTINELY PUBLISHED ..... SOLNECHNYE DANNYE (USSR)
DATA SENT TO WDC-A ..... YES
DATA SENT TO WDC-B ..... YES
DATA SENT TO WDC-C ..... YES
DATA AVAILABLE ON REQUEST ..... YES
ADDRESS FOR INFORMATION ABOUT STATION --- Vojtech Rusin
Astronomical Institute
Slovak Academy of Sciences
059 60 Tatranska Lomnica 154
Czechoslovakia
Same as above
.....
ADDRESS FOR INFORMATION ABOUT DATA ..... Same as above
ADDITIONAL COMMENTS ..... Co-investigator Milan Rybansky
.....

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A06 Solar Maps, Prominences, Filaments (Cont.)

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*****
IDENTICAL ISSUE
*****
DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
STATION LATITUDE ----- N 32.78
STATION LONGITUDE ----- E 254.68
ALTERNATE NAMES ----- Sac Peak
DATES OF OPERATION ----- 1955 to present
OBSERVING SCHEDULE ----- OCCASIONAL
INSTRUMENT DESCRIPTION ----- 1) Littrow Spectrograph, spectrum & slit jaw
pictures; 13 m focal length, single or double
pass, occasionally scheduled, photographic
or photoelectric output; 2) the Littrow spectro-
graph receives light from the 40 cm airyragraph
telescope or the 30 cm collostat telescope.
Normal solar image size at the spectrograph
slit is 25 cm. 3) Littrow spectrograph is
controlled by a Perkin Elmer 3220 computer.
RAW DATA ----- 35 or 70 mm film, magnetic tape, analog
charts
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Film, magnetic tape, computer
printout (depends on observatory).
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack B. Zirker, Director
Sacramento Peak Observatory
Sunspot, NM 88349
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
Sacramento Peak Observatory
Sunspot, NM 88349
USA
ADDITIONAL COMMENTS -----

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*****
IDENTICAL ISSUE
*****
DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
STATION LATITUDE ----- N 32.78
STATION LONGITUDE ----- E 254.68
ALTERNATE NAMES ----- Sac Peak
DATES OF OPERATION ----- 1955 to present
OBSERVING SCHEDULE ----- OCCASIONAL
INSTRUMENT DESCRIPTION ----- 1) Littrow Spectrograph, spectrum & slit jaw
pictures; 13 m focal length, single or double
pass, occasionally scheduled, photographic
or photoelectric output; 2) the Littrow spectro-
graph receives light from the 40 cm airyragraph
telescope or the 30 cm collostat telescope.
Normal solar image size at the spectrograph
slit is 25 cm. 3) Littrow spectrograph is
controlled by a Perkin Elmer 3220 computer.
RAW DATA ----- 35 or 70 mm film, magnetic tape, analog
charts
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Film, magnetic tape, computer
printout (depends on observatory).
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack B. Zirker, Director
Sacramento Peak Observatory
Sunspot, NM 88349
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
Sacramento Peak Observatory
Sunspot, NM 88349
USA
ADDITIONAL COMMENTS -----

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*****
IDENTICAL ISSUE
*****
DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
STATION LATITUDE ----- N 18.52
STATION LONGITUDE ----- E 292.90
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1968 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- AN/FMj-7 H-alpha Telescope ; observatory
operates daily from 1/2 hour before sunrise
to 1/2 hour after sunset; 35 mm photo of sun
white light projection
RAW DATA ----- Film, drawings, logs
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
FORM OF REDUCED DATA ----- Film, photographic prints, graphi-
cal plots
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- DET 3, 3 Weather Wing (MAC)
c/o Postmaster
FPO
Miami, FL 34050
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
IDENTICAL ISSUE
*****
DISCIPLINE ----- A06 Solar Maps, Prominences, Filaments
STATION LATITUDE ----- N 24.10
STATION LONGITUDE ----- E 74.00
ALTERNATE NAMES ----- Solar Observatory
DATES OF OPERATION ----- 12/1978 to present
OBSERVING SCHEDULE ----- On controlled days
INSTRUMENT DESCRIPTION ----- 15 cm aperture optical telescope, H-alpha-filter
and multislit spectrograph for H-alpha
and multi slit time lapse photographic data
RAW DATA ----- H-alpha time lapse photographic data
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- No
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- A. Bhatnagar, Director
Udaipur Solar Observatory
11 Vidya Marg
Udaipur-313001
India
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- If international campaign is required for Solar-
Terrestrial programme, this station can participate.

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A07 Optical Observations of the Corona

 KASAKH ASTRONOMICAL INST., USSR

ITEM: 2368
 DATE: *****

DISCIPLINE ----- A07 Optical Observations of the Corona
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- High altitude station (~3000 m), Coronagraph
 (D = 53 cm, F = 8 m), H-alpha filter "Halle",
 Solar image size = 160 mm, Vector magnetograph,
 Horizontal solar telescope ACU-5,
 Filtergrams, Zeiss coronagraph

RAW DATA ----- Filtergrams, Zeiss coronagraph
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B Catalog and UAU-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 MAUNA LOA, USA

ITEM: 394
 DATE: 01/01/80

DISCIPLINE ----- A07 Optical Observations of the Corona
 STATION LATITUDE ----- N 19.53
 STATION LONGITUDE ----- E 204.42
 ALTERNATE NAMES ----- HAO/MCAR Mauna Loa Station
 DATES OF OPERATION ----- 12/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- K-Coronameter, Coronal Activity Monitor, Promi-
 nence Coronagraph, The K-Coronameter and Coronal
 Activity Monitor are Optical Polarimeters,
 attached to coronagraphs to permit measurement
 of the intensity of the solar white-light (K)
 corona. The Prominence Coronagraph employs
 a 10 Angstrom filter centered at H-alpha for
 photography of solar prominences from the
 solar limb to a height of 2 R from sun center.

RAW DATA ----- Paper charts, digital magnetic
 tape, 70 mm film, photographs

DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, film, photographic
 prints, graphical plots, etc.

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Richard Fischer
 High Altitude Observatory of NCAR
 P.O. Box 3090
 Boulder, CO 80303
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- Reduced data are also in the form of microfilm and
 computer printouts. Observations are daily, often
 from an hour after sunrise until an hour before
 sunset. Data is assembled in Boulder.
 No response received to inquiry for updating material
 in 1983.

 KISLOVODSK, USSR

ITEM: 976
 DATE: 24/04/76

DISCIPLINE ----- A07 Optical Observations of the Corona
 STATION LATITUDE ----- N 44.70
 STATION LONGITUDE ----- E 42.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Coronagraphs with objectives of 20 and 53 cms.

RAW DATA ----- Photos, tables, charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, photos
 DATA ROUTINELY PUBLISHED ----- SOLAR DATA (Pulkovo Obs)
 Zurich Quarterly Solar Bulletin
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kislovodsk Station of Pulkovo Obs
 P.O. Box 1
 Kislovodsk 357741
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1980.

 NIJIKURA, JAPAN

ITEM: 414
 DATE: 18/07/83

DISCIPLINE ----- A07 Optical Observations of the Corona
 STATION LATITUDE ----- N 36.11
 STATION LONGITUDE ----- E 137.55
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1951 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 10 cm Lyot-type coronagraph

RAW DATA ----- Tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Monthly Bulletin on Solar Pheno-
 mena, Tokyo Astronomical Obs.

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Heaton
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Solar Physics Division
 Tokyo Astronomical Observatory
 Mitaka, Tokyo 181
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS -----

A07 Optical Observations of the Corona (Cont.)

 OBSERVATORY LOMNICKY STIT, CZECHOSLOVAKIA

ITEM: 992
 DATE: 01/01/80

DISCIPLINE ----- A07 Optical Observations of the Corona
 STATION LATITUDE ----- N 49.19
 STATION LONGITUDE ----- E 20.22
 ALTERNATE NAMES ----- Astron Inst., Skalnaté Pleso
 DATES OF OPERATION ----- 02/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 20/300 cm Zeiss coronagraph (2 pieces),
 emission coronal lines in range 4 900 - 8 000 Å,
 also polarization.
 In active regions more observations are made
 during the day according to the special program.

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, photographic paper
 DATA ROUTINELY PUBLISHED ----- SULNECHNÝE DANNÝE (USSR), ORSA (U.S.A.),
 SOLAR-GEOPHYSICAL DATA (NOAA, USA)
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Milan Mybansky
 Astronomical Institute
 Slovak Academy of Sciences
 059 80 Tatranska Lomnica 354
 Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data are available as tables of the intensities of
 the corona (5303 and 6374 Å).
 Co-investigator: Vojtech Rusin

 SACRAMENTO PEAK, USA

ITEM: 499
 DATE: 01/09/83

DISCIPLINE ----- A07 Optical Observations of the Corona
 STATION LATITUDE ----- N 32.78
 STATION LONGITUDE ----- E 254.68
 ALTERNATE NAMES ----- Sac Peak
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- OCCASIONAL
 INSTRUMENT DESCRIPTION ----- Universal spectrograph, 60 inch FL - capable of
 photographing the solar spectrum 3500-9000 Å on (3)
 60 cm strips of 35 mm film. 4 inch solar image.
 Used primarily for solar corona, frequently used
 for solar flares. Observations scheduled accord-
 ing to scientists demand.

RAW DATA ----- 35 mm film negatives
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA

ADDITIONAL COMMENTS ----- Universal spectrograph is coupled with 40 cm corona-
 graph.

 OBSERVATORY 4001, FRANCE

ITEM: 460
 DATE: 01/07/83

DISCIPLINE ----- A07 Optical Observations of the Corona
 STATION LATITUDE ----- N 42.94
 STATION LONGITUDE ----- E 1.01
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1945 to present
 OBSERVING SCHEDULE ----- 1/3 of the time, weather permitting
 INSTRUMENT DESCRIPTION ----- X coronameter with simultaneous wavelength 5303 Å
 images.

RAW DATA ----- Wavelength 5303 photographs and X-corona
 intensity
 DATA REDUCTION PRACTICE ----- Only for interesting condensations or
 upon request
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Wavelength 5303 prints, X-corona isophotal
 maps and magnetic tapes.

DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- J. C. Neens
 Observatoire du Pic du Midi
 Bagnères de Bigorre 65200
 France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SACRAMENTO PEAK, USA

ITEM: 506
 DATE: 01/09/83

DISCIPLINE ----- A07 Optical Observations of the Corona
 STATION LATITUDE ----- N 32.78
 STATION LONGITUDE ----- E 254.68
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1973 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 REGULAR
 INSTRUMENT DESCRIPTION ----- 1) Coronal emission line photometer. Operates
 at 5303 Å (green light), 5694 Å (yellow light),
 and 6374 Å (red light). Records coronal intensity
 at 1.15, 1.35, and 1.55 solar radii. Daily
 observations taken, weather permitting.

RAW DATA ----- Computer printouts, drawings
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA

ADDITIONAL COMMENTS ----- The coronal emission line photometer is coupled to
 the 40 cm coronagraph. Operated from 02/1973 through
 01/1974 and from 12/1974 to present.

A07 Optical Observations of the Corona (Cont.)

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*****
SACRAMENTO PEAK, USA
*****
ITEM: 2074
DATE: 01/09/83

DISCIPLINE ----- A07 Optical Observations of the Corona
STATION LATITUDE ----- N 32.78
STATION LONGITUDE ----- E 254.68
ALTERNATE NAMES ----- Sac Peak
DATES OF OPERATION ----- 1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Full limb coronagraph, photographic instrument
that records in sequence, coronal emission at
wavelengths: 5303 A and 6374 A and prominences
and disk at 6563 A.

RAW DATA ----- 70 mm film
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
Sacramento Peak Observatory
Sunspot, NM 88349
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. Ray N. Smartt
Sacramento Peak Observatory
Sunspot, NM 88349
USA
ADDITIONAL COMMENTS ----- The full limb coronagraph is housed in the Hilltop
Dome.
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A08 Total Radio Flux Measurements

 ATHENS, GREECE

 ITEM: 1148
 DATE: 15/07/83
 DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 37.85
 STATION LONGITUDE ----- E 23.72
 ALTERNATE NAMES ----- Det 3, 2d Weather Wing
 DATES OF OPERATION ----- 7/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- AFGL Radio Telescope monitors four discrete frequencies (1415, 2695, 4995, and 8800 MHz).
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Logs
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Det 7, 4th Weather Wing
 APO
 New York, NY 09223
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- NOA
 Thessalon (306)
 Athens
 Greece
 ADDITIONAL COMMENTS ----- Data are the property of the National Observatory of Athens (NOA).

 BUENOS AIRES, ARGENTINA

 ITEM: 828
 DATE: 01/01/75
 DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- S 34.55
 STATION LONGITUDE ----- E 301.27
 ALTERNATE NAMES ----- 01/1967 to present
 DATES OF OPERATION ----- REGULAR
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Total Solar Radio Flux at 3 cm
 RAW DATA ----- Pen and ink strip charts
 DATA REDUCTION PRACTICE ----- MONTHS
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip charts, bulletins
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. J. R. Seibold
 Dept de Fisica Solar, Obs Nac de Fisica
 Av. Mitre 3100
 San Miguel
 Argentina
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

 BORDEAUX, FRANCE

 ITEM: 2162
 DATE: 21/08/83
 DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 44.84
 STATION LONGITUDE ----- E 359.47
 ALTERNATE NAMES ----- 1968 to present
 DATES OF OPERATION ----- REGULAR
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Wurzburg-type radiotelescope (07.5 m) at 930 MHz with analogic receiver
 RAW DATA ----- Total radio flux of the Sun at 930 MHz
 DATA REDUCTION PRACTICE ----- Analogic mode
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Paper list of solar flux and events
 DATA ROUTINELY PUBLISHED ----- Monthly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. F. Pommeyrol
 Observatoire de l'Universite de Bordeaux
 B.P. 21
 33270 Floirac
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Automatic system for data acquisition and reduction developed, but not yet in operation.

 CHUBU, JAPAN

 ITEM: 301
 DATE: 01/01/80
 DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 35.27
 STATION LONGITUDE ----- E 137.01
 ALTERNATE NAMES ----- Chubu Inst of Technology
 Kasugai
 DATES OF OPERATION ----- 01/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Frequencies 6 GHz and 37.5 GHz, 0900-1500 LT, 0000-0600 UT continuously
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, paper tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Dr. Atsushi Kimpara
 Chubu Institute of Technology
 1200 Matsumoto-cho
 Kasugai-shi
 Aichi-ken 487
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data are usually available after two months.
 No response received to inquiry for updating material in 1980 or 1983.

A08 Total Radio Flux Measurements (Cont.)

CHIMEAN ASTRO OBSERVATORY, USSR

ITEM: 2369
DATE:

DISCIPLINE ----- A08 Total Radio Flux Measurements
STATION LATITUDE ----- N
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1957 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- 22 meter radio telescope at wavelength 13.5 mm with simultaneous registration of Stoke parameters I and V. Total emission measured at 8 mm. Main beams of antenna patterns at 8 and 13.5 mm. Radio source scanned at both wavelengths.

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

HIRAISO, JAPAN

ITEM: 258
DATE: 22/07/83

DISCIPLINE ----- A08 Total Radio Flux Measurements
STATION LATITUDE ----- N 36.37
STATION LONGITUDE ----- E 140.62
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Solar radio flux at 100, 200, 500 and 9500 MHz. Continuously recording sunrise to sunset on strip chart at 18 cm/h.

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN issued monthly by RRL
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: United Kingdom
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Solar Radio Research Section
Hiraiso Branch
Radio Research Laboratories
3601 Isozaki-machi
Nakaminato-shi
Ibaraki-Ken 311-12
JAPAN

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data usually available after 1 month.

DULGOORA, AUSTRALIA

ITEM: 2204
DATE: 01/06/84

DISCIPLINE ----- A08 Total Radio Flux Measurements
STATION LATITUDE ----- S 30.32
STATION LONGITUDE ----- E 149.56
ALTERNATE NAMES ----- Dulgoora Radiospectrograph
DATES OF OPERATION ----- 1951 to present
OBSERVING SCHEDULE ----- Regular: 2030 to 0730 UT, daily
INSTRUMENT DESCRIPTION ----- Swept frequency radio spectrograph operating between 10 and 9000 MHz.

RAW DATA ----- 70 mm film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Times, intensities and class of radio bursts; photographs of dynamic spectrum available upon request
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. R. Robinson
CSIRO Division of Radiophysics
P.O. Box 76
Epping, NSW 2121
Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

IRKUTSK, USSR

ITEM: 859
DATE: 00/00/75

DISCIPLINE ----- A08 Total Radio Flux Measurements
STATION LATITUDE ----- N 52.47
STATION LONGITUDE ----- E 104.03
ALTERNATE NAMES ----- Zui
DATES OF OPERATION ----- 12/1958 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- Solar Total Radio Fluxes at 3.2 cm, daily

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Drawings
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. V. E. Stepanov
Sibizmir 664697
P.O. B. 4
Irkutsk 33
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980.

A08 Total Radio Flux Measurements (Cont.)

 ITAPEATINGA (INPE), ATIBATA, BRAZIL

 ITEM: 2241
 DATE: 12/04/84

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- S 23.18
 STATION LONGITUDE ----- E 313.44
 ALTERNATE NAMES ----- CRAAM
 San Paulo
 SAO
 JFA
 DATES OF OPERATION ----- 1966 to present
 Station moved from Unuarama in 1969
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 7 GHz Solar Polarimeter. Right and left-hand
 polarizations.
 RAW DATA ----- Strip chart, analog magnetic tape, tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, plots
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA, Quarterly Bulletin
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- P. Kaufmann
 (INPE, CRAAM)
 C.P. 515
 12200 San Jose dos Campos
 Brazil
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1) CRAAM and Itapeatinga are operated by INPE: Instituto
 de Pesquisas Espaciais, in an agreement with Mackenzie
 University, San Paulo.
 2) The 7GHz operation was temporarily stopped in 1983
 for complete change in electronics. The upgraded
 polarimeter is back in operation since April 1984.

 KISLOVODSK, USSR

 ITEM: 2277
 DATE: 12/04/84

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 44.70
 STATION LONGITUDE ----- E 42.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Radio Telescope with mirrors, 2 and 3 m,
 interferometer
 RAW DATA ----- Photos, tables, charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, photos
 DATA ROUTINELY PUBLISHED ----- SOLAR DATA (Pulkovo Obs)
 Zurich Quarterly Solar Bulletin
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kislovodsk Station of Pulkovo Obs
 P.O. Box 1
 Kislovodsk 357741
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980.

 IZMIRAN, USSR

 ITEM: 2370
 DATE:

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Radiometers at 202 and 3000 MHz. Spectrographs
 in the 45 - 90 MHz and 180 - 230 MHz ranges.
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-B3.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 MANILA, PHILIPPINES

 ITEM: 389
 DATE: 15/07/83

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 14.64
 STATION LONGITUDE ----- E 121.08
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Five solar radiometers for 8800, 4995, 1695, 1415 and
 606 MHz -- Dicke type radiometer operating
 sunrise to sunset, 0.1 mm/s.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- The Director
 Manila Observatory
 P.O. Box 1231
 Manila
 Philippines
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

A08 Total Radio Flux Measurements (Cont.)

 NIHF YAMA, JAPAN

ITEM: 2116
 DATE: 06/08/83

DISCIPLINE ----- A08 Total Flux and Polarization
 STATION LATITUDE ----- N 35.93
 STATION LONGITUDE ----- E 138.48
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1978 to present
 OBSERVING SCHEDULE ----- REGULAR: 10 hours each day
 INSTRUMENT DESCRIPTION ----- 17 GHz Polarimeter
 RAW DATA ----- Digital magnetic tape
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Computer Plot
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Nobeyama Solar Radio Observatory
 Tokyo Astronomical Observatory
 Minamimaki-mura
 Minamisaku-gun, Nagano-ken 388-13
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 OTTAWA, CANADA

ITEM: 2257
 DATE: 11/07/83

DISCIPLINE ----- A08 Total Flux and Polarization
 STATION LATITUDE ----- N 45.96
 STATION LONGITUDE ----- E 281.93
 ALTERNATE NAMES -----
 ARO
 Algonquin Radio Observatory
 DATES OF OPERATION ----- 1947 to present
 OBSERVING SCHEDULE ----- Daily
 INSTRUMENT DESCRIPTION ----- 6 foot (1.82 m) parabolic reflector
 RAW DATA ----- Observed 2800 MHz solar flux
 DATA REDUCTION PRACTICE ----- Flux adjusted to 1 astronomical
 unit distance
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH (tenth day of following month)
 FORM OF REDUCED DATA ----- Tabulation
 DATA ROUTINELY PUBLISHED ----- Monthly: SOLAR GEOPHYSICAL DATA
 Yearly: ARO REPORT
 DATA SENT TO WDC-A ----- YES: Omaha and Boulder
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES: reports and raw data
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. Bell
 Herzberg Institute of Astrophysics
 National Research Council
 Ottawa KIA UR6
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data sent to Omaha and Boulder are both daily and
 monthly values. Flux observations are continuous
 from local sunrise to sunset with calibrations at
 1400, 1700 and 2000 UT.

 ANDREJOV, CZECHOSLOVAKIA

2291
 DATE: 06/07/83

DISCIPLINE ----- A08 Total Flux and Polarization
 STATION LATITUDE ----- N 49.92
 STATION LONGITUDE ----- E 14.98
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1958 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Measurements of total flux of solar radio emission
 at the frequencies: 260 MHz, 536 MHz, 808 MHz,
 and 3000 MHz.
 RAW DATA ----- Analog and digital
 DATA REDUCTION PRACTICE ----- Visual and computer
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Bulletin
 DATA ROUTINELY PUBLISHED ----- Solar Radio Data, monthly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. A. Flamicia
 Astronomical Institute
 Observatory Ondrejov
 251 65 Ondrejov
 Czechoslovakia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 PEKING, CHINA

ITEM: 2178
 DATE: 24/11/83

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 40.10
 STATION LONGITUDE ----- E 116.33
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR: 0000-0800 UT, daily
 INSTRUMENT DESCRIPTION ----- Two sets of Dicke type receivers with fixed
 wavelength at 3.2 and 10 cm respectively.
 RAW DATA ----- Pen recorder
 DATA REDUCTION PRACTICE ----- Manual
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Monthly table
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA) and
 Chinese SOLAR-GEOPHYSICAL DATA
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Beijing Astronomical Observatory
 Academia Sinica
 Beijing
 China
 ADDRESS FOR INFORMATION ABOUT DATA ----- Radio Astronomical Department
 Beijing Astronomical Observatory
 Academia Sinica
 Beijing
 China
 ADDITIONAL COMMENTS -----

A08 Total Radio Flux Measurements (Cont.)

 PENTELI, GREECE

ITEM: 905
 DATE: 15/07/83

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 36.05
 STATION LONGITUDE ----- E 23.86
 ALTERNATE NAMES ----- Athens
 ----- Natl Observatory of Athens
 DATES OF OPERATION ----- 08/1970 to present
 INSTRUMENT DESCRIPTION ----- Radio telescope on fixed frequencies 1445, 2695, 4995, 8800 MHz with a 90 inch antenna for continuous observation.
 ----- Strip charts
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- U.S MONTHS
 FORM OF REDUCED DATA ----- Tables, films, photographic paper
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Meudon
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Institute
 ----- National Observatory of Athens
 ----- Athens 306
 ----- Greece
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 0.5 months.

 PURPLE MOUNTAIN, CHINA

ITEM: 2160
 DATE: 01/03/84

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 32.07
 STATION LONGITUDE ----- E 118.82
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 0000-0830 UT, daily
 ----- Two sets of Dicke type receivers with fixed
 ----- wavelength at 3.2 and 10 cm, respective.
 RAW DATA ----- Pen recorder
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTH
 FORM OF REDUCED DATA ----- Monthly table
 DATA ROUTINELY PUBLISHED ----- Chinese Solar Geophysical Data
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Purple Mountain Observatory
 ----- Academia Sinica
 ----- Nanjing
 ----- China
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 PENNINGTON, CANADA

ITEM: 2253
 DATE: 15/07/83

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 49.32
 STATION LONGITUDE ----- E 240.38
 ALTERNATE NAMES ----- Dominion Radio Astrophysical Observatory (DRAO)
 DATES OF OPERATION ----- 1954 to present
 OBSERVING SCHEDULE ----- Daily
 INSTRUMENT DESCRIPTION ----- 6 foot (1.82 m) parabolic reflector
 RAW DATA ----- Observed 2700 MHz solar flux
 DATA REDUCTION PRACTICE ----- Solar flux adjusted to 1 astronomical
 ----- unit distance
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH (after the 10th)
 FORM OF REDUCED DATA ----- Tabulation
 DATA ROUTINELY PUBLISHED ----- Monthly: Solar Geophysical Data
 ----- Monthly and Yearly: ARO Report
 ----- YES: Boulder and Omaha
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES: reports and raw data
 ----- M. R. Bell
 ----- Herzberg Institute of Astrophysics
 ----- National Research Council
 ----- Ottawa K1A 0R6
 ----- Canada
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- High daily and monthly values are sent to Boulder and
 ----- Omaha. Flux observations are continuous from local
 ----- sunrise to sunset with calibration at 1935 UT.

 SAGAMORE HILL, USA

ITEM: 1159
 DATE: 25/07/83

DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 42.63
 STATION LONGITUDE ----- E 289.18
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar Radio Telescope system. Total flux and bursts at
 ----- 242, 409, 609, 1415, 2685, 4995, 8800, 15400
 ----- MHz sunrise to sunset patrol. Computerized patrol
 ----- data stored on magnetic tape with manual
 ----- patrol/analog strip charts available during
 ----- computer outages. Sweep Frequency Interferometric
 ----- Radiometer. Burst data available from 30-80
 ----- MHz, sunrise to sunset patrol.
 RAW DATA ----- Magnetic tapes and analog strip charts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTH
 FORM OF REDUCED DATA ----- Computer printouts and magnetic tape
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA (NOAA, IAU
 ----- Quarterly (QBSA))
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ----- Dat 2, 4th Weather Wing
 ----- Box 415
 ----- S. Hamilton, MA 01982
 ----- USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- National Geophysical & Solar Terrestrial
 ----- Data Center
 ----- NOAA/EDS
 ----- Boulder, CO 80303
 ----- USA
 ADDITIONAL COMMENTS ----- Radio data prior to 01/1980 available from:
 ----- Ed Cliver
 ----- AFGL/PHG
 ----- Hanscom AFB, MA 01731
 ----- USA

A08 Total Radio Flux Measurements (Cont.)

 SYDNEY, AUSTRALIA

 DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- S 33.87
 STATION LONGITUDE ----- E 150.77
 ALTERNATE NAMES ----- Fleurs
 DATES OF OPERATION ----- 12/1954 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- A.I.L. Solar Radio Telescope. Total solar radio flux measurements. Frequencies 245, 1420, 2695, and 4945 MHz. Schedule approx 2200Z to 0700Z. Chart speed 3 mm/minute. Also recording 1 mm/minute.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfiche, magnetic tape. Computer printout is available upon special request.
 DATA ROUTINELY PUBLISHED ----- Provisional: bi-monthly microfiche
 Final: One microfiche per month
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Fleurs Field Station
 University of Sydney/IPS
 Kemps Creek, N.S.W. 2171
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Disturbance Warning Section
 Ionospheric Prediction Service
 Dept. of Science, P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia
 ADDITIONAL COMMENTS ----- Data on flux and events supplied daily to IURWS via URSIGRAM.

ITEM: 583
 DATE: 01/06/84

 TOYOKAWA, JAPAN

 DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 34.83
 STATION LONGITUDE ----- E 137.37
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1951 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Radiometers/Polarimeters, total radio flux and polarization measurements. Center frequencies 3400, 3750, 2090, 100 MHz. Both side bands 60 MHz apart from the center, each 10 MHz wide. Sum and difference of right- and left-handed circular polarizations are recorded. CMP is about 10 UT, stop at 06 UT when inactive. Chart speed 2 mm/min. New instrument was put in operation in 1980 with full daytime coverage and with increased time resolution.
 RAW DATA ----- Strip chart, digital magnetic tape partially available beginning 1976
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots, computer printouts
 DATA ROUTINELY PUBLISHED ----- Monthly report of solar radio emission, Toyokawa Observatory. Regularly available free. Tables of 3-hourly, daily and monthly flux values and tables of distinctive events
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Shinzo Enone
 Toyokawa Observatory
 13 Honhar 3-Chome
 Toyokawa 442
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 0.1 months.

ITEM: 630
 DATE: 06/12/77

 TORUN, POLAND

 DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 53.10
 STATION LONGITUDE ----- E 18.55
 ALTERNATE NAMES ----- Nicolaus Copernicus University
 Pnince Astronomical Obs
 DATES OF OPERATION ----- 10/1958 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Simple interferometer, total flux observations at 127 MHz. Interferometer consists of 2 antennas placed 23.7 m (10 wavelengths) apart along E-W direction. The signal of sine pattern is detected in a Dicke radiometer of 230 kHz IF bandwidth and 2 s IF time constant. Chart speed is 16 cm/h. Data reduced manually. See also Report UAG-83, Part I, p. 130 (1982).
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- ORSA data of daily mean fluxes since 10/1958; SOLNECHNYE DANNYE (Leningrad), since 01/1980, 1/1975
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kazimierz Borowski
 Torun Radio Astronomy Observatory
 Nicolaus Copernicus University
 Chopina 12/1 R
 Torun PL 87-100
 Poland
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 127 MHz observations for 10/1958-1/1960 made with parabolic (12 m dish) antenna. Interferometric observations carried out since 9/1960. Gaps in observations (longer than or equal to 1 month): 2-8/1960, 7/1972, 1-5/1973, 7/1974. Co-investigators: Prof. S. Gorgolewski, G. Gawronska

ITEM: 1084
 DATE: 01/08/83

 TREMSDORF, GDR

 DISCIPLINE ----- A08 Total Radio Flux Measurements
 STATION LATITUDE ----- N 52.28
 STATION LONGITUDE ----- E 13.13
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Radiometer and radiopolarimeter, measurement of intensity and polarization of total solar radio flux at different frequencies, observing time 08-14 UT during winter and 07-15 UT during summer. Absolutely calibrated measurement of 9400, and 1500 MHz. Radiometers at 9400, 3000, 510, 234 MHz; polarimeters at 9400, 1500, 775, 64, 40, 30 MHz (circular polarization) and 113 and 30 MHz (circular and linear polarization). Time resolution 25 seconds at 9400, 3000, 1500 MHz, and 0.15 s at the other frequencies.
 RAW DATA ----- Film, paper records
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Several lists
 DATA ROUTINELY PUBLISHED ----- SOLARE BEOBSACHTUNGSERGEBNISSE (SOLAR DATA) Akad. d. Wissenschaften d. DDR, Zentralinstitut f. solar-terrestrische Physik (HM1), DDR-1199 Berlin-Adlershof. Tables are published monthly.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Henry Aurass
 Zentralinst solar-terrestrische Physik
 Telegrafenberg Haus A50
 15-Potsdam DDR-15
 GDR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 634
 DATE: 09/08/83

A08 Total Radio Flux Measurements (Cont.)

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*****
TRIESTE, ITALY
*****
ITEM: 635
DATE: 01/08/83

DISCIPLINE ----- A08 Total Radio Flux Measurements
STATION LATITUDE ----- N 45.64
STATION LONGITUDE ----- E 13.88
ALTERNATE NAMES ----- Basovizza Observing Station, TRST
DATES OF OPERATION ----- 03/1966 to present
                        Station moved
                        Operation intermittent

OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- The antenna is a parabolical disc of 10 m
                                diameter. It is in operation from January
                                1969. We measure daily (from sunrise to sunset)
                                the total flux density at 237 MHz. Circular
                                polarization measurements at the same frequency
                                started on November 1969. From March 1979 the
                                polarimetric channels at 237, 327, 408, 500,
                                606 and 790 MHz are operating. L- and R-handeu
                                outputs are recorded separately on analogic
                                magnetic tape with a time constant of 0.01 s.
                                The 237 MHz channel is recorded also on paper strip,
                                as L+R and L-R, at 20 cm/h.

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Computer plots
DATA ROUTINELY PUBLISHED ----- OSSERVAZIONI SOLAR: - quarterly bulletin;
                                hourly mean values of flux density and
                                polarization data, up to 03/1979; also
                                distinctive events

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Radio - Solar Group
                                                Trieste Astronomical Observatory
                                                G. B. Tiepolo 11
                                                P.O. Box Succursale Trlest 5
                                                I-34131 Trieste
                                                Italy
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Gaps in operation: only flux density measurements
                                during: 3/1972 - 6/1972 and 1/1973 - 3/1973. No
                                measurements during: 2/1972, 12/1972, 6/1973 - 8/1973,
                                10/1974 and 10/1975 - 7/1976.
                                Special purpose data available in 3 months.
                                Station moved 3/1967 from N45.76 E13.95.
                                Fixed antenna was in operation daily for 4 hours
                                during 3/1966 - 11/1969.
                                The channels at 505, 606, 790 MHz are not calibrated
                                due to strong TV interferences.
    
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*****
YUNNAN, CHINA
*****
ITEM: 2296
DATE: 25/11/83

DISCIPLINE ----- A08 Total Radio Flux Measurements
STATION LATITUDE ----- N 25.03
STATION LONGITUDE ----- E 102.78
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1980 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Total solar radio flux, 2902, 3653 MHz
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- MONTHLY SOLAP ACTIVITY OF YUNNAN
                                OBSERVATORY

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Wang Jing-Sheng
                                                Radio Astronomy Division
                                                Yunnan Observatory
                                                Kunming
                                                China
ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. Yang Rong-Bang
                                                Radio Astronomy Division
                                                Yunnan Observatory
                                                Kunming
                                                China

ADDITIONAL COMMENTS -----
    
```


A09 Radio and Radar Maps of Solar Disk

```

*****
TOYOKAWA, JAPAN
*****
ITEM: 631
DATE: 06/02/82

DISCIPLINE ----- A09 Radio and Radar Maps of Solar Disk
STATION LATITUDE ----- N 34.83
STATION LONGITUDE ----- E 137.37
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1969 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 3 cm Radioheliograph, radio maps of solar disk,
Frequency 9415 MHz, 32 2m dishes in EW, 16 1.2m
dishes in NS, T-shaped, unit spacing 86.03
wavelengths. Resolution 2 arcmin in EW, 2 cos
Z arcmin in NS, Z being zenith distance. Skip
scans in NS during B drifts in EW, one map in
about 20 min soon after cmb. Record sum and
difference of two circular polarizations. Taking
several maps/day is scheduled.
RAW DATA ----- Digital Magnetic Tapes
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.1 MONTHS
FORM OF REDUCED DATA ----- Contour maps, half-tone image
DATA ROUTINELY PUBLISHED ----- May submit daily maps to SOLAR-
GEOPHYSICAL DATA in near future

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Shinzo Enome
Toyokawa Obs, Nagoya Univ, 415
13 Honohara 3-chome
Toyokawa 442
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Ew dishes are common to the 3 cm grating/compound
interferometer described separately. Special purpose
data available after 0.1 months.

```

```

*****
TOYOKAWA, JAPAN
*****
ITEM: 1143
DATE: 06/02/82

DISCIPLINE ----- A09 Radio and Radar Maps of Solar Disk
STATION LATITUDE ----- N 34.83
STATION LONGITUDE ----- E 137.37
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 8 cm Radioheliograph, radio maps of solar disk,
frequency 3750 MHz, 32 E-W 16 N-S 3m dishes, T
shaped with one dish at the cross point for phase
correction. Unit spacing 86.03 wavelengths,
resolution 2 arcmin in E-W, 2cos(Z) arcmin in N-S
Z being zenith distance.
RAW DATA ----- Digital magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.1 MONTHS
FORM OF REDUCED DATA ----- Contour maps, half-tone image
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Shinzo Enome
Toyokawa Observatory
Research Institute of Atmospheric
Nagoya University
13 Honohara 3-chome, Toyokawa 442
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

```

A10 Radio East-West Scans of Solar Disk

```

*****
ITEM: 429
DATE: 22/07/83
*****
NANCAY, FRANCE
*****
DISCIPLINE ----- A10 Radio East-west Scans of Solar Disk
STATION LATITUDE ----- N 47.38
STATION LONGITUDE ----- E .15
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1956 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Interferometer working at 169 MHz, East-West posi-
tions of radio active centers at 169 MHz, resolv-
ing power 3.5 min, 6 hours of observing time.

RAW DATA -----
DATA REDUCTION PRACTICE ----- Paper
REGULAR REDUCED DATA AVAILABLE AFTER ---- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- M. Pick
Meudon Observatory, O.A.S.O.P.
Meudon 92100
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Global flux at
M.P. Issartel
    
```

```

*****
ITEM: 431
DATE: 22/07/83
*****
NANCAY, FRANCE
*****
DISCIPLINE ----- A10 Radio East-West Scans of Solar Disk
STATION LATITUDE ----- N 47.38
STATION LONGITUDE ----- E .15
ALTERNATE NAMES -----
DATES OF OPERATION ----- East-West: 12/1975 to present
North-South: 3/1980 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Radioheliograph at 169 MHz, East-West and North-South
instrument: 25 images/s, polarization, 6 n/day.

RAW DATA ----- Film, digital magnetic tape
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ---- MONTHS
FORM OF REDUCED DATA ----- Films, graphical plots
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- M. Pick
Meudon Observatory
Meudon 927100
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```

```

*****
ITEM: 430
DATE: 22/07/83
*****
NANCAY, FRANCE
*****
DISCIPLINE ----- A10 Radio East-West Scans of Solar Disk
STATION LATITUDE ----- N 47.38
STATION LONGITUDE ----- E .15
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1965 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Interferometer working at 408 MHz, East-West posi-
tions of radio active centers, Resolving power
1.7 min, 3 hours of observing time.

RAW DATA -----
DATA REDUCTION PRACTICE ----- Paper
REGULAR REDUCED DATA AVAILABLE AFTER ---- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- M. Pick
Meudon Observatory
Meudon 92100
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Global flux at
M.P. Issartel
    
```

```

*****
ITEM: 440
DATE: 01/08/83
*****
NOBEYAMA, JAPAN
*****
DISCIPLINE ----- A10 Radio East-West Scans of Solar Disk
STATION LATITUDE ----- N 35.93
STATION LONGITUDE ----- E 138.48
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1978 to present
OBSERVING SCHEDULE ----- 5 hours each day
INSTRUMENT DESCRIPTION ----- 17 GHz interferometer of a multi-correlator type
RAW DATA ----- Digital magnetic tape
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ---- 2 MONTHS
FORM OF REDUCED DATA ----- Computer plot
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Nobeyama Solar Radio Observatory
Tokyo Astronomical Observatory
Minamimakiura, Minamisakugun
Nagano-ken 384-13
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```

A10 Radio East-West Scans of Solar Disk (Cont.)

 OTTAWA, CANADA

ITEM: 2254
 DATE: 13/07/83

DISCIPLINE ----- A10 Radio East-West Scans of Solar Disk
 STATION LATITUDE ----- N 45.96
 STATION LONGITUDE ----- E 281.93
 ALTERNATE NAMES ----- Algonquin Radio Observatory
 DATES OF OPERATION ----- 1968 to present
 OBSERVING SCHEDULE ----- Daily at transit (1700 UT)
 INSTRUMENT DESCRIPTION ----- Interferometer composed of 32, ten-foot parabolic reflectors on an East-West baseline operating at 2400 MHz.

RAW DATA ----- East-West solar scan with 1.5 arc East-West resolution
 DATA REDUCTION PRACTICE ----- None
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS (after the 10th)
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA and A10 REPORT
 DATA SENT TO WDC-A ----- YES: Boulder (Daily and monthly values)
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- M. B. Bell
 Herzberg Institute of Astrophysics
 National Research Council
 Ottawa, KIA 0R6
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TOYOKAWA, JAPAN

ITEM: 1144
 DATE: 06/02/82

DISCIPLINE ----- A10 Radio East-West Scans of Solar Disk
 STATION LATITUDE ----- N 34.83
 STATION LONGITUDE ----- E 137.37
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 8 cm grating/compound interferometer, radio East-West scans of solar disk; frequency 3750 MHz, 32x2 3m dishes, total 63.5 spacings; unit spacing 86.03 wavelengths; resolution 1.1 arcmin for grating, 0.4 arcmin for compound. Observe sum and difference of right- and left-handed circular polarizations, 2 h before and after OMP.

RAW DATA ----- Digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.1 MONTHS
 FORM OF REDUCED DATA ----- Graphical plots, computer printouts, URSIGRAM code URALR
 DATA ROUTINELY PUBLISHED ----- URSIGRAM-flux for each active region, its position, flux ratio 3 cm/8 cm, position of events (also in MONTHLY REPORT OF SOLAR RADIO EMISSION, TOYOKAWA OBSERVATORY)

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Shinzo Enome
 Toyokawa Observatory
 Research Institute of Atmospheric
 Nagoya University
 13 Honohara 3-chome, Toyokawa 442
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Grating interferometer is common to the 8 cm radio-heliograph described separately. Observations by 8 elements at 4000 MHz started 3/1953, 8 elements 5/1954 to 10/1967. Raw data on punched paper tape for 1 scan/day, 256 samples/40 arcmin. Quick scans during bursts are reproduced on charts, about 3 mm/arcmin. Reduced data are graphical plots of phase corrected normalized drift curves, their computer printouts, URSIGRAM code URALR.

 TOYOKAWA, JAPAN

ITEM: 632
 DATE: 06/02/82

DISCIPLINE ----- A10 Radio East-West Scans of Solar Disk
 STATION LATITUDE ----- N 34.83
 STATION LONGITUDE ----- E 137.37
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 3 cm grating/compound interferometer, radio east-west scans of solar disk, frequency 9415 MHz, bandwidth 6 MHz. 32 2 m dishes for grating additional 2 3 m dishes for compound, 32 spacings apart, distance between phase centers is 33 spacings, unit spacing 86.03 wavelengths, resolution 1.1 arcmin for grating, 0.4 arcmin for compound; observe sum and difference of right- and left-handed circular polarizations, 2 hours before and after OMP. Monthly summary of drift curves is available in Solar Geophysical Data.

RAW DATA ----- Digital magnetic tapes
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.1 MONTHS
 FORM OF REDUCED DATA ----- Graphical plots, computer printouts
 DATA ROUTINELY PUBLISHED ----- Flux for each active region, its position, flux ratio 3 cm/8 cm are in URSIGRAM and position of events is in URSIGRAM and monthly Report of Solar Radio Emission, Toyokawa Observatory. Daily E-W scans are published on the Solar Geophysical Data since January 1978.

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Shinzo Enome
 Toyokawa Observatory, Nagoya Univ, RIA
 13 Honohara 3-chome
 Toyokawa 442
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Grating interferometer is common to the 3 cm radio-heliograph (see TOYOKAWA A10). Observations by 8 element grating started 8/1959, 16 element grating 09/1961, 16x2 grating/compound 3/1962. No observations 3-6/1966. Special purpose data available after 0.1 months. Raw data are on punched paper tape for 1 scan/day, 256 samples/40 arcmin. Other scans on chart, speed 4 mm/arcmin. Reduced data are graphical plots of phase-corrected normalized drift curves. URSIGRAM code URALR.

A11 Solar X-ray and UV Background Levels

```
.....
BOULDER, USA
.....

DISCIPLINE ----- All Solar X-ray and UV Background Levels
STATION LATITUDE ----- Geosynchronous Orbit
STATION LONGITUDE ----- Geosynchronous Orbit
ALTERNATE NAMES ----- Boulder Observatory
                        SULTERWARN
DATES OF OPERATION ----- 1974 to present
OBSERVING SCHEDULE ----- Continuous
INSTRUMENT DESCRIPTION ----- Satellite X-ray, Particle and Magnetic Sensors,
                        GOES-5, GOES-6, Geostationary satellites
                        with X-ray, particle and magnetic sensors provide
                        continuous data to SULTERWARN.

RAW DATA ----- Strip charts, magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, microfilm
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
                        NOAA R/E/SE2
                        325 Broadway
                        Boulder, CO 80303
                        USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of the US Operational Flare Patrol Network.
```

A12 Energetic Solar Protons and Solar Electrons

```

*****
BOULDER, USA
*****
ITEM: 922
DATE: 10/05/84

DISCIPLINE ----- A12 Energetic Solar Protons and Solar Electrons
STATION LATITUDE ----- Geosynchronous Orbit
STATION LONGITUDE ----- Geosynchronous Orbit
ALTERNATE NAMES ----- Boulder Observatory
                        SOLTERWARN
DATES OF OPERATION ----- 1974 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Satellite I-ray, Particle and Magnetic Sensors,
                        GOES-5, GOES-6; Geostationary satellites
                        with I-ray, particle and magnetic sensors provide
                        continuous data to SOLTERWARN.

RAW DATA ----- Strip charts, magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, microfilm
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
                        NOAA R/E/SE2
                        325 Broadway
                        Boulder, CO 80303
                        USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of the US Operational Flare Patrol Network.
    
```

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*****
BOULDER, USA
*****
ITEM: 2303
DATE: 10/05/84

DISCIPLINE ----- A12 Energetic Solar Protons and Solar Electrons
STATION LATITUDE ----- Polar orbiting satellite with a sun synchronous
                        orbit, altitude 800 miles
STATION LONGITUDE -----
ALTERNATE NAMES ----- TIROS
DATES OF OPERATION ----- 1976 to present
OBSERVING SCHEDULE ----- Continuous
INSTRUMENT DESCRIPTION ----- NOAA-6 and NOAA-7; energetic proton, electron,
                        and alpha particles provide continuous data to
                        SOLTERWARN.

RAW DATA ----- Strip charts, magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, microfilm
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
                        NOAA R/E/SE2
                        325 Broadway
                        Boulder, CO 80303
                        USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of the US Operational Flare Patrol Network.
                        An additional data set is the flux precipitating
                        electrons and protons in the auroral zones.
    
```

A14 Comet Tails, Interplanetary Scintillations, Zodiacal Light

 CANARIAS, CANARY ISLANDS

ITEM: 1105
 DATE: 03/03/76

DISCIPLINE ----- A14 Comet Tails, Interplanetary Scintillations,
 Zodiacal Light
 STATION LATITUDE ----- N 28.48
 STATION LONGITUDE ----- E 143.72
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1970 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- Photopolarimeter telescope for zodiacal light
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Instituto Universitario de Astrofisica
 Universidad de La Laguna
 La Laguna, Tenerife
 Spain

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in
 1980 or 1983.

 OOTY, INDIA

ITEM: 448
 DATE: 01/07/84

DISCIPLINE ----- A14 Comet Tails, Interplanetary Scintillations,
 Zodiacal Light
 STATION LATITUDE ----- N 11.38
 STATION LONGITUDE ----- E 76.67
 ALTERNATE NAMES ----- Ooty Radio Telescope
 Ootacamund
 DATES OF OPERATION ----- 02/1970 to present
 INSTRUMENT DESCRIPTION ----- Ooty Radio Telescope, Interplanetary Scintillation
 studies of sources around the solar path.
 530 m x 30 m long parabolic cylinder placed on a
 W-S slope of 11.38° making it parallel to axis
 of earth. Capable of rotation in 1/2 angle from
 -4 h to 5 h 30 min. (Electronic beam steering in
 declination over ± 35°. Operating frequency
 326.5 MHz, BW 4 MHz; Time constant from 50 ms
 to 1 s; Total power A phase switched receiver
 system, phase switched beam 2 degrees x 3.6
 arcmin. More information below.

RAW DATA ----- Strip charts, digital magnetic
 tape, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3-6 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Librarian
 Radio Astronomy Centre, T.I.F.R.
 P. B. No. 8
 Ootacamund, Tamil Nadu 643001
 India

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Gaps in operation from 17/1971 to 06/1973. Inter-
 mittent monitoring of sources around sun; sources in
 comet tail, etc. Normal chart speed 1-2 inch/min,
 capable of up to 125 mm/s.

 LA JOLLA, USA

ITEM: 326
 DATE: 07/07/83

DISCIPLINE ----- A14 Comet Tails, Interplanetary Scintillations,
 Zodiacal Light
 STATION LATITUDE ----- N 32.51
 STATION LONGITUDE ----- E 242.58
 ALTERNATE NAMES ----- UCSD
 DATES OF OPERATION ----- 05/1972 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- Regular on a daily basis
 74 MHz antennas. Daily observations of solar
 wind speed by the technique of interplanetary
 scintillations (IPS) in and out of ecliptic.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR on a daily basis
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA (NOAA, US
 Dept of Commerce, Boulder, CO
 80303) solar wind speed data
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Prof. W. A. Coles
 Univ. of California at San Diego
 Applied Physics Information Science
 La Jolla, CA 92093
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- STIP, frequent data gaps for a variety of reasons,
 but some data nearly every day. Raw data are radio
 intensity; inferred quantity is solar wind speed.

 TOYOKAWA, JAPAN

ITEM: 780
 DATE: 01/08/83

DISCIPLINE ----- A14 Comet Tails, Interplanetary Scintillations,
 Zodiacal Light
 STATION LATITUDE ----- N 34.83
 STATION LONGITUDE ----- E 137.37
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1971 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 69 MHz dipole arrays and 327 MHz parabolic
 cylinders. Three-station (Toyokawa, Fuji and
 Sugadaira) observations of interplanetary
 scintillation of radio sources (measurements of
 solar wind speed).

RAW DATA ----- Digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 - 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Mr. Takakiyo Kakinuma
 Research Institute of Atmospheric
 Nagoya University
 Toyokawa, Aichi 442
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

A16 Total Solar Radiation

```

*****
BAGUIO, PHILIPPINES
*****
ITEM: 43
DATE: 01/01/80

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 16.42
STATION LONGITUDE ----- E 120.60
ALTERNATE NAMES ----- Baguio Weather Station
DATES OF OPERATION ----- 03/1971 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Eppley Black & White pyranometer Model B-48.
Thermoelectric sensor connected to strip chart
recorder. Schedule of observation is from 2100
GMT to 1200 GMT.

RAW DATA ----- Tables, computer printouts
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables, computer printouts
DATA ROUTINELY PUBLISHED ----- RADIANT ENERGY AND SUNSHINE, pub-
lished by PAGASA (monthly summary
of hourly and daily radiation val-
ues)

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Baguio Weather Station
Baguio City
Philippines

ADDRESS FOR INFORMATION ABOUT DATA ----- National Radiation Center
PAGASA
1424 Quezon Blvd. Ext.
Quezon City
Philippines

ADDITIONAL COMMENTS ----- Gaps in operation: April, October 1972; Feb., May,
June 1973.
No response received to inquiry for updating material
in 1983.
    
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*****
EBRO, SPAIN
*****
ITEM: 621
DATE: 15/07/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 40.82
STATION LONGITUDE ----- E 1.49
ALTERNATE NAMES ----- Tortosa
DATES OF OPERATION ----- 03/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Kipp and Zonen solarigraph, total solar radi-
ation, continuous recording.

RAW DATA ----- Paper strip chart
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio del Ebro
Roquetes
Tarragona
Spain

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Reduced data from 1967 till 1972; in 1982 we resumed
evaluation of data starting from 1980.
    
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*****
CATARMAN, PHILIPPINES
*****
ITEM: 98
DATE: 22/05/75

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 12.52
STATION LONGITUDE ----- E 124.67
ALTERNATE NAMES ----- UEP Agromet
DATES OF OPERATION ----- 01/1972 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Pyranometer with galvanometric recorder (Kipp &
Zonen). Recording and measurement of total solar
radiation. Thermoelectric sensor connected to
printing galvanometric recorder. Schedule of ob-
servation is from 2100 GMT to 1200 GMT.

RAW DATA ----- Tables, strip chart, computer
printouts
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables, computer printouts
DATA ROUTINELY PUBLISHED ----- RADIANT ENERGY AND SUNSHINE
published by PAGASA. Monthly sum-
mary of hourly and daily radiation
values

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Catarman Agrometeorological Station
Univ. of Eastern Philippines
Catarman, Northern Samar
Philippines

ADDRESS FOR INFORMATION ABOUT DATA ----- National Radiation Center
PAGASA
1424 Quezon Blvd. Ext.
Quezon City
Philippines

ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1980 or 1983.
    
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*****
GILGIT, PAKISTAN
*****
ITEM: 2320
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 35.92
STATION LONGITUDE ----- E 74.33
ALTERNATE NAMES ----- Meteorology Office, Gilgit
DATES OF OPERATION ----- 1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Solarimeter cm 2, Kipp and Zonen, Cambridge
Recorder. Global solar radiation (Sun and sky)
on horizontal surface.

RAW DATA ----- Monthly recorders on roll paper
(continuous)
Hourly and monthly mean values
tabulated
DATA REDUCTION PRACTICE ----- 1 MONTHS
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- A.I. Wotkov Main Geophysical
Observatory, 7-Karbysheva, Leningrad
194018, USSR

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Director
Geophysical Centre
P.O. Box 2
Quetta
Pakistan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Instruments are being calibrated annually with the
help of touring Standard Epply 3463-USA and Standard
Galvo 796-USSR.
    
```

A16 Total Solar Radiation (Cont.)

```

*****
KARACHI, PAKISTAN
*****
ITEM: 2315
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 24.90
STATION LONGITUDE ----- E 67.13
ALTERNATE NAMES ----- Meteorology Office, Karachi
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Solarimeter cm 2, Kipp and Zonen, Cambridge
Recorder. Global solar radiation (Sun and sky)
on horizontal surface.
RAW DATA ----- Monthly recorders on roll paper
(contiguous)
DATA REDUCTION PRACTICE ----- Hourly and monthly mean values
tabulated
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- A.I. Voikov Main Geophysical
Observatory, 7-Karbysheva, Leningrad
194018, USSR
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Director
Geophysical Centre
P.O. Box 2
Quetta
Pakistan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Instruments are
being calibrated annually with the
help of touring Standard Epply 3463-USA and Standard
Galvo 796-USSR.

```

```

*****
LOS BANOS, PHILIPPINES
*****
ITEM: 359
DATE: 21/07/80

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 14.17
STATION LONGITUDE ----- 121.25
ALTERNATE NAMES ----- National Agrometeorological Station
DATES OF OPERATION ----- 01/1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Black and white bimetallic pyranograph
RAW DATA ----- Strip charts
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables of daily and monthly values
RADIANT ENERGY AND SUNSHINE
DATA ROUTINELY PUBLISHED ----- published by PAGASA. Monthly
summary of hourly and daily ra-
diation values.
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Department of Agrometeorology
College of Engineering and Agro-Industrial
Technology
University of the Philippines, Los Banos
College, Laguna
Philippines
ADDRESS FOR INFORMATION ABOUT DATA ----- National Radiation Center
PAGASA
1424 Quezon Blvd Ext
Quezon City
Philippines
ADDITIONAL COMMENTS -----

```

```

*****
LAHORE, PAKISTAN
*****
ITEM: 2318
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 31.55
STATION LONGITUDE ----- E 74.43
ALTERNATE NAMES ----- Meteorology Office, Lahore
DATES OF OPERATION ----- 1967 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Solarimeter cm 2, Kipp and Zonen, Cambridge
Recorder. Global solar radiation (Sun and sky)
on horizontal surface.
RAW DATA ----- Monthly recorders on roll paper
(contiguous)
DATA REDUCTION PRACTICE ----- Hourly and monthly mean values
tabulated
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- A.I. Voikov Main Geophysical
Observatory, 7-Karbysheva, Leningrad
194018, USSR
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Director
Geophysical Centre
P.O. Box 2
Quetta
Pakistan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Instruments are
being calibrated annually with the
help of touring Standard Epply 3463-USA and Standard
Galvo 796-USSR.

```

```

*****
LOWELL, USA
*****
ITEM: 361
DATE: 04/07/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 35.20
STATION LONGITUDE ----- E 248.34
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1950 to present
Gap 1967-1971
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Reflecting Astronomical Telescope, photoelec-
tric measurements of Uranus, Neptune, and
Saturn's satellites Titan and Rhed, Jupiters'
satellites Europa, Callisto. Photoelectric
observations in two wavelengths (0.48, 0.55
micron) of reflected sunlight calibrated with
respect to the brightness of a set of standard
stars.
RAW DATA ----- Printout, DEC RT-11 flexible disks
printout
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout
DATA ROUTINELY PUBLISHED ----- Older data (before 1966) published
in BULLETIN OF LOWELL OBSERVATORY
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Lowell Observatory
Flagstaff, AZ 86002
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- G. W. Lockwood
Lowell Observatory
Box 1269
Flagstaff, AZ 86002
USA
ADDITIONAL COMMENTS ----- Operation 1950-66, 1972-present, seasonally variable
according to the positions of the planets.

```


A16 Total Solar Radiation (Cont.)

```

*****
MANILA, PHILIPPINES
*****
ITEM: 386
DATE: 26/07/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 14.63
STATION LONGITUDE ----- E 121.02
ALTERNATE NAMES ----- Quezon City
DATES OF OPERATION ----- 01/1960 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Eppley pyranometer Model 8-4H black and white.
                                Yokogawa electric works strip chart recorder.
                                Multirange, dual channel, schedule of observations
                                is from 2100 GMT to 1200 GMT.

RAW DATA ----- Strip charts, computer printouts,
                                tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables, computer printouts
DATA ROUTINELY PUBLISHED ----- RADIANT ENERGY AND SUNSHINE
                                monthly summary of hourly and
                                daily solar radiation values

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- National Radiation Center
                                Phil Atmos Geophys Astr Serv Ad PAGASA
                                1424 Quezon Blvd. Ext.
                                Quezon City
                                Philippines
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

```

```

*****
MEDINE SUGAR ESTATE, MAURITIUS
*****
ITEM: 2237
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- S 20.26
STATION LONGITUDE ----- E 57.39
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- Daily - Regular
INSTRUMENT DESCRIPTION ----- Kipp and Zonen Pyranometer with Integrator
RAW DATA ----- Daily Global Solar Radiation
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- January 1977
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- R.R. Vaghjee
                                Meteorological Service
                                Vacoas
                                Mauritius

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data routinely published in monthly publication
                                entitled "Climatological Summaries and Meteorological
                                Observations" by Mauritius Meteorological Service.

```

```

*****
MANILA, PHILIPPINES
*****
ITEM: 387
DATE: 15/07/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 14.64
STATION LONGITUDE ----- E 121.08
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1972 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Sun Tracking, photo-sensitive cell mounted
                                on telescope records hours of clear sun. In-
                                strument is standard cadmium sulphide cell
                                with power supply. Output is taken on a Brush
                                Penmotor geared to 2 mm/min. Full deflection
                                in clear sun restricted to 2 cm.

RAW DATA ----- Charts
DATA REDUCTION PRACTICE ----- IRREGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Original chart
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Manila Observatory
                                P.O. Box 1231
                                Manila
                                Philippines
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Intensity control on Halle-Lyot filter refractor,
                                stops photographs while sun is covered by clouds.
                                Number of photographs gives us hours of sunlight.

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*****
MULTAN, PAKISTAN
*****
ITEM: 2317
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 30.20
STATION LONGITUDE ----- E 71.43
ALTERNATE NAMES ----- Meteorology Office, Multan
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Solarimeter cm 2, Kipp and Zonen, Cambridge
                                Recorder. Global solar radiation (Sun and sky)
                                on horizontal surface.

RAW DATA ----- Monthly recorders on roll paper
                                (continuous)
                                Hourly and monthly mean values
                                tabulated
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- A.I. Voeikov Main Geophysical
                                Observatory, 7-Karbysheva, Leningrad
                                194018, USSR

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Director
                                Geophysical Centre
                                P.O. Box 2
                                Quetta
                                Pakistan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Instruments are being calibrated annually with the
                                help of touring
                                Standard Epply 3463-USA and Standard
                                Galvo 796-USSR.

```

A16 Total Solar Radiation (Cont.)

OBSERV. STARA LESNA, CZECHOSLOVAKIA

ITEM: 2330
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 49.16
STATION LONGITUDE ----- E 20.29
ALTERNATE NAMES -----
DATES OF OPERATION ----- 05/1984 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- 50 cm horizontal solar telescope C. Zeiss Jena
focal length f = 35 mm, F# = 10 m, Bausch and
Lomb grating 154 x 206 mm, 632 lines/mm.
RAW DATA ----- Photographic spectra
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tables, photographic paper
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Dr. Julius Sykora
Astronomical Institute
Slovak Academy of Sciences
059 60 Tatranska Lomnica
Czechoslovakia
ADDRESS FOR INFORMATION ABOUT DATA -----
Dr. Anna Antalova
Astronomical Institute
Slovak Academy of Sciences
059 60 Tatranska Lomnica
Czechoslovakia
ADDITIONAL COMMENTS -----

QUETTA, PAKISTAN

ITEM: 2316
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 30.18
STATION LONGITUDE ----- E 66.95
ALTERNATE NAMES ----- Meteorology Office, Quetta
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Solarimeter cm 2, Kipp and Zonen, Cambridge
Recorder. Global solar radiation (Sun and sky)
on horizontal surface.
RAW DATA ----- Monthly recorders on roll paper
(continuous)
DATA REDUCTION PRACTICE ----- Hourly and monthly mean values
tabulated
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- A.I. Moisev Main Geophysical
Observatory, 7-Karbysheva, Leningrad
194018, USSR
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
Director
Geophysical Centre
P.O. Box 2
Quetta
Pakistan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Instruments are being calibrated annually with the
help of touring Standard Epply 3463-USA and Standard
Galvo 796-USSR.

PLAISANCE, MAURITIUS

ITEM: 2238
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- S 20.43
STATION LONGITUDE ----- E 57.67
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- Daily - Regular
INSTRUMENT DESCRIPTION ----- Kipp and Zonen Pyranometer with integrator
RAW DATA ----- Daily Global Solar Radiation
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- July 1977
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- R.R. Vaghjee
c/o Director
Meteorological Service
Vacoas
Mauritius
Same as above
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS ----- Data routinely published in monthly publication
entitled "Climatological Summaries and Meteorological
Observations" by Mauritius Meteorological Service.

SAGAMORE HILL, USA

ITEM: 504
DATE: 21/12/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 42.63
STATION LONGITUDE ----- E 74.14
ALTERNATE NAMES ----- Hamilton
Det 2, 4 WW
DATES OF OPERATION ----- 01/1966 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Dicke Radiometer. Sunrise to sunset patrol plus
daily flux measurement. Monitor solar fluxes on
nine discrete frequencies - 24200, 15400, 1415,
2695, 4995, 8800, 15400 MHz. Make noon flux
measurement on all. Operation is sunrise to
sunset. Chart speed is 0.1 mm/s.
RAW DATA ----- Analog Multi-channel recorders,
computer automated reduction
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Computer printouts, punched cards
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Det 2, 4 WW
P.O. Box 414
S. Hamilton, MA 01942
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- All data transmitted immediately by telescope on
USAF Automated Weather Network.

A16 Total Solar Radiation (Cont.)

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*****
TULSA (TUL), USA
*****
ITEM: 2214
DATE: 06/07/83

DISCIPLINE ----- A16 Total Solar Radiation (Global Solar Radiation)
STATION LATITUDE ----- N 35.91
STATION LONGITUDE ----- E 264.21
ALTERNATE NAMES ----- Oklahoma Geophysical Observatory
DATES OF OPERATION ----- 1961-present (this discipline 3/10/80
to present)
OBSERVING SCHEDULE ----- Continuous
INSTRUMENT DESCRIPTION ----- Belfort 5-3850A Pyranograph (Actinograph)
RAW DATA ----- Ink on paper 45.5 mm/day recording rate
DATA REDUCTION PRACTICE ----- Not decided, at present daily
peaks are being listed.
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Not decided
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO MDC-A -----
DATA SENT TO MDC-B -----
DATA SENT TO MDC-C -----
DATA AVAILABLE ON REQUEST ----- Raw data available
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jim Lawson
Oklahoma Geophysical Observatory
Box 8
Leonard, OK 74043-0008
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
VICTORIAS, PHILIPPINES
*****
ITEM: 661
DATE: 22/05/75

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 10.90
STATION LONGITUDE ----- E 123.07
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1971 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Pyranometer (EKO, Japanese make) with printing
integrator (Mark V Lintronic), recording and
measurement of total solar radiation. Thermo-
electric sensor connected to printing volt time
inte., stor. Schedule of observation is from
2100 GMT to 1200 GMT daily. One print per hour.
RAW DATA ----- Paper tapes, tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables, computer printouts
DATA ROUTINELY PUBLISHED ----- RADIANT ENERGY AND SUNSHINE,
published by PAGASA, monthly
summary of hourly and daily
solar radiation values
DATA SENT TO MDC-A -----
DATA SENT TO MDC-B -----
DATA SENT TO MDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Victorias Milling Comp
Bacolod City
Philippines
ADDRESS FOR INFORMATION ABOUT DATA ----- National Radiation Center
PAGASA
1424 Quezon Blvd. Ext.
Quezon City
Philippines
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1980 or 1983.

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*****
YACOAS, MAURITIUS
*****
ITEM: 2236
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- S 20.30
STATION LONGITUDE ----- E 57.50
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1976
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Kipp and Zonen Pyranometer with integrator
Daily Global Solar Radiation
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- March 1976
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO MDC-A -----
DATA SENT TO MDC-B -----
DATA SENT TO MDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- R.R. Vaghjee
c/o Director
Meteorological Service
Yacoas
Mauritius
Same as above
ADDRESS FOR INFORMATION ABOUT DATA ----- Data routinely published in monthly publication
entitled "Climetological Summaries and Meteorolical
Observations" by Mauritius Meteorological Service.
ADDITIONAL COMMENTS -----

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*****
WARSAK, PAKISTAN
*****
ITEM: 2319
DATE: 01/08/83

DISCIPLINE ----- A16 Total Solar Radiation
STATION LATITUDE ----- N 34.00
STATION LONGITUDE ----- E 71.52
ALTERNATE NAMES ----- Meteorology Office, Warsak
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Solarimeter cm 2, Kipp and Zonen, Cambridge
Recorder, Global solar radiation (Sun and sky)
on horizontal surface.
RAW DATA ----- Monthly recorders on roll paper
(continuous)
DATA REDUCTION PRACTICE ----- Hourly and monthly mean values
tabulated
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- A.I. Vosikov Main Geophysical
Observatory, 7-Karbysheva, Leningrad
194018, USSR
DATA SENT TO MDC-A ----- YES
DATA SENT TO MDC-B ----- YES
DATA SENT TO MDC-C ----- YES
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Director
Geophysical Centre
P.O. Box 2
Quetta
Pakistan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Instruments are being calibrated annually with the
help of touring Standard Epply 3463-USA and Standard
Galvo 796-USSR.

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A17 Interplanetary Magnetic Fields

```

*****
UCLA, USA
*****
ITEM: 2258
DATE: 11/07/83

DISCIPLINE ----- A.7 Interplanetary Magnetic Fields
STATION LATITUDE ----- Varies with 19 month period approximately in
STATION LONGITUDE ----- ecliptic plane at 0.72 AU
ALTERNATE NAMES ----- VENUS
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR: continuous, all year
INSTRUMENT DESCRIPTION ----- Vector Magnetometer
RAW DATA ----- Tables, computer printouts
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ---- December 1978
FORM OF REDUCED DATA ----- Magnetic tapes
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- C. T. Russell
                                         Institute of Geophysics
                                         University of California - Los Angeles
                                         Los Angeles, California 90024
                                         USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Daily scalar value of interplanetary magnetic field
                                         and angle value are sent to WDC-A.

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*****
UCLA, USA
*****
ITEM: 2259
DATE: 11/07/83

DISCIPLINE ----- A17 Interplanetary Magnetic Fields
STATION LATITUDE ----- In a highly eccentric earth orbit
STATION LONGITUDE ----- In a highly eccentric earth orbit
ALTERNATE NAMES ----- ISEE 1 and ISEE 2
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR: continuous, all year
INSTRUMENT DESCRIPTION ----- Vector Magnetometer
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ---- October 1977
FORM OF REDUCED DATA ----- Microfiche
DATA ROUTINELY PUBLISHED ----- Sent to National Space Science Data Center,
                                         Gruenbelt, Maryland, USA
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- C. T. Russell
                                         Institute of Geophysics
                                         University of California - Los Angeles
                                         Los Angeles, California 90024
                                         USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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B. Ionospheric Phenomena

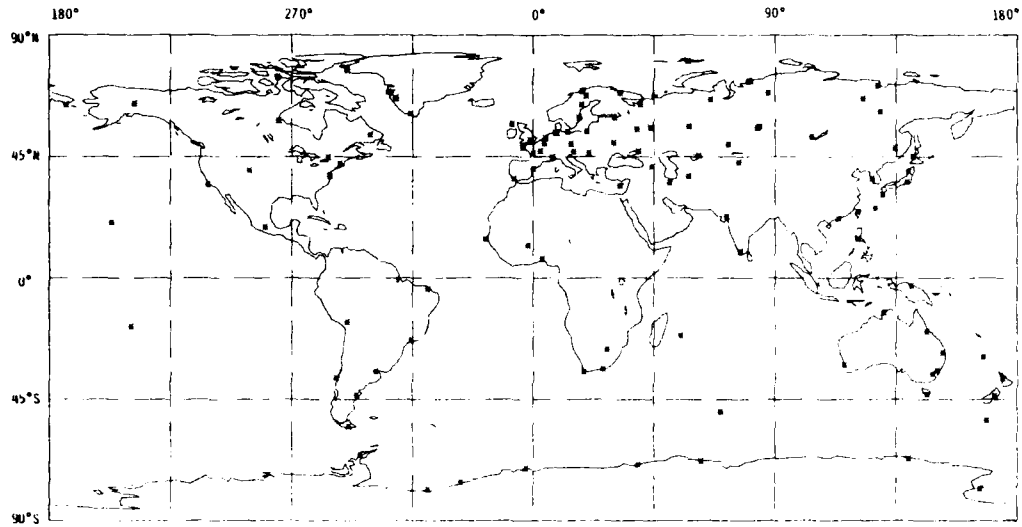
B. Ionospheric Phenomena

Below is a listing of the seven maps contained for this discipline:

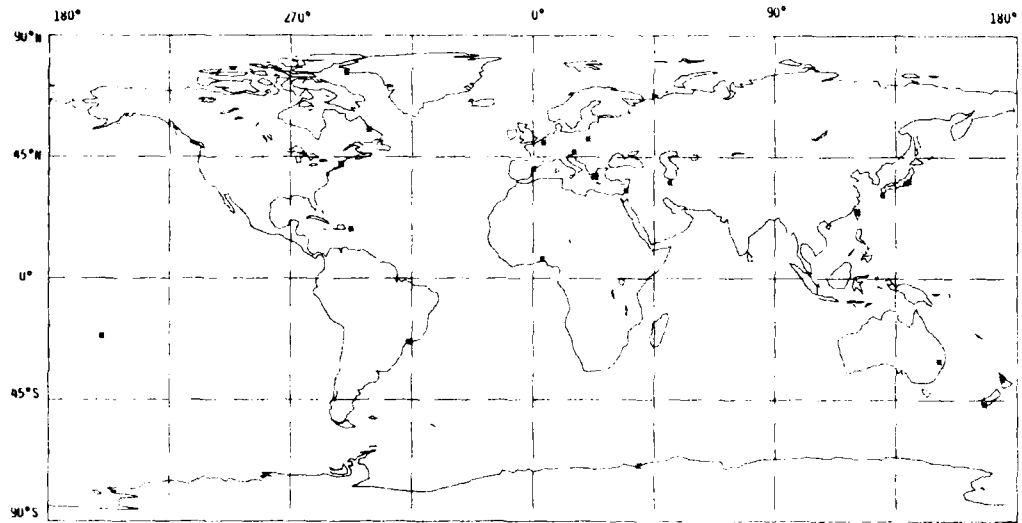
- B01 Ionosphere Vertical Soundings
- B06 Total Electron Content—Satellite Beacons
- B08 Ionospheric Absorption—Method A2 (Riometer)
- B07 Ionospheric Absorption—Method A1 (Pulse echo)
- B09 Ionospheric Absorption—Method A3 (CW Fieldstrength)
- B10 Ionospheric Drifts
- B11 Ionospheric Scintillations from Satellite Beacons
- B12 Ionospheric Back- and Forward-Scatter
- B13 Whistlers and VLF Emissions
- B14 Atmospheric Radio Noise
- B15 Partial Reflection Data

Note that some of the maps have incorporated more than one subdiscipline.
Each of the maps is clearly labelled.

B.1 Maps

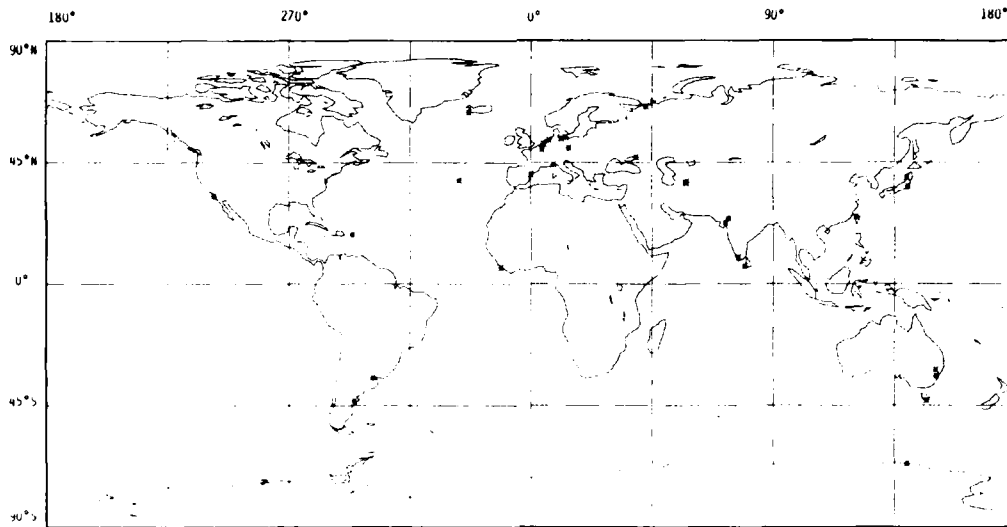


B01 IONOSPHERE VERTICAL SOUNDING



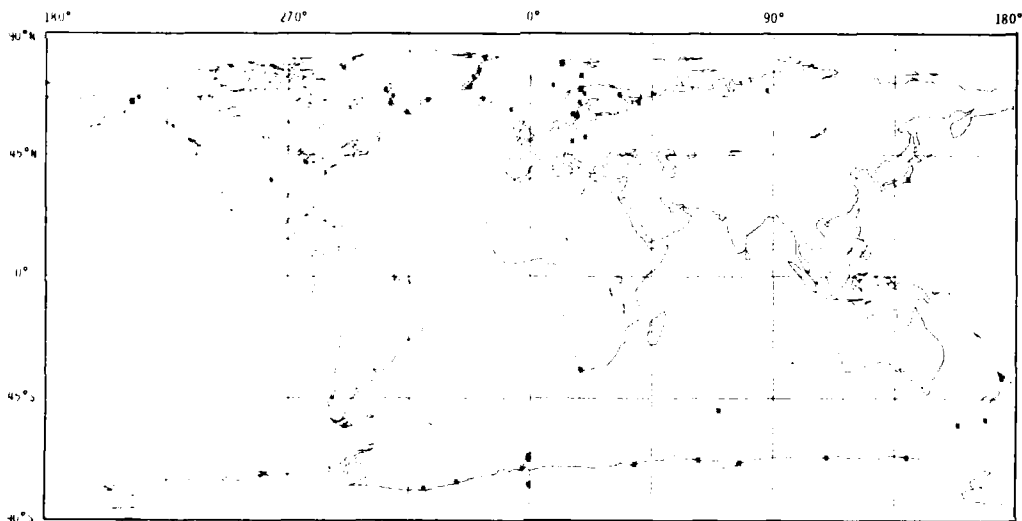
B06 TOTAL ELECTRON CONTENT - SATELLITE BEACONS

B.1 Maps (Cont.)



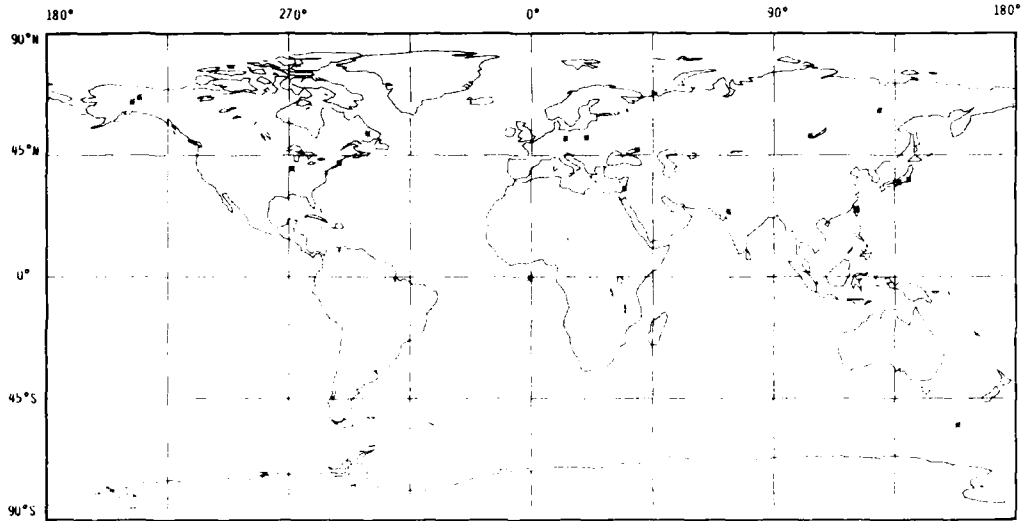
B07 IONOSPHERIC ABSORPTION - METHOD A1 (PULSE ECHO)

B09 IONOSPHERIC ABSORPTION - METHOD A3 (CW FIELDSTRENGTH)



B08 IONOSPHERIC ABSORPTION - METHOD A2 (RIOMETER)

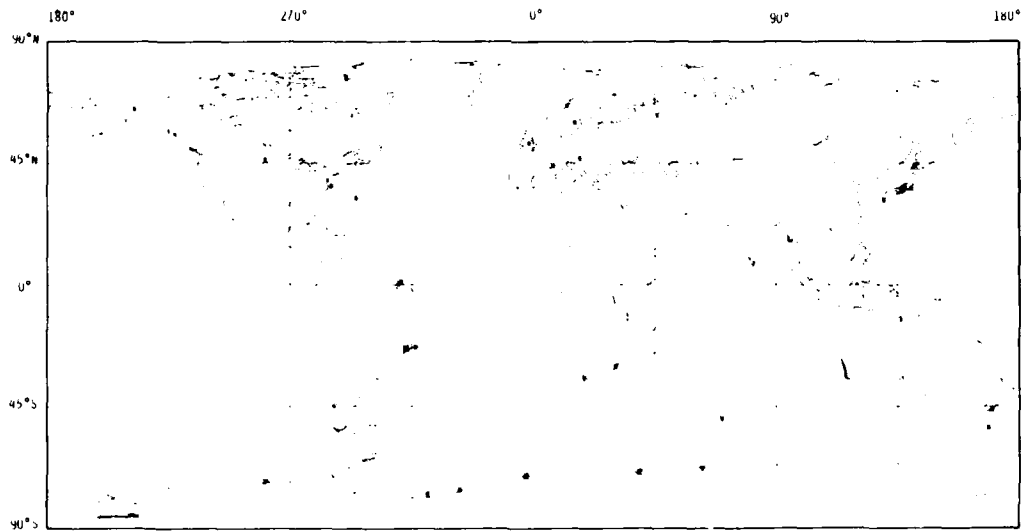
B.1 Maps (Cont.)



B10 IONOSPHERIC DRIFTS

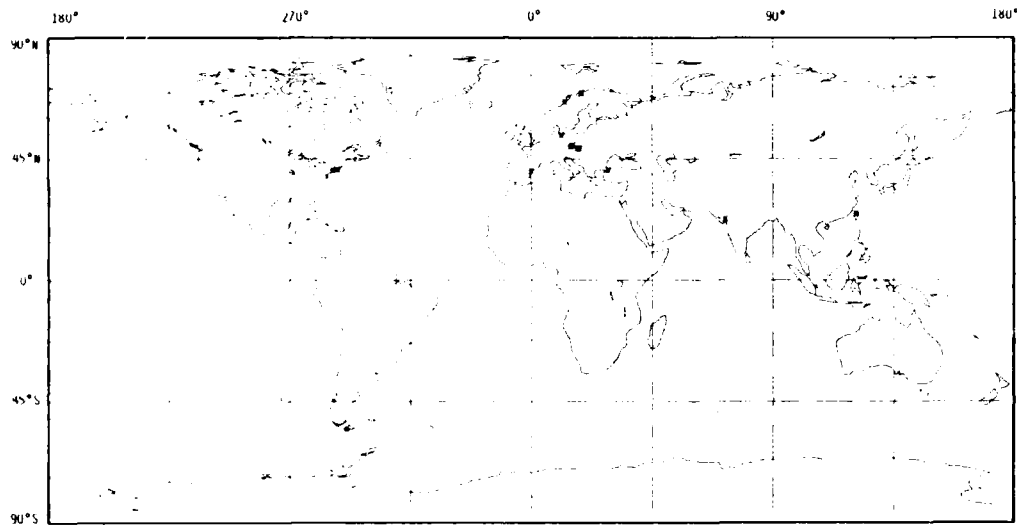
B11 IONOSPHERIC SCINTILLATIONS FROM SATELLITE BEACONS

B12 IONOSPHERIC BACK- AND FORWARD-SCATTER



B13 WHISTLERS AND VLF EMISSIONS

B.1 Maps (Cont.)



B14 ATMOSPHERIC RADIO NOISE
B15 PARTIAL REFLECTION DATA

B01 Ionosphere Vertical Soundings

 AHMEDABAD, INDIA

ITEM: 730
 DATE: 00/00/75

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 23.00
 STATION LONGITUDE ----- E 72.60
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde, 0.6-25 MHz
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Ram Gopal Rastogi
 Physical Research Laboratory
 Narangpura
 Ahmedabad, Gujarat 380004
 India

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1980 or 1983. Data have been received by the
 World Data Centers through June 1981.

 ALMA ATA, USSR

ITEM: 831
 DATE: 00/00/75

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 43.25
 STATION LONGITUDE ----- E 76.92
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1943 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Photographic prints, black/white
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- M. P. Rudina
 Ionospheric Section, Acad Sci of Kaz SSR
 6B Kamenskoe Plato
 Alma-Ata
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material. Data have been received by the World
 Data Centers through 1981.

 AKITA, JAPAN

ITEM: 5
 DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 39.73
 STATION LONGITUDE ----- E 140.13
 ALTERNATE NAMES ----- Ak, 539
 DATES OF OPERATION ----- 12/1949 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Type 9-B (Japanese made) Ionosonde, peak power
 10 kW, frequency sweep 1-25 MHz. Observations
 at 00, 15, 30 and 45 min past every hour, 35 mm
 film: 45 mm/obs.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots, computer
 printouts
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN, issued
 monthly by RRL, tables
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES, United Kingdom
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Akita Radio Wave Observatory
 Radio Research Laboratories
 6-1 Teqata-Sumiyoshi-cho
 Akita-shi, Akita-ken 010
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- WDC-F2 for Ionosphere
 Radio Research Laboratories
 2-1, Nukui-Kitanachi 4-chome
 Koganei-shi, Tokyo 184
 Japan

ADDITIONAL COMMENTS ----- INAts. Special purpose data available after 1 month.

 ARGENTINE ISLANDS

ITEM: 2001
 DATE: 12/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 65.25
 STATION LONGITUDE ----- E 295.73
 ALTERNATE NAMES ----- Port Lockroy, Faraday
 DATES OF OPERATION ----- 04/1957 to present
 OBSERVING SCHEDULE ----- Station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 04/1957 - 01/1983, D.S.I.R. Mark II (Union Radio)
 Ionosonde, Ionosphere vertical incidence
 soundings, 1/4 hourly. Expanded height scale
 (300 km) to 3 MHz on 1/2 h. Frequency range
 0.65-15 MHz, sweep time 4 min. Peak power 1 kW.
 PRF 50 Hz. Pulse length normally 150 microsec.
 Height range 1000km (normal), 300 km (expanded).
 Vertical rhombic antennas.
 01/1983 - present, IPS-42 Ionosonde, Ionosphere
 vertical incidence sounding 1/4 hourly. Frequency
 range 1-22.6 MHz, peak power 5 kW. Pulse length
 40 microsec. Height range 50-800 km. Vertical
 rhombic antennas.

RAW DATA ----- 70 mm photographic paper (to 2/1969)
 25 mm film (from 3/1969 to 1/1983)
 16 mm film (from 1/1983)

DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Computer printout, punched cards, magnetic
 tape, f-plots, and microfiche
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA-ARGENTINE ISLANDS,
 publication of WDC-C1
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Chilton
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. S. M. Broom
 British Antarctic Survey
 Madingley Road
 Cambridge CB3 0ET
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- World Data Centre - C1
 Rutherford Appleton Laboratory
 Chilton
 Didcot
 Oxfordshire OX11 0QX
 United Kingdom

ADDITIONAL COMMENTS ----- Part of the University of Alaska North-South meridi-
 an chain through Fairbanks. Moved from Port Lockroy
 (S64.82 E296.50) in 1/1961 to present site. Data
 processed in yearly batches, available after 5-18
 months. Special purpose data available after 1 month.

B01 Ionosphere Vertical Soundings (Cont.)

 ARKHANGELSK, USSR

ITEM: 2334
 DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 64.60
 STATION LONGITUDE ----- E 40.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde "AIS"
 RAW DATA ----- Ionograms on 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- F-plots, monthly tables of ionospheric parameters

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Complex Magneto-Ionospheric Observatory
 Voznesenye
 Primorskiy District
 164420 Arkhangelsk Region
 USSR
 IZMIRAN
 p/o Akademgorodok
 142092 Troitsk, Moscow Region
 USSR

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 AUCKLAND, NEW ZEALAND

ITEM: 38
 DATE: 08/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 37.00
 STATION LONGITUDE ----- E 175.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS-42 Ionosonde, virtual h(f) records. Ionograms recorded every 15 min on 16 mm film.

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Tables (hourly values)

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. E. Titheridge
 Radio Research Centre
 University of Auckland
 Auckland
 New Zealand
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 ASHKHABAD, USSR

ITEM: 847
 DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 37.9
 STATION LONGITUDE ----- E 58.3
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1955 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Two ionosondes "AIS"
 RAW DATA ----- Ionograms on 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2-3 MONTHS
 FORM OF REDUCED DATA ----- F-plots, monthly tables of ionospheric parameters

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Laboratory of Ionosphere Research
 Inst. of Physics and Technology of
 the Turkmen Academy of Sciences
 ul. Gogol, 15
 744000 Ashkhabad GSP-19
 USSR
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 BEKESCSABA, HUNGARY

ITEM: 73
 DATE: 01/08/83

DISCIPLINE ----- B01 Ionospheric Vertical Soundings
 STATION LATITUDE ----- N 46.67
 STATION LONGITUDE ----- E 21.17
 ALTERNATE NAMES ----- Budapest
 DATES OF OPERATION ----- 07/1954 to present
 Station moved
 Intermittent operation

OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS-42 ionosonde. Frequency sweeping: in the 1 to 22.6 MHz range in 576 logarithmic steps on the basis of frequency synthesis. Time sweeping: 12 s, pulse: 41.67 μ s, peak power: about 5 kW.

RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA (monthly)

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Meteorological Service
 of the Hungarian Peoples Republic
 Budapest H-1525
 114, P.O.B. 38
 Hungary
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Observations from 7/1954 to 12/1959 in Budapest (N46.43 E19.18). Measurements stopped from 1/1960 to 12/1963, and 3/1969 to 12/1971. Special purpose data available after 1 month. As of 09/1978, ionosonde down (IRX ionosonde). As of 2/1982 at the station BEKESCSABA an IPS-42 type ionosonde made in Australia has been operating.

B01 Ionosphere Vertical Soundings (Cont.)

 BOULDER, USA

ITEM: 66
 DATE: 21/12/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 40.03
 STATION LONGITUDE ----- F 254.70
 ALTERNATE NAMES ----- Boulder Ionospheric Sounding
 IONBC
 Boulder Field Station
 IONBC

DATES OF OPERATION ----- 06/1957 to present
 Intermittent operation 57/58/5
 OBSERVING SCHEDULE ----- REGULAR - 15 minute sweeps
 INSTRUMENT DESCRIPTION ----- The C2/4, C3/4 and C4 ionosondes have all been used at various times. Since 2/1973 the instrument is a C2/4. Vertical incidence sweeps every 15 min, sweeping from 250 to 20 000 kHz in 30 s. During special events, 5 min sweeps are obtained and on rare occasions continuous observations are made. 12 to 15 kW peak power is in a large aperiodic delta antenna.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphs (hourly values)
 DATA ROUTINELY PUBLISHED ----- YES (All)
 DATA SENT TO WDC-A ----- YES (Some)
 DATA SENT TO WDC-B ----- YES (Some)
 DATA SENT TO WDC-C ----- YES (Some)
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Boulder Ionospheric Field Station
 WDA/EDIS D63
 Attn: John J. Pitts
 325 Broadway
 Boulder, CO 80303
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- World Data Center A for STP
 WDA/EDIS D63
 Attn: P.O. Conkright
 325 Broadway
 Boulder, CO 80313
 USA

ADDITIONAL COMMENTS ----- The Boulder Field Station has been used for years as a training station for Antarctic personnel as well as technical personnel for other stations in the world-wide network. This site is also used for testing rebuilt sounders and final on the air tests are conducted at this location. Special purpose data available after 1/2 month on request. Daily scalings on 7E form, plus f-plots and monthly tabulations available from WDC-A. Raw data stored at WDC-A.

 BUENOS AIRES, ARGENTINA

ITEM: 818
 DATE: 15/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 34.50
 STATION LONGITUDE ----- E 301.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1950 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS-42 Ionosonde from 1982
 RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- Interpretation
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer output data sheets
 DATA ROUTINELY PUBLISHED ----- Monthly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- LIARA
 Avenida del Libertador No. 327
 1638 Vicente Lopez
 Buenos Aires
 Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 BRISBANE, AUSTRALIA

ITEM: 70
 DATE: 01/06/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 27.53
 STATION LONGITUDE ----- E 152.92
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1943 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS Type IIIIE Ionosonde, routine vertical soundings every 15 min, 1.0 to 20.0 MHz.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfiche, magnetic tape
 Computer printout by special request
 Provisional: 81-monthly microfiche.
 Final: One microfiche per month.
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
 Ionospheric Prediction Service
 P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 CACHOEIRA PAULISTA, BRAZIL

ITEM: 533
 DATE: 01/07/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 22.70
 STATION LONGITUDE ----- E 314.98
 ALTERNATE NAMES ----- Sao Jose dos Campos
 San Jose
 DATES OF OPERATION ----- 03/1973 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Magnetic AB mode 100SW. Ionosphere vertical soundings. Transmitting antennas are folded dipole and logperiodic and received on a delta, operating frequency in sweep from .25-20 MHz. Observations are taken 1/4 hourly.

RAW DATA ----- Films, tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots
 DATA ROUTINELY PUBLISHED ----- BOLETIM DE DADOS ASTROGEOFISICOS,
 listing the periods of available data
 YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Divisao de Banco de Dados
 Instituto de Pesquisas Espaciais (INPE)
 Caixa Postal 515
 Sao Jose dos Campos, SP 12200
 Brazil

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Gaps in operation: 06/73-09/73, 02/74-09/74,
 01/75-08/75.

B01 Ionosphere Vertical Soundings (Cont.)

 CAMPBELL ISLAND

ITEM: 79
 DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 52.60
 STATION LONGITUDE ----- E 169.10
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1944 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- J28 till 1950, C3 to 1982
 15 min observations, 5 min observations on
 RWD, IPS42 vertical ionospheric soundings; 15
 min intervals.
 RAW DATA ----- 35 mm negative film and 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfiche
 DATA ROUTINELY PUBLISHED ----- Ionosphere Data - Exchange or
 special request - limited mailing
 list. Hourly values of standard
 parameters.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Slough, Tokyo
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Officer in Charge
 Geophysical Observatory
 P.O. Box 2111
 Christchurch
 New Zealand
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 CAPE ZEVGARI, CYPRUS

ITEM: 87
 DATE: 15/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 34.58
 STATION LONGITUDE ----- E 32.95
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- Intermittent operation
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Chirp ionosonde. Vertical incidence soundings.
 1-20 MHz linear scale, 1000 km height. Hourly
 readings.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables (daily worksheets)
 DATA ROUTINELY PUBLISHED ----- Published in bulletins, 4-8/1964,
 1/1970 through 10/1972
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Chilton
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- World Data Centre C1
 SERC
 Rutherford Appleton Laboratory
 R3 G1/3
 Chilton Oxon OX11 00X
 United Kingdom
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 CANBERRA, AUSTRALIA

ITEM: 84
 DATE: 01/06/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 35.32
 STATION LONGITUDE ----- E 149.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1937 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS type 4B ionosonde, normal vertical incidence
 sounding every 15 min. 1.0 to 22.6 MHz. Until
 March 1976 the instrument was an IPS type 3C
 ionosonde.
 RAW DATA ----- 16 mm film for type 4B, 35 mm film
 for type 3C ionosonde.
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Table, microfiche, magnetic tape
 Computer printout by special request
 Provisional: 81-monthly microfiche
 Final: One microfiche per month
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
 Ionospheric Prediction Service
 P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1/4 h recordings, usually, 5 minute recordings for
 seven days centered on Priority Regular World Days.

 CHRISTCHURCH, NEW ZEALAND

ITEM: 112
 DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 43.41
 STATION LONGITUDE ----- E 172.35
 ALTERNATE NAMES ----- Godley Head
 Lincoln
 DATES OF OPERATION ----- 10/1937 to present
 Station moved
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- P2 ionosonde, 15 min hf records, vertical, 1-22
 MHz, 1000 km. NZ designed and built ionosonde.
 Records on 35 mm film at 15 min intervals. On
 RWDs records at 5 min intervals.
 IPS42 vertical ionospheric soundings at 15 min
 intervals from 01/1983.
 RAW DATA ----- 35 mm negative film, copies avail-
 able on request for short runs
 16 mm film from 01/1983
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape and microfiche
 DATA ROUTINELY PUBLISHED ----- IONOSPHERE DATA/exchange or special request.
 Limited mailing list.
 Hourly values of standard parameters.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Slough
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Officer-in-Charge
 Geophysical Observatory
 P.O. Box 2111
 Christchurch
 New Zealand
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Station formerly at Lincoln - no significant loca-
 tion change. J28 until 1957.

B01 Ionosphere Vertical Soundings (Cont.)

 CHUNG-LI, TAIWAN, CHINA

ITEM: 113
 DATE: 13/01/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 24.91
 STATION LONGITUDE ----- E 121.24
 ALTERNATE NAMES ----- Taipei
 DATES OF OPERATION ----- 03/1960 to present
 OBSERVING SCHEDULE ----- 07/1965 station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 C2/C4 ionosonde. Observations scheduled according to IUMWS recommendation.

RAW DATA ----- Film, tables
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Hourly value tables, graphical plots
 DATA ROUTINELY PUBLISHED ----- Detailed values of ionospheric characteristics and f-Plots for Chung-Li

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Yinn-Hsen Huang
 Telecommunication Laboratories, M.O.C.
 P.O. Box 71
 Chung Li 320
 Taiwan, China

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose observations are usually available after 1 month. Station moved from N25.0 E121.5 to present location in 07/1965.

 CHURCHILL, CANADA

ITEM: 2159
 DATE: 01/02/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 58.70
 STATION LONGITUDE ----- E 265.80
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1948 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 1005 M ionosonde antenna; receive twin delta. Transmit: 0.25 to 2.25 MHz dipole 30 feet; 2.25 to 22 MHz double log, periodic 130 feet. Sounding schedule and receiver gain settings: (6 hourly observations) 59 minutes - high; 00 minutes - medium; 01 minutes - low; 15, 30 and 45 minutes - medium (manually adjusted).

RAW DATA ----- 35 mm film, analog
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, film, tables
 DATA ROUTINELY PUBLISHED ----- Canadian Ionospheric Data (monthly)

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- District Manager
 Department of Communications
 Ionospheric Data Centre
 1241 Clyde Ave.
 Ottawa, Ontario K2C 1Y3
 Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 1/2 month.

 CHURCHILL, CANADA

ITEM: 114
 DATE: 01/02/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 54.70
 STATION LONGITUDE ----- E 265.80
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1948 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 1005 M sounder, antenna 200 kc-2 MHz, multiple dipole, 3000 ft long; 2-20 MHz, double log periodic, 175 ft tower. Sounding schedule is the same as Ottawa.

RAW DATA ----- 35 mm film, analog
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, film, tables
 DATA ROUTINELY PUBLISHED ----- Canadian Ionospheric Data (monthly)

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- District Manager
 Department of Communications
 200-386 Broadway Ave.
 Winnipeg, Manitoba R3C 3Y9
 Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Engineering Support Division
 Department of Communications
 1241 Clyde Avenue
 Ottawa, Ontario K2C 1Y3
 Canada

ADDITIONAL COMMENTS ----- Special purpose data usually available after 1/2 month.

 COLLEGE, USA

ITEM: 123
 DATE: 22/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 64.93
 STATION LONGITUDE ----- E 212.00
 ALTERNATE NAMES ----- Sheep Creek
 DATES OF OPERATION ----- 1954 to present
 OBSERVING SCHEDULE ----- 07/1969 station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 C-3 ionosonde, ionospheric density layers, ionosonde transmits a 0.5 to 20 MHz frequency scan over a 30 second period once every 15 minutes. Received returns are displayed on an oscilloscope and recorded on 35 mm film.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- YES
 Archives
 Geophysical Institute
 University of Alaska
 Fairbanks, AK 99701
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Previous to 07/1969, this facility was located 6 miles SW at NSR 86 E212.17. It was the policy to store original College ionosonde films at the Geophysical Institute and send copies to Boulder, Colorado. Due to a lack of funding, after December 1981 no copies could be made. Therefore, all original film after that date has been shipped to NOAA, Boulder, Colorado and only previous original films remain at the Geophysical Institute.

B01 Ionosphere Vertical Soundings (Cont.)

 CONCEPCION, CHILE

ITEM: 126
 DATE: 08/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 36.78
 STATION LONGITUDE ----- E 286.88
 ALTERNATE NAMES ----- IONCP
 DATES OF OPERATION ----- 11/1957 to 8/1975 and 12/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Vertical incidence soundings from 1.0 to 25 MHz, 11/1957 to 10/1964, 0.25 to 20 MHz, 11/1964 to 1/1980, every 30 minutes, except RAO every 15 minutes some years. Then 1.0 to 20 MHz, 2/1980 to present, every hour.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables, punched cards, f-plot 11/1957 to 12/1979
 ----- Tables, punch cards, magnetic tape 1/1980 to present

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ----- Harald Sagner
 ----- Dept. de Geofisica, Fac. Ciencias
 ----- Universidad de Concepcion
 ----- Casilla 947
 ----- Concepcion
 ----- Chile

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data formerly published in IONOSPHERIC DATA (NOAA/EDS, US Dept of Commerce - no longer published).

 DARMSTADT, FRG

ITEM: 2915
 DATE: 24/05/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 54.
 STATION LONGITUDE ----- E 9.
 ALTERNATE NAMES ----- St. Peter-Indring
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Harry Chirpsounder

RAW DATA -----
 DATA REDUCTION PRACTICE ----- See IONOSPHERIC DATA and IONOSPHERIC REDUCED DATA AVAILABLE AFTER ----- 15 minutes after measurement every hour
 FORM OF REDUCED DATA ----- See IONOSPHERIC DATA and IONOSPHERIC DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES Solferwonn, Boulder, CO, USA
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Not always
 ADDRESS FOR INFORMATION ABOUT STATION ----- Forschungsanstalt der DBP
 ----- Postfach 5000
 ----- D-6100 Darmstadt
 ----- FRG

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 DAKAR, SENEGAL

ITEM: 131
 DATE: 01/06/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 14.76
 STATION LONGITUDE ----- E 342.58
 ALTERNATE NAMES ----- Ca herenn
 DATES OF OPERATION ----- 05-1949 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS 42 ionosonde. Ionograms every 15 min, 1 - 22 MHz.

RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables of hourly values, magnetic tape since 01/1971
 ----- BULLETIN DE MESURES IONOSPHERIQUES

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ----- Monsieur l'Ingenieur Charge du Service
 ----- des Previsions Ionospheriques
 ----- C.N.E.T. - B.P. 40
 ----- 22301 Lannion Cedex
 ----- France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No data from July 1978 to April 1979

 DARWIN, AUSTRALIA

ITEM: 2009
 DATE: 01/06/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 12.45
 STATION LONGITUDE ----- E 130.95
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1983 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS Type 4B ionosonde, normal vertical incidence sounding every 15 minutes, 1.0 to 22.6 MHz.

RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTH
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ----- Assistant Secretary
 ----- Ionospheric Prediction Service
 ----- P. O. Box 702
 ----- Darlinghurst N.S.W. 2010
 ----- Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B01 Ionosphere Vertical Soundings (Cont.)

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*****
DE BILT, THE NETHERLANDS
*****
ITEM: 141
DATE: 01/09/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE --- N 52.10
STATION LONGITUDE --- E 5.18
ALTERNATE NAMES -----
DATES OF OPERATION --- 11/1949 to present
OBSERVING SCHEDULE --- Intermittent operation
INSTRUMENT DESCRIPTION -----
REGULAR
Panoramic ionosonde observations 1/2 hourly, only
hourly observations are tabulated. Ionosonde
developed and built in the Netherlands.
RAW DATA ----- Film, monthly bulletins on microfiche
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER --- 1 MONTH
FORM OF REDUCED DATA --- Films, tables in monthly bulletin
DATA ROUTINELY PUBLISHED ----- Royal Netherlands Meteorological
Institute, monthly bulletin of
ionospheric data
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES, from 1/1983
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- Chief, Division of Geophysics
Royal Netherlands Meteorological Inst.
P. O. Box 201
3730 AE-De Bilt, De Bilt
The Netherlands
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Gap from 3/1967 until 10/1967 (included).

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*****
DOURBES, BELGIUM
*****
ITEM: 152
DATE: 01/01/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE --- N 50.10
STATION LONGITUDE --- E 4.60
ALTERNATE NAMES -----
DATES OF OPERATION --- 07/1957 to present
OBSERVING SCHEDULE --- REGULAR
INSTRUMENT DESCRIPTION -----
Digisonde 128 and Digisonde 256. Ionosphere
Vertical Soundings. Normal ionograms every
15 minutes. Digital ionograms every hour.
Continuous recording of ionospheric char-
acteristics (foF2, h'pmin, MUF).
RAW DATA ----- Digital ionograms on paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER --- 1 MONTHS
FORM OF REDUCED DATA --- Tables
DATA ROUTINELY PUBLISHED ----- Institut Royal Meteorologique de
Belgique, Bulletin mensuel, obser-
vations ionospheriques et du
rayonnement cosmique
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. J. C. Jodogne
Geophysique externe - Inst. Royal Met.
3, avenue Circulaire
Bruxelles 1180
Belgium
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
DIXON, USSR
*****
ITEM: 2194
DATE: 01/05/84

DISCIPLINE ----- B01 Ionospheric Vertical Soundings
STATION LATITUDE --- N 73.5
STATION LONGITUDE --- E 80.6
ALTERNATE NAMES ----- Dixon Island
DATES OF OPERATION --- 1957 to present
OBSERVING SCHEDULE --- Regular
INSTRUMENT DESCRIPTION ----- Ionosonde of "ALS" type
RAW DATA ----- Ionograms on 35 mm film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ---
FORM OF REDUCED DATA ----- F-plots, monthly tables of ionospheric
parameters
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Arctic & Antarctic Research Institute
Fontanka, 34
192104 Leningrad D-104
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
EBRO, SPAIN
*****
ITEM: 622
DATE: 15/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE --- N 40.82
STATION LONGITUDE --- E .49
ALTERNATE NAMES ----- Tortosa
DATES OF OPERATION --- 04/1955 to present
OBSERVING SCHEDULE --- REGULAR
INSTRUMENT DESCRIPTION ----- French ionosonde; from 7/1967 Swedish Magnetic
AB ionosonde, vertical soundings, normally one
ionogram per hour, occasionally every 15 or 5
minutes.
RAW DATA ----- Film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER --- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- Boletin del Observatorio del
Ebro (Ionosfera)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- YES: Slough
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Observatorio del Ebro
Roquetes
Tarragona
Spain
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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B01 Ionosphere Vertical Soundings (Cont.)

 EL ARENOSILLO, SPAIN

 ITEM: 160
 DATE: 01/01/80
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 37.10
 STATION LONGITUDE ----- E 553.25
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Graphical plots, tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Juan M. Cisneros
 Inst Nacional de Tecnica Aeroespacial
 Torrejon De Ardoz
 Madrid
 Spain
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 3 months.
 No response received to inquiry for updating material
 in 1983.

 GARCHY, FRANCE

 ITEM: 187
 DATE: 01/08/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 47.28
 STATION LONGITUDE ----- E 3.07
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1959 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde magnetic AB type 1005W, 4 soundings per
 hour (RM-12 soundings per hour). Range 0.25 to
 20.25 MHz, power 25 kW, recurrence 50 Hz, im-
 pulse 70 microsec, exploration 30 s. Double
 superheterodyne type, aperiodic power amplified.
 Delta and Trombone antennas.
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- MESURES IONOSPHERIQUES RADIO-
 ELECTRIQUES C.N.E.T. Lannion
 (Cotes du Nord) 22301
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Station Ionospherique
 Centre de Recherches Geophysiques
 de Garchy
 Pouilly s/Loire 58150
 France
 Monsieur le Chef du Departement TMA/MIR
 C.N.E.T.
 Route de Tregastel
 Lannion 22301
 France
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Ionograms have not been reduced since 03/1974.

 FORTALEZA, BRAZIL

 ITEM: 172
 DATE: 01/07/84
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 3.75
 STATION LONGITUDE ----- E 321.05
 ALTERNATE NAMES ----- Eusebio
 DATES OF OPERATION ----- 08/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- C-4 ionosonde: transmitting and receiving anten-
 nas are delta type, operating frequency sweeps
 from 1 MHz - 20 MHz.
 RAW DATA ----- Film, tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, graphic plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Divisao de Banco De Dados
 Instituto de Pesquisas Espaciais (INPE)
 Caixa Postal 515
 Sao Jose Dos Ca SP 12200
 Brazil
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Former station location was Natal, Brazil.
 Only limited data have been sent to WDC-A.

 GENERAL BELGRAND, ANTARCTICA

 ITEM: 51
 DATE: 01/08/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 77.97
 STATION LONGITUDE ----- E 321.20
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Data are published by Instituto
 Antartico Argentino as scientific
 contributions.
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Horacio A. Cazeneuve
 Instituto Antartico Argentino
 Cerrito 1248
 Buenos Aires
 Argentina
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Special purpose data available after 4 months.

B01 Ionosphere Vertical Soundings (Cont.)

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 69.26
 STATION LONGITUDE ----- E 306.49
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde, 0.75-20 MHz
 RAW DATA ----- 35 mm film, h-values; f_oplot
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Viggo Nohle Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 729
 DATE: 13/01/84

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 56.15
 STATION LONGITUDE ----- E 44.30
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1958 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Ionosonde "AIS"
 RAW DATA ----- Ionograms on 35 mm cinematographic film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- F-plots, monthly tables of ionospheric parameters
 DATA ROUTINELY PUBLISHED ----- "Cosmic Data" Bulletin
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric Station
 Research Radio Physics Institute (NIRFI)
 ul. Lyadova 25/14
 603600 Gorky GSP-51
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 2188
 DATE: 01/05/84

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 53.32
 STATION LONGITUDE ----- E 299.64
 ALTERNATE NAMES ----- AFGL Goose Bay Ionospheric Observatory
 DATES OF OPERATION ----- 01/1972 to present
 OBSERVING SCHEDULE ----- One Vertical/Backscatter sounding pair every 15 minutes
 INSTRUMENT DESCRIPTION ----- Digisonde 128 PS, .5 to 20 MHz linear frequency scan, minimum step 25 kHz, phase coded transmission, spectral integration identifies Doppler of maximum amplitude in each frequency/range bin.
 VERTICAL SOUNDINGS : 10 kw pp Granger transmitter, 180 foot vertical rhombic transmit antenna, 4 circular polarized (switchable) receive antennas for o/x identification and coarse mode of arrival measurements.
 BACKSCATTER SOUNDINGS : 10 kw pp Granger transmitter, log periodic TCI transmit antenna, 12 element log periodic loop antenna receive array, boresight 0 degrees (True North).
 RAW DATA ----- Digital magnetic tape (reduced rate hard copy paper recording)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Vertical only: Hourly Values
 15 ionospheric parameters (URSI standard)
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Jurgen Buchau
 Air Force Geophysics Laboratory (PHY)
 Hanscom AFB, MA 01731
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 208
 DATE: 08/03/84

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 33.32
 STATION LONGITUDE ----- E 26.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1958 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Barry Research VOS 1C Chirpsounder, 0.5-15 MHz, 1000 km height range, sweep rate 50 kHz/s, sweep duration 4 min 50 s, peak power 80 W, average power 30 W, sweep commences on the hour, equivalent 3 dB pulse width 30 microseconds.
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA, monthly bulletin for Grahamstown, available on request
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Slough
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Data Centre
 Department of Physics and Electronics
 Rhodes University
 Grahamstown 6140
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Regularly scheduled data normally available after 1-12 months depending on staffing. Data bulletins are available for 1/3/58-31/8/58, 3/9/58-31/12/58, 3/1/59-22/2/59, 2/1965-12/1965, 7/1972-present.

ITEM: 212
 DATE: 01/08/83

B01 Ionosphere Vertical Soundings (Cont.)

 GRAZ, AUSTRIA

ITEM: 214
 DATE: 01/01/80

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 47.10
 STATION LONGITUDE ----- E 15.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1947 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Special production ionosonde, hourly ionograms on 16 mm film, 2.5-12 MHz in 50 s, on International World Days every 15 min.

RAW DATA ----- Film, monthly tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, fof graphical plots (monthly)
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC STATION GRAZ/AUSTRIA hourly foF2 data, monthly means of foE, foF1, virtual heights

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institut fur Meteorologie und Geophysik University of Graz Halbarthgasse 1 Graz A-8010 Austria

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 HEISS ISLAND, USSR

ITEM: 2195
 DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 80.6
 STATION LONGITUDE ----- E 58.0
 ALTERNATE NAMES ----- Tikhaya (05/1933 - 08/1958)
 DATES OF OPERATION ----- 05/1933 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Ionosonde "AIS"
 RAW DATA ----- Ionograms on 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 YEARS
 FORM OF REDUCED DATA ----- F-plots, monthly tables of ionospheric parameters

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Arctic & Antarctic Research Institute Fontanka, 34 192104 Leningrad D-104 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Called Heiss Island since 08/1958.

 HALLEY BAY, ANTARCTICA

ITEM: 227
 DATE: 17/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 75.52
 STATION LONGITUDE ----- E 333.37
 ALTERNATE NAMES ----- Halley
 DATES OF OPERATION ----- 04/1957 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 04/1957 to 01/1981, DSIR Mark II (Union Radio) ionosonde, ionosonde vertical incidence soundings 1/4 hourly. Expanded height scale (300 km) to 3 MHz on 1/2 h, gain runs at hour. Frequency range 0.65-15 MHz, sweep time about 4 min, peak power 1 kW, P.R.F. 50 Hz, pulse length normally 100 microsec, height range 1000 km (normal), 300 km (expanded), antennas terminated folded dipoles.
 01/1981 to present, NOAA sounder. Computer controlled, digital ionosonde, providing amplitude and phase of retruned echoes. Frequency range 0.4 MHz - 15 MHz, sweep time typically 20 s, peak power 10 kW. Normally PRF is 50 Hz, pulse length 60 microsec, height range 800 km. TTX antenna log periodic array, RX antenna spaced dipole array, basic program, 1/4 hourly soundings supplemented with frequent special campaign programs.

RAW DATA ----- 35 mm film to 1/1/81
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL (1957 to 1981)
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 13 MONTHS
 FORM OF REDUCED DATA ----- Computer printout, punched cards, magnetic tape, f-plots, fiche (until 1981)
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA - HALLEY BAY publication of WDC-C1 (1957 to 1981)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES: Chilton
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. R. Dudeney British Antarctic Survey Madingley Road Cambridge, CB3 0ET, United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- World Data Centre - C1 Rutherford Appleton Laboratory Chilton Didcot Oxfordshire OX11 0QX United Kingdom

ADDITIONAL COMMENTS ----- No operation during 1959. Regularly scheduled data are normally available after 8-18 months (processed in yearly batches). Special purpose data usually available after 1 month (selected parameters). Regular scaling practice to recommence in 1984.

 HERMANUS, REP. OF S. AFRICA

ITEM: 244
 DATE: 01/02/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 34.42
 STATION LONGITUDE ----- E 19.23
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1949 to present
 OBSERVING SCHEDULE ----- Station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 IPS 42 swept frequency ionosonde, routine recordings, 1-22 MHz, vertical delta antennas, sweep time 20 seconds. Normal 15 minute program, but special runs of continuous, 1 minute, or 5 minute runs can be run on request.

RAW DATA ----- 8 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Monthly Bulletin
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- The Director National Institute for Telecommunications Research PO Box 3718 Johannesburg 2000 Rep. of S. Africa

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The Monthly Bulletin of Ionospheric Characteristics Recorded at Johannesburg and Hermanus is mailed regularly to listed institutions as the data becomes available. Apply to the institute to receive copies. The ionosonde originally operated at Cape Town S34.13 E18.31 from January 1949 to 10 May 1971. It was moved to Hermanus and recording resumed 13 May 1971.

B01 Ionosphere Vertical Soundings (Cont.)

 HOBART, AUSTRALIA

ITEM: 262
 DATE: 01/06/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 42.88
 STATION LONGITUDE ----- E 147.33
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1948 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS Type 48 ionosonde, normal vertical incidence soundings every 15 minutes 1.0 to 22.6 MHz.
 RAW DATA ----- 16 mm film for type 48
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfiche, magnetic tape
 DATA ROUTINELY PUBLISHED ----- Computer printout by special request
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
 Ionospheric Prediction Service
 P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Hobart station was destroyed by fire 29/05/59. Some of the ionograms were lost in the fire. The station was reopened in April 1961. 15 minute recordings, usually, 5 minute recordings for seven days centered on Priority Regular World Days.

 IBADAN, NIGERIA

ITEM: 275
 DATE: 28/10/75

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 7.40
 STATION LONGITUDE ----- E 3.90
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 12/1961 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Mark IV union ionosonde, 1 kW peak power 80-330 microsec pulse width covering frequency range 0.67-25 MHz in 5 minutes, ionograms produced every hour.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IBADAN
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Slough
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ibadan Ionospheric Station
 Physics Dept., University of Ibadan
 Ibadan
 Western State
 Nigeria
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Other vertical ionospheric sounders available at the station are the C2/4 ionosonde and a portable cosson ionosonde. The former has not started to function. It is hoped to use the latter at a later date (around 1976) in Jos which is a station almost right on the dip equator. No response received to inquiry for updating material in 1980 or 1983.

 HONG KONG, HONG KONG

ITEM: 264
 DATE: 21/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 22.33
 STATION LONGITUDE ----- E 114.20
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS-42 ionosonde, soundings every 15 minutes, 1-22.0 MHz, peak power 5 kW.
 RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Film
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- G. O. Walker
 Physics Department
 Hong Kong University
 Hong Kong
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month. Overhauled replacement C2/4 ionosonde installed 1974. Replaced by IPS-42 (K&I Aerospace) 1983. C2/4 still operatable.

 IRKUTSK, USSR

ITEM: 861
 DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 52.5
 STATION LONGITUDE ----- E 104.0
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1948 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde "A15"
 RAW DATA ----- Ionograms on 35 mm cinematographic film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- F-plots, monthly tables of ionospheric parameters, RMD ionograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- SIBIZMIR
 P.O. Box 4
 664697 Irkutsk 33
 USSR
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

B01 Ionosphere Vertical Soundings (Cont.)

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*****
KOKUBUNJI, TOKYO, JAPAN
*****
ITEM: 324
DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 35.71
STATION LONGITUDE ----- E 139.48
ALTERNATE NAMES ----- TO, 535
DATES OF OPERATION ----- 01/1946 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Type 9-R (Japanese made) ionosonde, peak power
10 kw, frequency sweep 1-20 MHz, observations at
00, 15, 30 and 45 min past every hour, 35 mm film;
36 mm/ohs.

RAW DATA ----- 35 mm film, ionofax
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables, graphical plots, computer
printouts
DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN, issued
monthly by RRL, tables, f-plots
YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: United Kingdom
ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric Prediction Service
Radio Research Laboratories
2-1, Nukui-Kitamachi 4-chome
Koganei-shi, Tokyo 184
Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- WDC-C2 for Ionosphere
Radio Research Laboratories
2-1, Nukui-Kitamachi 4-chome
Koganei-shi, Tokyo 184
Japan
ADDITIONAL COMMENTS ----- !NAG. Special purpose data available after 1 month.

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*****
LENINGRAD, USSR
*****
ITEM: 325
DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 60.0
STATION LONGITUDE ----- E 30.7
ALTERNATE NAMES ----- Voyerkovo
DATES OF OPERATION ----- 1939 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionosonde
DATA REDUCTION PRACTICE ----- Film
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2-3 MONTHS
FORM OF REDUCED DATA ----- Paper copies of tables & plots
DATA ROUTINELY PUBLISHED ----- "Cosmic Data"
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric Observatory
155 Voyerkovo
3333 Vsevolozhskii district
19565 Leningrad Region
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- WDC-B
ADDITIONAL COMMENTS ----- r updating

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*****
LANNION, FRANCE
*****
ITEM: 327
DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 48.75
STATION LONGITUDE ----- E 356.55
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1971 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- C6 Ionosonde, Ionograms every 15 minutes,
1 - 25 MHz.

RAW DATA ----- 35 mm film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Monthly tables of hourly values
(microfiche), magnetic tape since 01/1971
BULLETIN DE MESURES IONOSPHERIQUES
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Monsieur l'Ingénieur Charge du Service
des Prévisions Ionosphériques
C.N.E.T. - B.P. 40
22301 Lannion Cedex
France
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

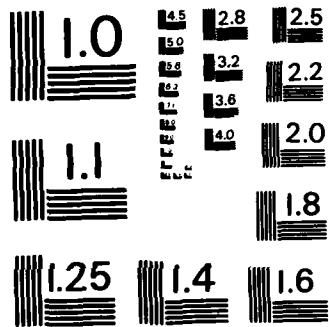
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*****
LYCKSELE, SWEDEN
*****
ITEM: 368
DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 64.62
STATION LONGITUDE ----- E 18.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1956 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionosonde
RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- Published monthly in LYCKSELE
IONOSPHERIC DATA (Ionospheric Data
Sweden)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Ove Klång
Ionospheric Observatory
Box 100
Lycksele, S-92100
Sweden
ADDRESS FOR INFORMATION ABOUT DATA ----- Library
Kiruna Geophysical Institute
Kiruna, S-98101
Sweden
ADDITIONAL COMMENTS -----

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963 - A

B01 Ionosphere Vertical Soundings (Cont.)

 MANILA, PHILIPPINES

ITEM: 2097
 DATE: 15/07/83

DISCIPLINE ----- B01 Ionospheric Vertical Soundings
 STATION LATITUDE ----- N 14.7
 STATION LONGITUDE ----- E 121.1
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- C-3 Ionosonde, soundings every 15 mins, sweep frequency from 1 to 29MHz

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Tabulated daily and monthly hourly values of all parameters; f-plots
 DATA ROUTINELY PUBLISHED ----- Monthly tabulated hourly values of all parameters with medians

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Manila Observatory
 P.O. Box 1231
 Manila
 Philippines

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MAWSON, ANTARCTICA

ITEM: 689
 DATE: 01/06/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 67.60
 STATION LONGITUDE ----- E 62.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1959 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS Type 48 directional ionosonde, normal vertical incidence sounding every 15 min, 1.0 to 22.6 MHz. Until May 1976 the instrument was an IPS Type 3E ionosonde.

RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 14 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfiche, magnetic tape
 Computer printout by special request
 Provisional: 81-monthly microfiche
 Final: One microfiche per month

DATA ROUTINELY PUBLISHED -----

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
 Ionospheric Prediction Service
 P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1/4 hour recordings usually. 5 minute recordings on Regular World Days.

 MAUI, USA

ITEM: 393
 DATE: 21/12/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 20.83
 STATION LONGITUDE ----- E 203.53
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1943 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Station moved.
 C2/C4 ionosonde, NBS B, all ionospheric parameters. Vertical incidence sounder operating every 15 minutes. Samples ionosphere for 30 s, sweeping from 0.25 MHz to 20 MHz. Ionograms are on 35 mm film, each frame approximately 4 inches in length.

RAW DATA ----- Daily hourly values, summary sheets, film
 DATA REDUCTION PRACTICE ----- SPECIAL NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Photographic, monthly and daily tabulations of parameters

DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- NOAA, US Dept of Commerce
 Maui Field Station
 P.O. Box 578
 Puunene, HI 96784
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose observations are usually available immediately. Daily hourly values of ionosphere soundings and Monthly Summary sheet of foF2 and F2 M3000 are kept at station. Films, originals are sent to WDC-A, Boulder, CO, USA. In addition Rionometer observations from 01/03/79 to 01/07/80. Short wave fade out observations from 07/80, by recordings at Kauai, HI station. MWWH on 5 MHz (e.g. chart paper record).

 MEXICO CITY, MEXICO

ITEM: 401
 DATE: 01/02/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 19.26
 STATION LONGITUDE ----- E 260.58
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- C-4 ionosonde, Ionosphere Vertical Soundings. The C-4 works two times each hour (0000 and 0030) all days except Saturdays and Sundays because of free days of week and superior instructions.

RAW DATA ----- The ionograms are sent to Boulder after scaling and computing.
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- The reduced data is in accordance with the international rules.

DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- S.C.T. - D.G.C.P.T.
 Direccion de Control de Operacion de Sistemas Radioelectricos
 Departamento de Ingenieria de Campo
 Popocatepetl 506-B
 Col. Xoco, Delegacion Benito Juarez
 Codigo Postal 03330
 Mexico, D.F.

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.

B01 Ionosphere Vertical Soundings (Cont.)

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*****
MILLSTONE HILL, USA
*****
ITEM: 403
DATE: 01/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 42.61
STATION LONGITUDE ----- E 288.51
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1963 to present
Intermittent operation
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- C-4 ionosonde until 1971. Presently 128 Dig-
sonde. Vertical incidence sounder operates
at 30 minute intervals.
RAW DATA ----- Versatec paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables of foF2
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. John C. Foster
Willstone Hill Radar
Westford, MA 01886
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Mr. W. A. Reid
Millstone Hill Radar
Westford, MA 01886
USA
ADDITIONAL COMMENTS ----- Gaps in data exist due to equipment malfunctions but
are usually of short duration. Current operation is
limited to support of incoherent scatter radar
experiments.
    
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*****
MUNDARING, AUSTRALIA
*****
ITEM: 419
DATE: 01/06/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- S 31.98
STATION LONGITUDE ----- E 116.22
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1959 to present
REGULAR
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- IPS Type 4B ionosonde, normal vertical incidence
sounding every 15 minutes, 1.0 to 22.6 MHz
Until 01/1979 the instrument used was an IPS
3E ionosonde, and until 03/1970 a Cossor was
used.
RAW DATA ----- 35 mm film for 3E, 16 mm film for
Type 4B
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, microfiche, magnetic tape
Computer printout by special request
DATA ROUTINELY PUBLISHED ----- Provisional: 81-monthly microfiche
Final: One microfiche per month
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
Ionospheric Prediction Service
P.O. Box 702
Darlinghurst, NSW 2010
Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- 1/4 hour recordings usually. 5 minute soundings
for seven days centered on Priority Regular World
Days. This ionosonde is operated for IPS by BMR.
    
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*****
MOSCOW, USSR
*****
ITEM: 852
DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 55.5
STATION LONGITUDE ----- E 39.3
ALTERNATE NAMES ----- Krasnaya Pakhra
DATES OF OPERATION ----- 1946 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionosonde SP-3
RAW DATA ----- Ionograms on 35-mm cinematographic film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2-3 MONTHS
FORM OF REDUCED DATA ----- F-plots, monthly tables, ionograms
(on film)
DATA ROUTINELY PUBLISHED ----- "Cosmic Data" Bulletin
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- IZMIRAN
P/O Akadempgorodok
142082 Troitsk, Moscow Region
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
MURMANSK, USSR
*****
ITEM: 2196
DATE: 01/01/80

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 69.0
STATION LONGITUDE ----- E 33.0
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1956 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionosonde Film
RAW DATA ----- Irregular
DATA REDUCTION PRACTICE ----- Irregular
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Paper copies of tables & plots
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric station of the Polar
Geophysical Institute
ul. Vladimirskaaya, 17
183023 Murmansk
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- WDC 82
ADDITIONAL COMMENTS -----
    
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B01 Ionosphere Vertical Soundings (Cont.)

 NARSARSISIAQ, GREENLAND

ITEM: 777
 DATE: 13/01/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 61.17
 STATION LONGITUDE ----- E 314.59
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde, 0.25-20 MHz
 RAW DATA ----- 35 mm film, h-values; f-plot
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Vigaq Nebbe Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 NORILSK, USSR

ITEM: 863
 DATE: 00/00/75

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 69.00
 STATION LONGITUDE ----- E 88.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, bulletins
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. N. M. Erofeev
 SINIZMIR
 P.O.B. 4
 Irkutsk 33
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material.
 Data have been received by the World Data
 Centers through 1975.

 NORFOLK ISLAND, AUSTRALIA

ITEM: 442
 DATE: 01/06/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 29.03
 STATION LONGITUDE ----- E 167.97
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS Type 48 ionosonde, normal vertical incidence
 sounding every 15 min, 1.0 to 22.6 MHz. Until
 Aug, 1977 the instrument was an IPS Type 3D iono-
 sonda.
 RAW DATA ----- 16 mm film for Type 48, 35 mm film for
 Type 3D
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printout
 DATA ROUTINELY PUBLISHED ----- Monthly computer listings of Australian
 Ionospheric Data by IONO PRED SERV.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
 Ionospheric Prediction Service
 P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1/4 hour recordings, usually, 5 minute recordings for
 seven days centered on Priority Regular World Days.

 NOVOKAZALINSK, USSR

ITEM: 833
 DATE: 00/00/75

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 45.76
 STATION LONGITUDE ----- E 62.12
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Photographic prints, black/white
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- M. P. Rudina
 Ionospheric Section, Acad Sci of Kaz SSR
 68 Kamenskoe Plato
 Almg-Ata
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material.
 Data have been received by the World Data
 Centers through 1977.

B01 Ionosphere Vertical Soundings (Cont.)

 OJINAWA, JAPAN

 ITEM: 446
 DATE: 01/08/83

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 26.28
 STATION LONGITUDE ----- E 127.81
 ALTERNATE NAMES ----- Ok. 426
 DATES OF OPERATION ----- 06/1972 to present
 OBSERVING SCHEDULE ----- REGULAR SPECIAL
 INSTRUMENT DESCRIPTION ----- Type 9-R (Japanese made) ionosonde, peak power 10 kW, frequency sweep 1-25 MHz, observations at 00, 15, 30 and 45 min past every hour, 35 mm film : 45 mm/obs.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots, computer printouts
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN, issued monthly by RRL, tables
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Okinawa Radio Wave Observatory
 Radio Research Laboratories
 Kuba, Nakagusuku-son
 Nakagami-gun
 Okinawa-ken 901-24
 Japan
 WDC-C2 for Ionosphere
 Radio Research Laboratories
 2-1, Mukai-Kitamachi 4-chome
 Koganei-shi
 Tokyo 184
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- From 05/1966-06/1972 station operated by USA. INAG. Special purpose data available after 1 month.

 OJAGADOUZOU, UPPER VOLTA

 ITEM: 452
 DATE: 01/08/83

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 12.37
 STATION LONGITUDE ----- E 358.47
 ALTERNATE NAMES ----- Haute Volta
 DATES OF OPERATION ----- 05/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS 42 Ionosonde, Ionograms every 15 min. 1 - 22 MHz
 RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables of hourly values, magnetic tape since 06/1966
 DATA ROUTINELY PUBLISHED ----- BULLETIN DE MESURE IONOSPHERIQUES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Monsieur l'ingenieur Charge du Service
 des Previsions Ionospheriques
 CNET B.P. 40
 22301 Lannion Cedex
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Station closed August and September 1975.

 OTTAWA, CANADA

 ITEM: 449
 DATE: 05/01/84

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 45.10
 STATION LONGITUDE ----- E 293.85
 ALTERNATE NAMES ----- Ashton Ionospheric Station
 DATES OF OPERATION ----- 1948 to present
 Station moved in 1972
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 1005 W ionosonde. Antenna-Receive 600 ohm delta, height 100 ft. Transmit: 600 ohm delta (3 wire). Sounding schedule and receiver gain settings: 6 hourly observations: 59 minute - high; 00 minute - medium; 01 minute - low; 15, 30, and 45 minute - medium (manually adjusted).
 RAW DATA ----- Film analogue (35 mm film)
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, film, tables
 DATA ROUTINELY PUBLISHED ----- CANADIAN IONOSPHERIC DATA (monthly)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dept. of Communications
 Ionospheric Data Center
 1241 Clyde Ave.
 Ottawa, Ontario K2C 1Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Former location 45.44, 75.9W, station moved in 1972. Special purpose data usually available after 1/2 month.

 OVEJUVO, BOLIVIA

 ITEM: 454
 DATE: 21/01/76

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 16.00
 STATION LONGITUDE ----- E 291.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, punched paper tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Instituto de Investigaciones Fisicas
 Laboratorio de Fisica Cosmica
 Universidad Mayor de San Andres
 La Paz
 Bolivia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

B01 Ionosphere Vertical Soundings (Cont.)

 POITIERS, FRANCE

 ITEM: 464
 DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 46.57
 STATION LONGITUDE ----- E 0.35
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1948 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- LRM Ionosonde, Ionograms every 15 minutes,
 1.6 - 17 MHz.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables of hourly values (microfiche)
 magnetic tape since 01/1971
 DATA ROUTINELY PUBLISHED ----- BULLETIN DE MESURES IONOSPHERIQUES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Professeur Carcuff
 Laboratoire de Physique de la
 Haute Atmospherique
 Le Daffend - Mignaux-Beauvoif
 B6800 St. Julien L'Ars
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Monsieur l'ingenieur Charge du Service
 des Previsions Ionospheriques
 CNET - B.P. 40
 22301 Lannion Cedex
 France
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 3
 months.

 PROVIDENIYA BAY, USSR

 ITEM: 2336
 DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 64.4
 STATION LONGITUDE ----- E 186.6
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Set of Ionosondes AIS No. 21 (made in 1957)
 and AIS No. 7515 (made in 1964)
 Ionograms on 35 mm film
 RAW DATA ----- REGULAR
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/2 MONTHS
 FORM OF REDUCED DATA ----- F-plots, monthly tables of ionospheric
 parameters, ionograms on film
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Research Institute of Applied Geophysics
 Glebovskaya ul. 20-b
 107258 Moscow B-258
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 PORT AUX FRANCAIS, KERGUELEN ISLANDS

 ITEM: 302
 DATE: 05/31/82

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 49.35
 STATION LONGITUDE ----- E 70.24
 ALTERNATE NAMES ----- Port aux Francais
 DATES OF OPERATION ----- 02/1963 to present - 1964 station moved
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde Magnetic AB, ionograms every 15 min and
 every 5 min on RWD, 0.25-20 MHz.
 RAW DATA ----- 35 mm film, 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 15 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables of hourly values,
 magnetic tape since 04/1965
 DATA ROUTINELY PUBLISHED ----- BULLETIN DE MESURES IONOSPHERIQUES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Monsieur le Dir. des Lab. Scientifiques
 T.A.A.F.
 27 rue Oudinot
 Paris 75700
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Monsieur le Chef du Dept. M.I.R.
 C.M.E.T.
 Lannion 22301
 France
 ADDITIONAL COMMENTS ----- Station moved in 1964 (former station location
 S49.30 E70.50).

 PRUMONICE, CZECHOSLOVAKIA

 ITEM: 821
 DATE: 00/00/75

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 50.00
 STATION LONGITUDE ----- E 14.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde at 1-10 MHz
 Film
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Bulletins, microfilm
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Pavel Triska
 Geophysical Inst., Czechoslovak Acad Sci
 Bocni II
 Praha 4, Sporilov 141 31
 Czechoslovakia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1980 or
 1983. Data have been received by the World Data Centers
 through 1978.

B01 Ionosphere Vertical Soundings (Cont.)

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*****
RAMSUNDØEN, NORWAY
*****
ITEM: 2131
DATE: 04/01/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 64.58
STATION LONGITUDE ----- E 19.22
ALTERNATE NAMES ----- Tromsø
DATES OF OPERATION ----- 01/1983 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionosonde (own construction)
RAW DATA ----- 35 mm film, magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Computer printouts, yearly report
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Ove Bratteng
University of Tromsø
P. O. Box 953
N-9001 Tromsø
Norway
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
REUNION (PLAINE DES CAFRES)
*****
ITEM: 2333
DATE: 01/01/82

DISCIPLINE ----- B01 Ionosphere Vertical Sounding
STATION LATITUDE ----- S 21.07
STATION LONGITUDE ----- E 55.32
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1981 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- C4 Ionosonde; ionograms every 15 minutes;
1-22 MHz.
RAW DATA ----- 35 mm film
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Monthly tables of hourly values
(microfilm); magnetic tape
DATA ROUTINELY PUBLISHED ----- BULLETIN DE MESURES IONOSPHERIQUES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Monsieur l'Ingenieur Charge du Service
Previsions Ionospheriques
C.N.E.T. - B.P. 40
22301 Lanion Cedex
France
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
RESOLITE BAY, CANADA
*****
ITEM: 486
DATE: 01/02/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 74.70
STATION LONGITUDE ----- E 265.10
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1948 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 1005 W Ionosonde. Antenna-Receive 600 ohm delta,
height 100 ft. Transmit: 600 ohm delta (3 wire).
Sounding schedule and receiver gain settings:
6 hourly observations; 59 minute - high; 00 minute -
medium; 01 minute - low; 15, 30, and 45 minute -
medium (manually adjusted).
RAW DATA ----- 35 mm film analogue
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Film, tables, magnetic tape
DATA ROUTINELY PUBLISHED ----- CANADIAN IONOSPHERIC DATA, monthly
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dept. of Communications
Ionospheric Data Center
1241 Clyde Ave.
Ottawa, Ontario K2C 1Y3
Canada
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data usually available after 1/2
month.

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*****
ROSTOV, USSR
*****
ITEM: 2191
DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 47.2
STATION LONGITUDE ----- E 39.7
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionosonde "A1S"
RAW DATA ----- Ionograms on 35-mm film
DATA REDUCTION PRACTICE ----- Not since 1/1/81
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES (Copies of ionograms)
ADDRESS FOR INFORMATION ABOUT STATION ----- Research Physical Institute
Rostov State University
Prospect Stachki, 194
344000 Rostov
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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B01 Ionosphere Vertical Soundings (Cont.)

 SAINT PETER-ORDING, FRG

 ITEM: 2092
 DATE: 01/09/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 54.0
 STATION LONGITUDE ----- E 9.3
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1983 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Quasi-vertical incidence chirpsounder system
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.25 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Monthly report available
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Th. Damboldt
 Forschungsinstitut der DBP
 P.O. Box 5000
 6100 Darmstadt
 FRGR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SANAE, ANTARCTICA

 ITEM: 528
 DATE: 01/08/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 70.31
 STATION LONGITUDE ----- E 357.59
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Cossor Ionosonde, 1962-1975, Barry Research VOS
 IC Chirpsounder as from 2/1975. Cossor: 1.0-18
 MHz, height range 850 km, sweep time 15 s, peak
 power 1 kW, P.R.F. 50 pps; Chirp sounder: 0.5-15
 MHz, height range 1000 km, sweep rate 50 kHz/s,
 sweep duration 4 min 50 s, peak power 80 W, average
 power 30 W, sweep commences on the hour, equivalent
 308 pulse width 30 microsec.
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA MONTHLY BULLETIN
 for SANAE, available on request
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES: CI Slough
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Data Centre
 Dept of Physics and Electronics
 Rhodes University
 Grahamstown 6140
 Rep. of S. Africa
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data bulletins available from 06/1962 onwards.

 SALEXHARD, USSR

 ITEM: 2171
 DATE: 01/05/84
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 66.5
 STATION LONGITUDE ----- E 66.5
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Ionosonde "AIS"
 RAW DATA ----- Ionograms on 35-mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Plots, monthly tables of ionospheric
 parameters
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric Observatory
 ul. Shelgina, 16
 626601 Saikhard-1
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Arctic and Antarctic Research Institute
 Fontanka, 34
 192104 Leningrad D-104
 USSR
 ADDITIONAL COMMENTS -----

 SAN CARLO CANAVESE, ITALY

 ITEM: 616
 DATE: 13/01/84
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 45.01
 STATION LONGITUDE ----- E 7.64
 ALTERNATE NAMES ----- IEN - Torino
 Torino
 DATES OF OPERATION ----- 01. 196 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Digisonde 128, one sounding every hour
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA, published monthly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- A. Guiducci
 Istituto Elettrotecnico
 Nazionale Galileo Ferraris
 Corso Massimo d'Azeglio 42-10125
 Torino
 Italy
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B01 Ionosphere Vertical Soundings (Cont.)

SCOTT BASE, ANTARCTICA

ITEM: 543
DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- S 77.81
STATION LONGITUDE ----- E 166.76
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- P2 ionosonde, 15 minute vertical hf records. NZ P2 ionosonde, 1-22 MHz, 1000 km, records on 35 mm film, otherwise 15 minute operation except RWD when 5 minute operation. Sweep time 56 seconds.
RAW DATA ----- 35 mm negative film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables, magnetic tape
DATA ROUTINELY PUBLISHED ----- Ionosphere data is available by exchange, or special request or a limited mailing list.
Hourly values of standard parameters
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
Slough, Tokyo
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
Sacramento Peak Observatory
Sunspot, NM 88349
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
Sacramento Peak Observatory
Sunspot, NM 88349
USA
ADDITIONAL COMMENTS ----- Special purpose data usually available after 1 month.

SEOUL, REPUBLIC OF KOREA

ITEM: 549
DATE: 13/03/75

DISCIPLINE ----- B01 Ionosphere Vertical Sounding
STATION LATITUDE ----- N 37.23
STATION LONGITUDE ----- E 126.57
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1966 to present
OBSERVING SCHEDULE ----- Station moved
REGULAR
INSTRUMENT DESCRIPTION ----- Model NJZ-502A Ionospheric Layer Measuring Equipment. Ionosphere Vertical Soundings.
1) Frequency range: 400 kHz-15 MHz,
2) Type of observation: h f flow recording on 35 mm film,
3) Film feed: 100 mm for one,
4) Observing schedule: every 30 minutes. (RWD: 15 minutes)
RAW DATA ----- Film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Computer printouts, table
DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN KOREA: {foF2, M(3000)F2, h F2, foF1, M(3000)F1, h f, foE, foEs, foEs, Type of Es, fmin)
YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
Slough, Tokyo
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- The Director
Radio Research Laboratory
Ministry of Telecommunications
Seoul (Anyang) 171
Republic of Korea
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- A V-4939 Cesium digital station magnetometer with both standard and rapid run measurements is also operated at this station. This instrument measures variation of the earth's total magnetic field intensity. The magnetic field data are displayed directly in gammas in a 5-digit display window. The least significant digits are converted to an analog voltage for recording on a potentiometric strip chart recorder. Observing schedule: 24 hours continuously.
No response to inquiry for updating material in 1980 or 1983. Data have been received by the World Data Centers through 1981.

SCOTT BASE, ANTARCTICA

ITEM: 2287
DATE: 01/06/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- S 77.81
STATION LONGITUDE ----- E 166.76
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- IPS42 vertical ionospheric soundings at 15 minute intervals.
RAW DATA ----- 16 mm negative film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, microfiche
DATA ROUTINELY PUBLISHED ----- Ionosphere data/exchange or special request/limited mailing list. Hourly values of standard parameters
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
Slough, Tokyo
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Officer in Charge
Geophysical Observatory
P.O. Box 2111
Christchurch
New Zealand
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

SLOUGH, UNITED KINGDOM

ITEM: 561
DATE: 15/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
STATION LATITUDE ----- N 51.48
STATION LONGITUDE ----- E 359.43
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1931 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Lowell digisonde 256. 1-16 MHz logarithmic. 700 km height. Peak power 10 kW. Recordings hourly plus quarter hourly on RWDs.
RAW DATA ----- Paper 1931-1956; film 1957 to present; magnetic tape and paper 1982 to present.
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, graphical plots, computer printouts
DATA ROUTINELY PUBLISHED ----- SLOUGH IONOSPHERIC DATA. Available on request. Monthly bulletins. Standard B01 Ionogram parameters, f plots for R.W.D.s
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
Tokyo; Chilton
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- World Data Centre CI
SERC
Rutherford Appleton Laboratory
R3 G1/3
Chilton Ox. OX11 0QX
United Kingdom
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data usually available after 1 working day.

B01 Ionosphere Vertical Soundings (Cont.)

 SONDERSSTRUM, GREENLAND

ITEM: 2158
 DATE: 13/01/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 67.02
 STATION LONGITUDE ----- E 309.28
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1973 to present
 OBSERVING SCHEDULE ----- IRREGULAR: Campaigns
 INSTRUMENT DESCRIPTION ----- Ionosonde, 0.25-20 MHz
 RAW DATA ----- 35 mm film, h-values; f-plots
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Viggo Neble Jensen
 Geophys Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SOUTH OIST, UNITED KINGDOM

ITEM: 571
 DATE: 15/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 57.37
 STATION LONGITUDE ----- E 352.67
 ALTERNATE NAMES ----- West Geirinnish, Scotland
 DATES OF OPERATION ----- 11/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Magnetic A/B ionosonde, 0.25-20 MHz logarithmic
 1000 km height. Peak power 25 kW. Recording
 hourly from 01/1979. Earlier data at 09, 06,
 10, 12, 14, 18 except during rocket campaigns
 when recordings more frequent.
 RAW DATA ----- Since 01/1969 35 mm film. Prior to
 1969, 70 mm photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables (daily worksheets)
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Chilton
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 World Data Centre 11
 SERI
 Rutherford Appleton Lab
 Chilton
 Oxon OX11 0QF
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.

 SONDRE STROMFJORD, GREENLAND

ITEM: 2324
 DATE: 15/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 67.00
 STATION LONGITUDE ----- E 309.05
 ALTERNATE NAMES ----- Sondrestrom Radar
 DATES OF OPERATION ----- 02/1983 to present
 OBSERVING SCHEDULE ----- Occasional - approximately 1200 hours/year
 INSTRUMENT DESCRIPTION ----- Incoherent scatter radar. Ionosphere electric
 fields, electron precipitation, plasma temperatures,
 electrojet currents, neutral winds, conductivities.
 Radar operates at 1290 MHz, observations scheduled
 2 months in advance. Time resolution varies
 between a few seconds and minutes depending on
 ionospheric conditions and experiment being
 performed.
 RAW DATA ----- Digital magnetic tape, computer printouts,
 computer plots
 DATA SENT TO WDC-A ----- REGULAR SPECIAL
 DATA SENT TO WDC-B ----- 1-5 MONTHS
 DATA SENT TO WDC-C ----- Digital magnetic tape, computer printouts,
 graphical plots
 DATA ROUTINELY PUBLISHED -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. John L. Kelly
 VSI International
 111 Ravenswood Avenue
 Menlo Park, CA 94025
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Station located at Sondre Stromfjord, Greenland from 1966 to
 1971 and at Barankia, Alaska from 1971 to 1982.
 Composite 1290 MHz 4 Mw pulsed radar, 50 dB gain, 0.5°
 beamwidth, fully steerable 100 ft dish, 100° noise
 temperature receiver. Station has been modified and
 moved to Sondre Stromfjord, Greenland.

 SVERDLOVSK, USSR

ITEM: 2371
 DATE: 15/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 56.43
 STATION LONGITUDE ----- E 38.57
 ALTERNATE NAMES ----- Arty
 DATES OF OPERATION ----- 1944 to present
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Ionogram Facility
 RAW DATA ----- 5 mm film, to 5.9 MHz
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Altitude - 300 M.
 This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B Catalog and IAGU-84.
 No information or additional information was received
 directly from world data centers.

B01 Ionosphere Vertical Soundings (Cont.)

.....
 SYDNEY, AUSTRALIA

 ITEM: 2010
 DATE: 01/06/84

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 34.05
 STATION LONGITUDE ----- E 150.67
 ALTERNATE NAMES ----- Camden
 DATES OF OPERATION ----- 01/1980 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IFS type 4C ionosonde, normal vertical incidence soundings, every 15 minutes, 1.0 to 16.0 MHz.
 RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
 Ionospheric Prediction Service
 P.O. Box 702
 Darlinghurst N.S.W. 2010
 Australia
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1/4 hour recordings only.

.....
 TAHITI, FRENCH POLYNESIA

 ITEM: 589
 DATE: 01/06/83

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 17.73
 STATION LONGITUDE ----- E 210.68
 ALTERNATE NAMES ----- Taravao
 DATES OF OPERATION ----- 12/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- C4 Ionosonde, Ionograms every 15 minutes, 1 - 22 MHz.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables of hourly values (microfiche), magnetic tape since 01/1971
 DATA ROUTINELY PUBLISHED ----- BULLETIN DE MESURES IONOSPHERIQUES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Monsieur l'ingenier charge du Service
 des Previsions Ionospheriques
 ONET - B.P. 40
 22301 Lannion Cedex
 France
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

.....
 SYOMA, JAPAN

 ITEM: 1141
 DATE: 01/08/83

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 69.00
 STATION LONGITUDE ----- E 39.35
 ALTERNATE NAMES ----- SW. 951
 DATES OF OPERATION ----- 02/1959 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- Type 9-B (Japanese made) ionosonde, peak power 10 kW, frequency sweep 0.4 - 15 MHz, observations at 00, 15, 30, 45 min past every hour, 35 mm film: 36 mm/obs.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots, computer printouts
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA AT SYOMA STATION
 ISSUED semi-annually by RML, tables, f-plots (RMD only)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: United Kingdom
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric Radio Prediction Section
 Radio Research Laboratories
 2-1, Nukul-Kitamachi 4-chome
 Koganei-shi, Tokyo 184
 Japan
 WDC-C2 for Ionosphere
 Radio Research Laboratories
 2-1, Nukul-Kitamachi 4-chome
 Koganei-shi, Tokyo 184
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Station closed from 2/1961 to 1/1966. INAG member.
 Special purpose data available after 15 months.
 ADDITIONAL COMMENTS -----

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 TBILISI, USSR

 ITEM: 2187
 DATE: 01/05/84

 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 41.7
 STATION LONGITUDE ----- E 44.8
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde SP-3 (1964-1968); ionosonde "AIS" (1968-present)
 RAW DATA ----- Ionograms on 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- f-plots, monthly tables of ionospheric parameters, ionograms (on film)
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric Research Laboratory
 Faculty of Physics
 Tbilisi State University
 Prosp. I. Chavochavdze, 3
 380028 Tbilisi-28
 USSR
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B01 Ionosphere Vertical Soundings (Cont.)

 TEHRAN, IRAN

 ITEM: 755
 DATE: 22/07/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 35.70
 STATION LONGITUDE ----- E 51.40
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Reports
 DATA ROUTINELY PUBLISHED ----- JOURNAL OF EARTH AND SPACE PHYSICS
 (Tehran Univ.), also monthly and
 yearly reports
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Geophysics
 Tehran University
 Ave. Kargar
 Tehran-14374
 Iran
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 THULE, GREENLAND

 ITEM: 729
 DATE: 13/01/84
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 77.50
 STATION LONGITUDE ----- E 290.80
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde, 0.25-25 MHz
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- 35 mm film
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Viggo Neble Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TERRE ADELIE, ANTARCTICA

 ITEM: 600
 DATE: 14/06/79
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 66.66
 STATION LONGITUDE ----- E 140.02
 ALTERNATE NAMES ----- Dumont d'Urville
 DATES OF OPERATION ----- 02/1991 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde Magnetic AB - Ionograms every 5 minutes
 (0.25 - 20 MHz).
 RAW DATA ----- 35 mm and 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 15 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables of hourly values,
 magnetic tape since 04/1989
 DATA ROUTINELY PUBLISHED ----- BULLETIN DE MESURES IONOSPHERIQUES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Directeur des Laboratoires Scientifiques
 T.A.A.F.
 27 rue Oudinot
 Paris 75700
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Monsieur le Chef du Departement MIR
 C.M.E.T.
 Route de Tregastel
 Lannion 22301
 France
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1983.

 TIKLE BAY, USSR

 ITEM: 842
 DATE: 01/05/84
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 71.6
 STATION LONGITUDE ----- E 128.9
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1967 to present
 OBSERVING SCHEDULE ----- IRREGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA ----- Ionograms on 35 mm film
 DATA REDUCTION PRACTICE ----- Irregular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- In the year-books of the observatory
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Polar Geo-Cosmophysical Observatory
 "Tixle"
 Bukhta Tixle
 678400 Yakutskaya ASSR
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Inst. of Cosmophysical Res. and Aeronomy
 Lenin Prospekt, 31
 677007 Yakutsk-7
 USSR
 ADDITIONAL COMMENTS -----

B01 Ionosphere Vertical Soundings (Cont.)

 TOMSK, USSR

ITEM: 825
 DATE: 01/01/80

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 56.00
 STATION LONGITUDE ----- E 84.90
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1944 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Ionosonde at 1-18 MHz, electron densities and heights of reflection are measured in 15 minutes.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. I. Likhachev
 Siberian Physical and Technical Inst
 Square of Revolution 1
 Tomsk 634050
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TOWNSVILLE, AUSTRALIA

ITEM: 628
 DATE: 01/06/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 19.63
 STATION LONGITUDE ----- E 146.85
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1946 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS Type 4B ionosonde, normal vertical incidence sounding every 15 min, 1.0 to 22.6 MHz, until 12/1976 the instrument was an IPS Type 3B ionosonde.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Table, microfiche, magnetic tape
 DATA ROUTINELY PUBLISHED ----- Computer printout by special request
 Provisional: Bi-monthly microfiche
 Final: One microfiche per month

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
 Ionospheric Prediction Service
 P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1/4 hour recordings, usually, 5 minute recordings for seven days centered on Priority Regular world days.

 TOMSK, USSR

ITEM: 2192
 DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 56.5
 STATION LONGITUDE ----- E 84.9
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1940 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde "AIS"

RAW DATA -----
 DATA REDUCTION PRACTICE ----- Ionograms on 35 mm film
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- F-plots, monthly tables, ionograms (on film)
 DATA ROUTINELY PUBLISHED ----- "Cosmic Data" Bulletin (Monthly Review)

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Siberian Research Institute of
 Physics & Technology
 Pl. Revolutsi, 1
 634050 Tomsk GSP-18
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B01 Ionosphere Vertical Soundings (Cont.)

 TRELEW, ARGENTINA

ITEM: 815
 DATE: 01/01/80

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 43.20
 STATION LONGITUDE ----- E 294.70
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde at 1.3-18 MHz
 RAW DATA ----- 36 mm film
 DATA REDUCTION PRACTICE ----- URSI Handbook
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Bulletins or reports
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 LIARA
 Avenida del Libertador No. 327
 1638 Vicente Lopez
 Buenos Aires
 Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Temporarily of operation (1978-1979)
 No response received to inquiry for updating
 material in 1983.

 UPPSALA, SWEDEN

ITEM: 1092
 DATE: 01/08/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 59.80
 STATION LONGITUDE ----- E 17.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1959 to present
 OBSERVING SCHEDULE ----- HOURLY, REGULAR
 INSTRUMENT DESCRIPTION ----- Ionospheric vertical sounder 0.5 - 16 MHz
 Type 15-14, peak power 5 kW, pulse repetition
 rate 50 Hz, pulse length 60 us, height range
 80 - 1000 km. Panoramic display recorded on 24
 x 36 mm film frame. Two delta aerials.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- Scaling according to international rules
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Data sheet
 DATA ROUTINELY PUBLISHED ----- Monthly bulletins
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Mr. Harald Derblom
 Uppsala Ionospheric Observatory
 Uppsala 1 S-755 90
 Sweden

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Change in the instrument August 1977

 TROMSO, NORWAY

ITEM: 705
 DATE: 01/01/80

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 69.70
 STATION LONGITUDE ----- E 19.00
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde, 0.6-25 MHz
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Bulletins
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Mr. Ove Bratteng
 Auroral Obs, Univ of Tromso
 P.O. Box 953
 Tromso N-9001
 Norway

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1983.

 USHUAIA, ARGENTINA

ITEM: 811
 DATE: 15/07/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 54.80
 STATION LONGITUDE ----- E 291.70
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1957 to present
 Station moved in August 1983
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- TRIO (Similar to a C-4 Ionosonde)
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- Interpretation
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Computer output data sheets
 DATA ROUTINELY PUBLISHED ----- Monthly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 LIARA
 Avenida del Libertador No. 327
 1638 Vicente Lopez
 Buenos Aires
 Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B01 Ionosphere Vertical Soundings (Cont.)

 VANDENBERG AFB, USA

 ITEM: 463
 DATE: 01/08/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 34.73
 STATION LONGITUDE ----- E 239.43
 ALTERNATE NAMES ----- Point Arguello
 DATES OF OPERATION ----- 06/1963 to present
 Station moved
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Granger 3905-4, 1128-4 Power Amplifier, 15 min. VI Ionograms. Observations are recorded on 35 mm film and are introduced into the Astro-geophysical Network (ATN) each hour by reading a CRT display. Film is interpreted and recorded on hourly summary sheets recommended in URSI Handbook of Ionogram Interpretation and Analysis. Real time observations include Fof2, M3000; f min, Foes and a qualifying code only.
 RAW DATA ----- 35 mm film, hourly values data sheet
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- 35 mm filmed ionogram (2-16 MHz), Standard URSI Hourly Values
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Det 30, 2 Weather Squadron
 Vandenberg AFB, CA 93437
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Former station location: July 1974 N34.36, W120.35.
 Special purpose data usually available as requested.

 WAKKANAI, JAPAN

 ITEM: 664
 DATE: 01/08/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 45.39
 STATION LONGITUDE ----- E 141.69
 ALTERNATE NAMES ----- WK, 545
 DATES OF OPERATION ----- 03/1947 to present
 OBSERVING SCHEDULE ----- REGULAR SPECIAL
 INSTRUMENT DESCRIPTION ----- Type 9-B (Japanese made) ionosonde, peak power 10 kW, frequency sweep 1-25 MHz, observations at 00, 15, and 45 min past every hour, 35 mm film; 45 mm obs.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots, computer printouts
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN, monthly issued by RRL, tables, f-plots
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: United Kingdom
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Wakkanai Radio Wave Observatory
 Radio Research Laboratories
 3-20 Midori 2-chome
 Wakkanai-shi, Hokkaido 097
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- WDC C2 for Ionosphere
 Radio Research Laboratories
 2-1, Nukui-Kitamachi 4-chome
 Koganei-shi, Tokyo 184
 Japan
 ADDITIONAL COMMENTS ----- INAG. Special purpose data available after 1 month.

 VANIMO, AUSTRALIA

 ITEM: 659
 DATE: 01/08/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- S 2.70
 STATION LONGITUDE ----- E 141.30
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IPS Type 4B ionosonde, vertical ionospheric sounding, routine soundings every 15 minutes, 1.0 to 22.6 MHz.
 RAW DATA ----- 16 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfiche, magnetic tape
 Computer printout by special request
 Provisional: Bi-monthly microfiche
 Final: One microfiche per month
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Assistant Secretary
 Ionospheric Prediction Service
 P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1/4 h recordings, usually, 5 min recordings for seven days centered on Priority Regular World Days.

 WALLOPS ISLAND, USA

 ITEM: 665
 DATE: 21/12/83
 DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 37.94
 STATION LONGITUDE ----- E 244.53
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1963 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- J-5W ionosonde, ionograms every 15 min (film). The J-5W is a highly advanced vertical incidence ionospheric recorder. Sweeps made every 15 min of the 24-hour day throughout the year. All data recorded on 35 mm film. The J5 sounder and field strength are set to LST.
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Leo W. Muneo
 NARA Ionosphere Sounding Sta.
 NSA Building 1-144
 Walllops Flight Facility
 Walllops Island, VA 23337
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 day.

B01 Ionosphere Vertical Soundings (Cont.)

 YAKUTSK, USSR

ITEM: 841
 DATE: 01/05/84

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 62.00
 STATION LONGITUDE ----- E 129.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1956 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionosonde *A1S
 RAW DATA ----- Ionograms on 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- F-plots, tables of ionospheric parameters
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ionosphere Laboratory
 Inst. of Cosmophysical Research & Aeronomy
 Lenin Prospekt, 31
 677007 Yakutsk-7
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ZHIGANSK, USSR

ITEM: 2230
 DATE: 01/01/80

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 66.7
 STATION LONGITUDE ----- E 123.3
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1977 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Ionosonde
 RAW DATA ----- 35 mm microfilm tables
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film of continuous records
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Cosmophysical
 Research and Aeronomy
 Lenin Avenue 31
 677007 Yakutsk
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 YAMAGAWA, JAPAN

ITEM: 684
 DATE: 01/04/83

DISCIPLINE ----- B01 Ionosphere Vertical Soundings
 STATION LATITUDE ----- N 31.20
 STATION LONGITUDE ----- E 130.61
 ALTERNATE NAMES ----- YG, 431
 DATES OF OPERATION ----- 12/1946 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Type 9-R (Japanese made) ionosonde, peak power
 10 kw, frequency sweep 1-25 MHz, observations at 00
 15, 30, and 45 min past every hour, 35 mm film :
 45 mm/obs.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots, compu-
 ter printouts
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN, issued
 monthly by RRL, tables
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: United Kingdom
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Yamagawa Radio Wave Observatory
 Radio Research Laboratories
 2719 Narikawa, Yamagawa-machi
 Ibusuki-gun, Kagoshima-ken 891-05
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- WDC C2 for Ionosphere
 Radio Research Laboratories
 2-1, Nukui-Kitamachi 4-chome
 Koganei-shi, Tokyo 184
 Japan
 ADDITIONAL COMMENTS ----- INAG. Special purpose data available after 1 month.

B02 Topside-Vertical Incidence Soundings

 KASHIMA, JAPAN

 ITEM: 299
 DATE: 01/01/80

 DISCIPLINE ----- B02 Topside-Vertical Incidence Soundings
 STATION LATITUDE ----- N 35.95
 STATION LONGITUDE ----- E 140.67
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1966 to present
 OBSERVING SCHEDULE ----- OCCASIONAL
 INSTRUMENT DESCRIPTION ----- Telemetry equipment, 15-20 min/pass, magnetic
 tape 15 inch/s.
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- DATA ON TOPSIDE IONOSPHERE, issued
 by RPL irregularly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kashima Branch
 Radio Research Laboratories
 Hirai Kashima-machi
 Kashima-gun
 Ibaraki-Ken 314
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Radio Research Laboratories
 2-1, Nukui-Nitamachi 4-chome
 Koganei-shi
 Tokyo 194
 Japan
 ADDITIONAL COMMENTS ----- Satellites monitored include ISIS I and II, ISS(Japanese).
 No response received to inquiry for updating material
 in 1983.

 TERRE ADELIE, ANTARCTICA

 ITEM: 601
 DATE: 01/01/80

 DISCIPLINE ----- B02 Topside-Vertical Incidence Soundings
 STATION LATITUDE ----- S 66.66
 STATION LONGITUDE ----- E 140.02
 ALTERNATE NAMES ----- Dumont d'Urville
 DATES OF OPERATION ----- 01/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Satellite receiving station, Topside soundings,
 ISIS and TOI-A satellite signals (on 135-138 MHz)
 RAW DATA ----- Analog magnetic tapes
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Directeur des Laboratoires Scientifiques
 T.A.U.F.
 27 rue Oudinot
 Paris 75700
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Laboratoire de Geophysique Externe
 4 Av. de Neptune
 Saint Maur 94100
 France
 ADDITIONAL COMMENTS ----- Data are available on request thru Communication
 Research Center, Ottawa.
 No response received to inquiry for updating material
 in 1983.

 LAUDER, NEW ZEALAND

 ITEM: 2090
 DATE: 01/01/80

 DISCIPLINE ----- B02 Topside Vertical Incidence Soundings
 STATION LATITUDE ----- S 45.04
 STATION LONGITUDE ----- E 169.69
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1971 to present
 OBSERVING SCHEDULE ----- Daily
 INSTRUMENT DESCRIPTION ----- Telemetry equipment, 15-20 min/pass,
 magnetic tape recording
 RAW DATA ----- Magnetic tape, 35 mm film
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- Film copies of ionograms obtained
 11/1971 - 06/1976
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Officer in Charge
 Geophysical Observatory, DSIR
 P O Box 2111
 Christchurch
 New Zealand
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

B03 Incoherent Scatter Soundings

.....
 ARECIBO, PUERTO RICO, USA

 ITEM: 29
 DATE: 01/01/80

 DISCIPLINE ----- B03 Incoherent Scatter Soundings
 STATION LATITUDE ----- N 18.35
 STATION LONGITUDE ----- E 293.25
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1963 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 430 MHz radar measures Ne, Te, T_e, T_i, V_e, (n_e)_{in}, T_n E
 and F regions at least once/month for 30 h.
 Occasionally measures D-region and topside.
 Digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- R. F. Woodman
 Arecibo Observatory
 Post Office Box 995
 Arecibo
 Puerto Rico 00612
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Ionosonde, alrylow, Faraday rotation; special purpose data available after 3 months. All instruments at Arecibo Observatory.
 No response received to inquiry for updated material in 1983.

.....
 MILLSTONE HILL, USA

 ITEM: 434
 DATE: 04/07/83

 DISCIPLINE ----- B03 Incoherent Scatter Soundings
 STATION LATITUDE ----- N 42.62
 STATION LONGITUDE ----- E 298.51
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1963 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Vertical incidence and oblique incidence incoherent scatter soundings are made typically twice per month for periods of 32 to 58 hours. Measures electron density, electron and ion temp and ion drift velocity.
 Digital magnetic tape, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- 9-track magnetic tape, computer printout
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. John C. Foster
 Millstone Hill Radar
 Westford, MA 01886
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Radar is operated in concert with other incoherent scatter radars according to plans developed by the JRSI Working Group III-9 on Incoherent Scatter. (Chairman: M. Baron, EISCAT Scientific Association, Box 705, S-981 27 Kiruna, SWEDEN). Special purpose data usually available after 12 months.

.....
 JILAMARCA, PERU

 ITEM: 296
 DATE: 28/03/75

 DISCIPLINE ----- B03 Incoherent Scatter Soundings
 STATION LATITUDE ----- S 11.95
 STATION LONGITUDE ----- E 293.13
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Incoherent Scatter Sounder, electron density, temperature and drift. 18 432 dipole array with 1 degree beam and 4 milliwatt peak power, capable of line electron density, temperature and drift determinations from about 700 to 800 km normally. Also spread F measurements.
 Paper tape, graphs, photographic prints
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Graphical plots, photographic paper
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Carlos Calderon, Chairman
 Inst. Nat. del Peru
 Radio Observatory of Jilamarca
 Av. Arequipa 111
 Lima I
 Peru
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updated material in 1983 or 1985.

.....
 SAINT-SANTIN, FRANCE

 ITEM: 525
 DATE: 04/07/82

 DISCIPLINE ----- R02 Incoherent Scatter Soundings
 STATION LATITUDE ----- N 44.73
 STATION LONGITUDE ----- E 10.27
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1963 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Incoherent scatter facility. 1 transmitter, 3 receiving antennae. Scheduling 3 days a month. Vertical profiles of electron densities, electron and ion temperatures, ion drift vector (100-500 km). A complete profile is obtained in about 45 minutes.
 Digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, computer printout
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. G. Balmain
 Observatoire de Saint-Santin
 10000 Saint-Santin
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B04 Oblique Incidence Soundings

 GRAHAMSTOWN, REP. OF S. AFRICA

ITEM: 939
 DATE: 01/08/83

DISCIPLINE ----- B04 Oblique Incidence Soundings
 STATION LATITUDE ----- S 33.32
 STATION LONGITUDE ----- E 26.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Barry Research VDS 1C Chirp-sounder, oblique incidence, reception from Sanae, 2-30 MHz, 3.33 MHz window, 100 kHz/sec sweep rate, 4 min 40 secs duration, 80 W average power, sweep commences 5 min past 1/4 h. Equivalent 3 dB pulse width 30 microsec.

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTH
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Data Centre, Department of Physics and Electronics, Rhodes University, Grahamstown 6140, Rep. of S. Africa

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Regular data will be reduced upon request.

 SANA'E, ANTARCTICA

ITEM: 1044
 DATE: 01/08/83

DISCIPLINE ----- B04 Oblique Incidence Transmission
 STATION LATITUDE ----- S 70.31
 STATION LONGITUDE ----- E 357.59
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Barry Research VDS 1C Chirp-sounder, oblique incidence, transmission to Grahamstown, 2-30 MHz, 3.33 msec window, 100 kHz/sec sweep rate, 4 min 40 secs duration, 80 watts average power, sweep commences 5 min. past 1/4 hour. Equivalent 3 dB pulse width 30 microsec.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION --- Data Centre, Rhodes University, Department of Physics & Electronics, Grahamstown 6140, Rep. of S. Africa

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ST. KILDA, AUSTRALIA

ITEM: 524
 DATE: 01/05/84

DISCIPLINE ----- B04 Oblique Incidence Soundings
 STATION LATITUDE ----- S 34.73
 STATION LONGITUDE ----- E 138.54
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Granger Oblique Sounder Model 3905. Oblique ionograms for Yamagawa to St. Kilda path. Stepped frequency (160 channels), 4-64 MHz Oblique Sounder. (1) Short pulse (0.1 ms) and long pulse (1 ms) ionograms recorded every 30 minutes. (2) Routine transmissions at 04 minutes repeated every 10 minutes.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Computer printout, magnetic tape
 DATA ROUTINELY PUBLISHED ----- W.R.E. Ionospheric Data Bulletins containing hourly tabulations of MUF and LUF. Distributed to a number of research establishments. YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Principal Officer, Ionospheric Studies Group, Weapons Research Establishment, Box 2151, G.P.O., Adelaide, South Australia 5001, Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- St. Kilda participates in a network with Yamagawa & Townsville. The Sounder at Yamagawa (N31.20, E130.62) is operated by the Japanese Radio Research Laboratories.

 TOWNVILLE, AUSTRALIA

ITEM: 629
 DATE: 01/05/84

DISCIPLINE ----- B04 Oblique Incidence Soundings
 STATION LATITUDE ----- S 19.63
 STATION LONGITUDE ----- E 146.85
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Granger Oblique Sounder, Model 3905, Oblique ionograms for St. Kilda to Townsville and Yamagawa to Townsville paths, stepped frequency (160 channels), 4-64 MHz, Oblique Sounder Receiver. (1) Short pulse (0.1 ms) ionograms for St. Kilda to Townsville every 30 minutes. (2) Short pulse (0.1 ms) and long pulse (1 ms) ionograms for Yamagawa to Townsville every 30 minutes. IPS-4 ionosonde added.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Computer printout, magnetic tape
 DATA ROUTINELY PUBLISHED ----- W.R.E. - Ionospheric Data Bulletins containing hourly tabulations of MUF and LUF. YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Principal Officer, Ionospheric Studies Group, Weapons Research Establishment, Box 2151, G.P.O., Adelaide, South Australia 5001, Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Townsville participates in a network with St. Kilda and Yamagawa. The Sounder at Yamagawa (N 31.20, E 130.62) is operated by the Japanese Radio Research Laboratories. Monitoring for St. Kilda began in 9/1966, for Yamagawa in 6/1970. Original records serve need for St. Kilda to Townsville path. Station relocated 1977.

B06 Total Electron Content - Satellite Beacons

 ARMIDALE, AUSTRALIA

ITEM: 32
 DATE: 01/06/84

DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
 STATION LATITUDE ----- S 30.50
 STATION LONGITUDE ----- E 151.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Satellite Beacon Observations
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. F. H. Hibberd
 University of New England
 Armidale, N.S.W., 2351
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- It is intended to send data to WDC at Boulder eventually.

 AUCKLAND, NEW ZEALAND

ITEM: 40
 DATE: 06/07/83

DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
 STATION LATITUDE ----- S 37.00
 STATION LONGITUDE ----- E 175.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Polarimeter, continuous recording at chart speed of 1 inch/h of the Faraday rotation of 137 MHz geostationary satellite signal.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Tables (Hourly values)
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. E. Titheridge
 University of Auckland
 New Zealand
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ATHENS, GREECE

ITEM: 1149
 DATE: 15/07/83

DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
 STATION LATITUDE ----- N 37.85
 STATION LONGITUDE ----- E 23.72
 ALTERNATE NAMES ----- Tel. 3, 2d Weather wing
 DATES OF OPERATION ----- 5/74 - 5/77; 3/78 - present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- AFGL Polarimeter
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- LOGS
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Det 3, 2nd Weather Wing
 APO
 New York, NY 09223
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- NOAA
 Thessalon (306)
 Athens
 Greece
 ADDITIONAL COMMENTS ----- Data are the property of the National Observatory of Athens (NOA).
 Data gap between 5/77 and 3/78 due to lack of suitable satellite.

 BLSK, POLAND

ITEM: 54
 DATE: 03/06/75

DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
 STATION LATITUDE ----- N 51.84
 STATION LONGITUDE ----- E 20.79
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Commercial receivers with converters and antennas working on 40 and 41 MHz. Amplitude registration of the beacon signals. INTASAT satellite beacon signals are received and registered. Strip chart recorders are used with the chart speed 6 cm/h but occasionally with the higher speed. Every satellite pass with the satellite zenith distance greater than 70 degrees is registered, except on weekends and holidays.
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Plots, tables of TEC, AFGL scintillation index each 1/2 minutes.
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. W. Mernik
 Inst. of Geophysics, Polish Acad. Sci.
 ul. Pasteura 3, P.O. Box 155
 Warsaw 00-973
 Poland
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

B06 Total Electron Content - Satellite Beacons (Cont.)

 BRUXELLES, BELGIUM

 ITEM: 704
 DATE: 01/01/84
 DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
 STATION LATITUDE ----- N 50.50
 STATION LONGITUDE ----- E 4.20
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- IRREGULAR
 INSTRUMENT DESCRIPTION ----- Satellite beacon observations
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL MONTHS
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. C. Jodoane
 Inst Royal Meteorologique, Geophys Ext
 3, Avenue Circulaire
 Bruxelles 1120
 Belgium
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 EBRO, SPAIN

 ITEM: 623
 DATE: 11/20/83
 DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
 STATION LATITUDE ----- N 40.82
 STATION LONGITUDE ----- E 0.49
 ALTERNATE NAMES ----- To:osa
 DATES OF OPERATION ----- 10/1968 to present
 OBSERVING SCHEDULE ----- Operation intermittent
 INSTRUMENT DESCRIPTION ----- REGULAR
 Polarimeter, TEC from satellite beacons, normal and geostationary, Method Faraday Rotation, for normal beacons; passes near overhead of the station; for geostationary satellites, continuously with a mechanically rotating antenna, now also with a polarimeter.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR for orbiting satellites, selective periods for geostationary satellites.
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Yes
 ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio del Ebro
 Raquetes
 Tarragona
 Spain
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- From 10/1954 observations of Explorer 22 (BI-B) at 40-41 MHz Faraday rotation until the end of the known existence of the satellite. From 11/1974 to 10/1978 observations of INTASAT. From 1/1973 to 2/1975 from 11/1975 to 4/1976 and from 6/1976 to present observations of geostationary satellites at 137 MHz and 141 MHz.

 SAO JOSE DOS CAMPOS, BRAZIL

 ITEM: 2317
 DATE: 01/07/84
 DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
 STATION LATITUDE ----- S 22.70
 STATION LONGITUDE ----- E 314.98
 ALTERNATE NAMES ----- Sao Jose dos Campos
 DATES OF OPERATION ----- San Jose
 1980 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- VHF electronic polarimeter, polarization angle of 137 MHz beacon from GOES-3. Crossed yagi antenna and receiver.
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Punched card or tabulated sheets
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief of Dept. Geophysics and Aeronomy
 Instituto de Pesquisas Espaciais (INPE)
 Caixa Postal 515
 Sao Jose dos Campos, SP 12200
 Brazil
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 GOOSE BAY, CANADA

 ITEM: 209
 DATE: 01/07/83
 DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
 STATION LATITUDE ----- N 55.33
 STATION LONGITUDE ----- E 299.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1971 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Polarimeter, Faraday rotation measurements, 24 h operation, chart speed 15 mm/min. Hourly listings of scintillation and TEC.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- IBM cards
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. Herbert E. Whitney
 AFGL (L15)
 Hanscom AFB
 Bedford, MA 01731
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data sent to WDC-A are TEC only.

B06 Total Electron Content - Satellite Beacons (Cont.)

..... ITEM: 215
 GRAZ, AUSTRIA DATE: 01/01/80

DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
 STATION LATITUDE ----- N 47.10
 STATION LONGITUDE ----- E 15.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- Receiver for Faraday Effect (40, 41, 136-138 MHz)
 Receiver for 150 and 400 MHz (Differential
 Doppler effect), Explorer 22 (Faraday) and MNSS
 (Differential Doppler), Exp 22 twice/day, MNSS
 several times per day. Instruments mostly self-
 built. Geostationary satellites are available.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables of electron content reduced
 to a latitude of M47.0

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institut fur Meteorologie und Geophysik
 University of Graz
 Halbartngasse 1
 Graz A-8010
 Austria

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Gaps in operation: after uselessness of Exp 22
 (mid-1968). MNSS Differential Doppler obs.
 started November 1973.
 Special purpose data are usually available after
 2 months.
 No response received to inquiry for updating material
 in 1983.

..... ITEM: 227
 HAMILTON, SA DATE: 21/12/83

DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
 STATION LATITUDE ----- N 42.63
 STATION LONGITUDE ----- E 289.14
 ALTERNATE NAMES ----- Det 2, 4 WW
 DATES OF OPERATION -----
 INSTRUMENT DESCRIPTION ----- Polarimeter, Faraday rotation measurements
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Hourly listings of TEC
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Det 2, 4 WW
 P. O. Box 415
 South Hamilton, MA 01982
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- TEC data normally available after 3 months. Scin-
 tillation data usually available after 6 months
 (special).

..... ITEM: 222
 HAIFA, ISRAEL DATE: 01/08/83

DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
 STATION LATITUDE ----- N 32.87
 STATION LONGITUDE ----- E 35.09
 ALTERNATE NAMES ----- Radio Observatory NCSR
 DATES OF OPERATION ----- 11/1984 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Teletyne Micronetics Faraday Polarization tracking
 system, crossed Yagi antennas.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Computer printouts

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Z. Housner
 Radio Observatory, NCSR
 PO Box 911
 Haifa
 Israel

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

..... ITEM: 2067
 HIRAIISO, JAPAN DATE: 01/08/83

DISCIPLINE ----- R06 Total Electron Content - Satellite Beacons
 STATION LATITUDE ----- N 36.37
 STATION LONGITUDE ----- E 140.62
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1979 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Polarization and field intensity recording
 equipment frequency 136 MHz of geostationary
 satellite ETS-II stationed at 130° E

RAW DATA ----- Strip chart 12 cm/h, magnetic tape
 (since 04/1982)

DATA REDUCTION PRACTICE ----- Computer processing (irregular)
 REGULAR REDUCED DATA AVAILABLE AFTER ----- TEC (Quarter hourly value)
 FORM OF REDUCED DATA ----- Digital printer
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Solar Radio Research Section
 Hiraiso Branch, Radio Research
 Laboratories
 3601 Isozaki, Nakaminato
 Ibaraki 311-12
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B06 Total Electron Content - Satellite Beacons (Cont.)

 IADM, NIGERIA

 ITEM: 276
 DATE: 24/10/75

DISCIPLINE B06 Total Electron Content - Satellite Beacons
 STATION LATITUDE N 12.40
 STATION LONGITUDE E 13.90
 ALTERNATE NAMES
 DATES OF OPERATION 04/1965 to present
 OBSERVING SCHEDULE Intermittent operation
 INSTRUMENT DESCRIPTION Regular
 Faraday Rotator observations, records on 3 channels, Evershed anti diploles chart recorder at 100pm. Maximum of 2 good records/day in time ranges of 0730-1000 and 1430-1730UT (depending on particular day) as INTASAT is in a sun synchronous orbit. INTASAT started 11/1974, also see from 05/1976 to 01/1980, use of ATS-6 not yet started due to equipment difficulties.

RAW DATA Strip chart, tables
 DATA REDUCTION PRACTICE REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER 2 MONTHS
 DATA ROUTINELY PUBLISHED Tables, graphical plots
 DATA SENT TO WDC-A
 DATA SENT TO WDC-B
 DATA SENT TO WDC-C
 DATA AVAILABLE ON REQUEST YES
 ADDRESS FOR INFORMATION ABOUT STATION Ibadan Ionospheric Station
 Physics Department
 University of Ibadan
 Ibadan, western State
 Nigeria

ADDRESS FOR INFORMATION ABOUT DATA Same as above
 ADDITIONAL COMMENTS No response received to inquiry for updating material in 1981 or 1983.

 KOGANEI, JAPAN

 ITEM: 2327
 DATE: 01/08/83

DISCIPLINE B06 Total Electron Content - Satellite Beacons
 STATION LATITUDE N 35.71
 STATION LONGITUDE E 139.49
 ALTERNATE NAMES Kokubunji
 Tokyo
 DATES OF OPERATION 04/1977 to present
 OBSERVING SCHEDULE REGULAR
 INSTRUMENT DESCRIPTION Polarization and field intensity recording equipment frequency 136 MHz of geostationary satellite ETS-II stationed at 130°E.
 RAW DATA Strip chart 12 cm/hour
 DATA REDUCTION PRACTICE REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER MONTHS
 FORM OF REDUCED DATA Quarterly hour value; TEC and scintillation index; monthly table and daily plot.
 DATA ROUTINELY PUBLISHED Data from 05/1977 to 04/1978 were published

DATA SENT TO WDC-A
 DATA SENT TO WDC-B
 DATA SENT TO WDC-C
 DATA AVAILABLE ON REQUEST
 ADDRESS FOR INFORMATION ABOUT STATION Dr. K. Sinno
 Radio Research Laboratories
 2-1, Mukui-Kitamachi 4-Chome
 Koganei, Tokyo 184
 Japan

ADDRESS FOR INFORMATION ABOUT DATA Same as above
 ADDITIONAL COMMENTS Data from 05/1978 are under preparation for routine publication.

 INVER ARCADE, NEW ZEALAND

 ITEM: 283
 DATE: 09/07/83

DISCIPLINE B06 Total Electron Content - Satellite Beacons
 STATION LATITUDE S 40.40
 STATION LONGITUDE E 169.40
 ALTERNATE NAMES
 DATES OF OPERATION 02/1965 to present
 OBSERVING SCHEDULE REGULAR
 INSTRUMENT DESCRIPTION Single channel, total electron content from geostationary satellites, continuous recording at chart speed of one inch/h of the Faraday Rotation of 137 MHz geostationary satellite signal, antenna rotation at 1 Hz to give continuous record of polarization angle of 137 MHz signal.

RAW DATA Strip chart
 DATA REDUCTION PRACTICE REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER 1 MONTHS
 FORM OF REDUCED DATA Tables (hourly values)
 DATA ROUTINELY PUBLISHED
 DATA SENT TO WDC-A
 DATA SENT TO WDC-B
 DATA SENT TO WDC-C
 DATA AVAILABLE ON REQUEST YES
 ADDRESS FOR INFORMATION ABOUT STATION Dr. D. E. Fotheridge
 Radio Research Centre
 University of Auckland
 Auckland
 New Zealand

ADDRESS FOR INFORMATION ABOUT DATA Same as above
 ADDITIONAL COMMENTS

B06 Total Electron Content - Satellite Beacons (Cont.)

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*****
LUNPING, TAIWAN, CHINA
*****
ITEM 2093
DATE 13/01/84

DISCIPLINE ----- B06 Total Electron Content-Satellite
Beacons
STATION LATITUDE ----- N 25.00
STATION LONGITUDE ----- E 121.10
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Polarimeter, Total electron content from geostationary
satellites, continuous recording at chart speed
of 6 cm/hour of Faraday Rotation of 136 MHz
geostationary satellite signal.

RAW DATA ----- Strip charts, tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Computer printouts, graphical plots
DATA ROUTINELY PUBLISHED ----- Report of Lunping Observatory, TEC
published by Telecommunication Lab,
M.O.C., Taiwan, China
YES

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Yinn-Nien Huang
Telecommun. Laboratories
P. O. Box 71
Chungli 320
Taiwan, China
Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data sent to U.S. Air Force Geophysics Lab.
    
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*****
NAMEY, PUERTO RICO, USA
*****
ITEM 807
DATE 02/07/83

DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
STATION LATITUDE ----- N 18.50
STATION LONGITUDE ----- E 79.20
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- ATS-5 Total Electron Content Recorder (TEC)
Data recorded 24 hours daily on strip chart
(Chart speed 4 inches).

RAW DATA ----- Charts, worksheets
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Det 3, 3 Weather Wing (MAL)
c/o Postmaster
FPO
Miami, FL 34050
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- National Geophysical &
Solar-Terrestrial Data Center
NOAA/EDS
Boulder, Co. 80303
USA

ADDITIONAL COMMENTS ----- Raw data and worksheets sent to AFGL/LIS after 3
months.
    
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*****
PINELET, GREECE
*****
ITEM 906
DATE 15/07/83

DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
STATION LATITUDE ----- N 38.05
STATION LONGITUDE ----- E 23.86
ALTERNATE NAMES ----- Athens
DATES OF OPERATION ----- Natl Observatory of Athens
08/1970 to present
INSTRUMENT DESCRIPTION ----- Polarimeter, TEC observations

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
FORM OF REDUCED DATA ----- Tables, films, photographic paper
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES Meudon
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Institute
National Observatory of Athens
Athens 306
Greece
Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 0.5 months.
    
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*****
RAROTONGA, COOK ISLANDS
*****
ITEM: 810
DATE: 08/07/83

DISCIPLINE ----- B06 Total Electron Content
STATION LATITUDE ----- S 21.20
STATION LONGITUDE ----- E 200.20
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- IRREGULAR
INSTRUMENT DESCRIPTION ----- Satellite Beacon Observations

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tabular matter
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. John E. Titheridge
Radio Research Centre, U of Auckland
Private Bag
Auckland
New Zealand
Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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B06 Total Electron Content - Satellite Beacons (Cont.)

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*****
SAO JOSE DOS CAMPOS, BRAZIL
*****
DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
STATION LATITUDE ----- S 23.21
STATION LONGITUDE ----- E 314.14
ALTERNATE NAMES ----- INPE Sao Jose dos Campos
DATES OF OPERATION ----- 1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- VHF Polarimeter. Polarization angle of
137.35 Mhz signal from AT543. Rotating dipole
antenna and receiver. Operation should be con-
tinuous, but breakdown of the equipment stopped
operation during 1974.
RAW DATA ----- None
DATA REDUCTION PRACTICE ----- None
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Punched cards
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
ADDRESS FOR INFORMATION ABOUT STATION -----
Instituto de Pesquisas Espaciais - INPE
Caixa Postal 124
Sao Jose dos Campos - SP 13001
Brazil
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
SAO JOSE DOS CAMPOS, BRAZIL
*****
DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
STATION LATITUDE ----- S 23.21
STATION LONGITUDE ----- E 314.14
ALTERNATE NAMES ----- INPE Sao Jose dos Campos
DATES OF OPERATION ----- 1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- VHF Polarimeter. Polarization angle of
137.35 Mhz signal from AT543. Rotating dipole
antenna and receiver.
RAW DATA ----- None
DATA REDUCTION PRACTICE ----- None
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Punched cards
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
ADDRESS FOR INFORMATION ABOUT STATION -----
Instituto de Pesquisas Espaciais - INPE
Caixa Postal 124
Sao Jose dos Campos - SP 13001
Brazil
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
SAO JOSE DOS CAMPOS, BRAZIL
*****
ITEM: 534
DATE: 01/07/84
DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
STATION LATITUDE ----- S 23.21
STATION LONGITUDE ----- E 314.14
ALTERNATE NAMES ----- INPE Sao Jose dos Campos
DATES OF OPERATION ----- 1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- VHF Polarimeter. Polarization angle of
137.35 Mhz signal from AT543. Rotating dipole
antenna and receiver. Operation should be con-
tinuous, but breakdown of the equipment stopped
operation during 1974.
RAW DATA ----- None
DATA REDUCTION PRACTICE ----- None
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Punched cards
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
ADDRESS FOR INFORMATION ABOUT STATION -----
Instituto de Pesquisas Espaciais - INPE
Caixa Postal 124
Sao Jose dos Campos - SP 13001
Brazil
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
SYOWA, ANTARCTICA
*****
ITEM: 1142
DATE: 16/01/76
DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
STATION LATITUDE ----- S 69.00
STATION LONGITUDE ----- E 39.60
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Satellite beacon observations, telemetry recep-
tion of VHF signal intensity, natural wave,
electron density, etc., observed by satellite
EX-5A, Ryubei.
RAW DATA ----- None
DATA REDUCTION PRACTICE ----- None
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Punched cards
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
ADDRESS FOR INFORMATION ABOUT STATION -----
Mazda Ryubai
National Institute of Polar Research
1-1 Honcho, Syowa
Mitsubishi, Tokyo, Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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B06 Total Electron Content - Satellite Beacons (Cont.)

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*****
TAIPEI, TAIWAN, CHINA
*****
ITEM: 591
DATE: 01/01/80

DISCIPLINE ----- B06 Total Electron Content - Satellite Beacons
STATION LATITUDE ----- N 25.20
STATION LONGITUDE ----- E 121.50
ALTERNATE NAMES ----- RMRL, NTU
DATES OF OPERATION ----- 10/1968 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Satellite beacons receiver, Total electron
content and ionospheric scintillation, Ten-
element rotating Yagi antenna, VHF converter,
HF communication receiver, dual channel
recorder, regulated power supply, 24 hour
observation, chart speed 15 mm/min.

RAW DATA ----- Dual channel recording chart
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Graphical plots, tables, and computer
printouts

DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. K. H. Pai
Radio Wave Research Laboratory
Dept. of Electrical Engineering
National Taiwan University
Taipei
Taiwan, China

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- A member of Joint Satellite Studies Group. Sponsored
by AFGL in Bedford, MA, USA.
No response received to inquiry for updating material
in 1983.
    
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*****
THULE, GREENLAND
*****
ITEM: 2328
DATE: 01/08/83

DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
STATION LATITUDE ----- N 74.00
STATION LONGITUDE ----- E 24.34
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Total power receiver, phase meter receiver
1947H satellite beacon, observations, 24 hour
operation, strip chart and digital plots

RAW DATA ----- Strip chart and digital plots
DATA REDUCTION PRACTICE ----- Strip chart
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- IBM Cards

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Herbert E. Whitney
AFGL/JN7
Hanscom Field
Bedford, MA 01731
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 12 months.
    
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*****
TEHRAN, IRAN
*****
ITEM: 751
DATE: 22/07/83

DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
STATION LATITUDE ----- N 35.20
STATION LONGITUDE ----- E 51.47
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Faraday Rotation Measurements

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Reports
DATA ROUTINELY PUBLISHED ----- JOURNAL OF EARTH AND SPACE PHYSICS
(Tehran Univ.), also monthly and
yearly reports

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Geophysics
Tehran University
Ave. Kangan
Tehran-14374
Iran

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
YAMAGAWA, JAPAN
*****
ITEM: 2328
DATE: 01/08/83

DISCIPLINE ----- B06 Total Electron Content-Satellite Beacons
STATION LATITUDE ----- N 31.20
STATION LONGITUDE ----- E 136.62
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Polarization and field intensity recording
equipment frequency 136 MHz of geostationary
satellite ETS-II stationed at 130E.

RAW DATA ----- Strip chart 12 cm/hour
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Quarterly hour values; scintillation
index; monthly table
Data published from 10/1977

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. K. Shimada
Radio Research Laboratories
2-1, Nukui-Kitamachi 4-Chome
Koganei, Tokyo 184
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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B07 Ionospheric Absorption - Method A1 (Pulse echo)

 AHMEDABAD, INDIA

ITEM: 4
 DATE: 11/07/83

DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse Echo)
 STATION LATITUDE ----- N 23.00
 STATION LONGITUDE ----- E 72.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1972 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 AI Ionospheric Absorption Measuring Equipment,
 peak pulse power 30 kw, frequencies 1.8, 2.2,
 2.5 MHz, pulse width 100 microsec, repetition
 rate 33 pulses per second. Receiver band
 width 32 khz, vertical delta antennas, hourly
 observations daily, chart speed 6 cm/hour,
 film and punch tape recording also provided.

RAW DATA ----- Strip charts, tables
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. F. M. Kotadia
 Physics Department, Gujarat University
 Navrangpura
 Ahmedabad, Gujarat 380 009
 India

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Gaps due to failure of power supply and equipment
 failure. Location not changed. Recording of short
 wave field strength of CW transmission from Colombo.
 Occasional rocket experiment with impedance probe at
 Thumba, India.

 ASHKHABAD, USSR

ITEM: 2008
 DATE: 01/01/80

DISCIPLINE ----- B07 Ionosphere Absorption Method A1 (Pulse echo)
 STATION LATITUDE ----- N 37.56
 STATION LONGITUDE ----- E 58.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 AI Ionospheric absorption measuring equipment
 peak pulse power 15 kw, frequencies 1.8, 2.2,
 2.6 MHz, pulse width 100 microsec, repetition
 rate 50 pulse per. sec. Receiver bandwidth
 24 khz, vertical rhombic antenna, daily per
 hour observations, film speed 35 cm/min the
 period of performance at each frequency is
 5-10 min, 35 mm film of continuous records.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12/1975
 FORM OF REDUCED DATA ----- 1-2 months
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. M. Shirammedov
 Phys.-Tech. Institute
 Acad. Sci. of Turkmen SSR
 Gogol Street 16
 Ashkhabad 744019
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ASHKHABAD, USSR

ITEM: 846
 DATE: 01/01/80

DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse echo)
 STATION LATITUDE ----- N 37.56
 STATION LONGITUDE ----- E 58.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Pulse Amplitude (Pulse Echo) measurements (A1)
 at 1.73 MHz, hourly values.
 35 mm film of continuous records

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- Interpretation
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Computer listings
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. M. Shirammedov
 Inst. Phys. Earth & Atm., Acad. Sci. Turkmen
 Sq. 16
 Ashkhabad 744019
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 BUENOS AIRES, ARGENTINA

ITEM: 817
 DATE: 15/07/83

DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse echo)
 STATION LATITUDE ----- S 34.50
 STATION LONGITUDE ----- E 301.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1983
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Pulse Amplitude Measurements (A1)
 1.73 MHz, 2.28 MHz and/or 5.06 MHz

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- Interpretation
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Computer listings
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Lab de Absorcion
 Senfo Av. Libertador 327
 1638 Vte. Lopez
 Buenos Aires
 Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B07 Ionospheric Absorption - Method A1 (Pulse echo) (Cont.)

 COLOMBO, SRI LANKA

ITEM: 125
 DATE: 01/01/80

DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse Echo)
 STATION LATITUDE ----- N 6.90
 STATION LONGITUDE ----- E 79.87
 ALTERNATE NAMES ----- Sri Lanka
 DATES OF OPERATION ----- 01/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Pulse Echo sounder. Absorption - pulse echo method. The pulse transmitter/receiver system operating on 1.8, 2.2 and 2.6 MHz will measure the absorption at vertical incidence, and the vertical height of the reflecting layer; daily measurements at local noon, and the diurnal measurements on the RWDs will be taken.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Monthly tabulations
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. P. A. J. Ratnasiri
 Ceylon Inst. of Sci. and Ind. Research
 P.O. Box 787
 Colombo
 Sri Lanka
 ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. S. Gnanalingam
 Ceylon Inst. of Sci. and Ind. Research
 P.O. Box 787
 Colombo
 Sri Lanka
 ADDITIONAL COMMENTS ----- Date of commencement of experiment postponed due to delay in getting the new equipment commissioned. No response received to inquiry for updating material in 1983.

 DE BILT, THE NETHERLANDS

ITEM: 2077
 DATE: 01/05/83

DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse Echo)
 STATION LATITUDE ----- N 52.10
 STATION LONGITUDE ----- E 5.18
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Transmitter and receiver developed at De Bilt, echo amplitude averaged over a period of several minutes, two times an hour between sunrise and sunset, calibration using the results of the absorption measurements, Method A1.

RAW DATA ----- Strip chart, showing field strength, monthly tables on microfiche
 REGULAR
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Tables with daily values, monthly median values graph
 DATA ROUTINELY PUBLISHED ----- Monthly bulletin 'Ionospheric Data' of Royal Netherlands Meteorological Institute
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES, from 1/1983
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief, Division of Geophysics
 Royal Netherlands Meteorological Inst
 P.O. Box 20
 3730 AL de Bilt
 Netherlands
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 DE BILT, THE NETHERLANDS

ITEM: 142
 DATE: 01/09/83

DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse Echo)
 STATION LATITUDE ----- N 52.10
 STATION LONGITUDE ----- E 5.18
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1957 to present
 OBSERVING SCHEDULE ----- Intermittent 03-10/1967
 INSTRUMENT DESCRIPTION ----- Ionospheric absorption measurements. Calibrated receiver and transmitter measurements are daily about noon at 5 frequencies, (1.95, 2.3, 2.6, 2.9, and 13.2 MHz).

RAW DATA ----- Monthly tables on microfiche
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Tables: Noon absorption at 5 frequencies
 DATA ROUTINELY PUBLISHED ----- Monthly bulletin 'Ionospheric Data' of Royal Netherlands Meteorological Institute
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES, from 1/1983
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief, Division of Geophysics
 Royal Netherlands Meteorological Inst
 P. O. Box 20
 3730 AL de Bilt
 Netherlands
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 DUMBRIES, BELGIUM

ITEM: 938
 DATE: 01/01/84

DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse Echo)
 STATION LATITUDE ----- N 50.10
 STATION LONGITUDE ----- E 4.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- IRREGULAR
 INSTRUMENT DESCRIPTION ----- Digisonde
 RAW DATA ----- 128 and Digisonde 256 Paper
 DATA REDUCTION PRACTICE ----- IRREGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. C. Jodogne
 Geophys Inst, Inst Royal Meteorologique
 3, avenue Circulaire
 Bruxelles 1180
 Belgium
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- During some periods data will be recorded on tape.

B07 Ionospheric Absorption - Method A1 (Pulse echo) (Cont.)

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.....
ITEM: 2437
HUBERT, AUSTRALIA
DATE: 01/06/84
.....
DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse echo)
STATION LATITUDE ----- S 42.88
STATION LONGITUDE ----- E 147.33
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1983 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- A1 or pulse reflection experiment operating on
a single frequency of 1.91 MHz.
RAW DATA ----- Amplitude and time of arrival of
first order echo each minute.
DATA REDUCTION PRACTICE ----- IRREGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Absorption value every 30 minutes
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
Ionospheric Prediction Service
P.O. Box 702
Darlinghurst, N.S.W. 2010
Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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.....
ITEM: 2337
ROSTOV, USSR
DATE: 01/05/84
.....
DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse echo)
STATION LATITUDE ----- N 47.2
STATION LONGITUDE ----- E 39.7
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionospheric absorption measuring equipment
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tabular matter
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Research Physical Institute
Rostov State University
Prospekt Stachki, 194
344090 Rostov
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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ITEM: 956
JULIUSRUH/RUGEN, GDR
DATE: 01/08/83
.....
DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse echo)
STATION LATITUDE ----- N 54.63
STATION LONGITUDE ----- E 13.38
ALTERNATE NAMES ----- Zentralinst fur solar-terrestr Physik (MHI)
DATES OF OPERATION ----- 1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Fixed frequency equipment for A1 absorption mea-
surements near 2 MHz, continuously.
RAW DATA ----- Paper charts
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- GEOPHYSIKALISCHE BEOBACHTUNGS-
ERGEBNISSE (Geophysical Data) monthly
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: Tokyo
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. Entzian
Observatorium fur Ionospharenforschung
Mitschurin Str. 4-6
Kuhlungsborn DDR 2565
GDR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Several gaps and minor changes in frequency of A1

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.....
ITEM: 2007
SYDNEY, AUSTRALIA
DATE: 01/06/84
.....
DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse echo)
STATION LATITUDE ----- S 31.5
STATION LONGITUDE ----- E 150.7
ALTERNATE NAMES ----- Camden
DATES OF OPERATION ----- 02/1980 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- A1 or Pulse Reflection Experiment operating
on a single frequency of 1.91 MHz, PRF = 1 Hz.
RAW DATA ----- Amplitude and time-of-arrival of
first order echo each minute
DATA REDUCTION PRACTICE ----- Amplitude scaled using virtual
height data
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Absorption value every half hour
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
Ionospheric Prediction Service
P.O. Box 702
Darlinghurst N.S.W. 2010
Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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B07 Ionospheric Absorption - Method A1 (Pulse echo) (Cont.)

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*****
ITEM: 816
TRELAM, ARGENTINA DATE: 01/01/80
*****
DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse echo)
STATION LATITUDE ----- S 43.20
STATION LONGITUDE ----- E 294.70
ALTERNATE NAMES -----
DATES OF OPERATION ----- FUTURE
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Pulse Amplitude Measurements (A1)
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Bulletins or reports
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- LIARA
Avenida del Libertador No. 327
1638 Vicente Lopez
Argentina
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1983.

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*****
ITEM: 826
UDAIPUR, INDIA DATE: 01/07/84
*****
DISCIPLINE ----- B07 Ionospheric Absorption-Method A1 (Pulse echo)
STATION LATITUDE ----- N 24.50
STATION LONGITUDE ----- E 73.70
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1971 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Pulse amplitude measurements (A1) at 2-5 MHz,
hourly values monthly means and medians at
vertical and oblique incidence.
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. R. K. Rai
Department of Physics
University of Udaipur
Udaipur, Rajasthan
India
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

```

B08 Ionospheric Absorption - Method A2 (Riometer)

 ANDERMA, USSR

ITEM: 2372
 DATE:

DISCIPLINE ----- B08 Ionospheric Absorption - Method A2 (Riometer)
 STATION LATITUDE ----- N 63.4
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1964 to present
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Polar cap absorption measurements: Riometer
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and IAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

 ANGMAGSALLIK, GREENLAND

ITEM: 721
 DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 65.61
 STATION LONGITUDE ----- E 322.34
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip charts, digital cassette
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS -----

Viggo Meble Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark

 ANDOYA, NORWAY

ITEM: 18
 DATE: 01/08/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 60.28
 STATION LONGITUDE ----- E 16.02
 ALTERNATE NAMES ----- Oksebasen
 DATES OF OPERATION ----- 08/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 1962 to 1979: Riometer, 27.6 MHz, 3 element Yagi-antenna, vertical observation direction.
 1979 to present: a) Riometer 40 MHz, 2 x 5 elements crossed Yagi-antenna, vertical observation with fast time constant (1 to 2 s), slow time constant (5 to 10 s) and sampling rate of 10 s.
 b) Riometer 32.5 MHz, 3 elements Yagi-antenna vertical observation direction.
 RAW DATA ----- 1962 to 1979: Paper chart
 1979 to present: Computer compatible tape
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

NTNF
 Andoya Rocket Range
 P.O. Box 60
 0490 Blindern
 Norway
 27.6 Riometer: Dr. J. K. Hargreaves
 University of Lancaster
 Department of Environmental Science
 Lancaster LA1 4YQ
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Recording on 27.6 riometer is done upon request by Dr. Hargreaves.

The following riometers are installed with the 32.5 MHz riometer:
 32.5 MHz Min. detection
 32.5 MHz Long time constant
 32.5 MHz Fast time constant
 The riometers belong to:
 Dr. Peter Stauning
 Geofysisk Afd.
 DTM Bygn 349
 DK-2800 Lyngby
 Denmark

 APATIITY, USSR

ITEM: 2436
 DATE: 01/06/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 67.50
 STATION LONGITUDE ----- E 33.33
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer, 32 MHz dipole antenna
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 5 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

V. P. Kozelov
 Polar Geophysical Institute
 Academy of Sciences of the USSR
 Apatiity, Murmansk Region 184200
 USSR

B08 Ionospheric Absorption - Method A2 (Riometer) (Cont.)

 ARKHANGELSK, USSR

ITEM: 2373
 DATE:

DISCIPLINE ----- B08 Ionospheric Absorption - Method A2 (Riometer)
 STATION LATITUDE ----- N 64.6
 STATION LONGITUDE ----- E 40.5
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Riometer. Cosmic radiation level recorded at
 9, 13 and 29 MHz. H variation also measured.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 BEAR ISLAND, NORWAY

ITEM: 204
 DATE: 04/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 74.50
 STATION LONGITUDE ----- E 19.20
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)

RAW DATA ----- Strip chart, pen and ink, magnetic tape
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS -----
 Dr. Peter Stauning
 Danish Meteorological Institute
 Division of Geophysics
 Lyngbyvej 100
 DK-2100 Copenhagen
 Denmark
 Same as above

 AUCKLAND, NEW ZEALAND

ITEM: 808
 DATE: 13/07/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 37.00
 STATION LONGITUDE ----- E 175.00
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS -----
 Dr. John E. Titcheridge
 Radio Research Centre, U of Auckland
 Private Bag
 Auckland
 New Zealand
 Same as above

 BELSK, POLAND

ITEM: 55
 DATE: 03/06/75

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 51.84
 STATION LONGITUDE ----- E 20.79
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer Mark 1000 by Aerospace Research Inc.
 with the 3-element Yagi antenna directed verti-
 cally. The strip chart recorder chart speed is
 6 cm/h. Riometer working frequency 27.6 MHz.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS -----
 Dr. A. W. Wernik
 Inst. of Geophysics, Polish Acad. Sci.
 ul. Pasteura 3, P.O. Box 155
 Warsaw 00-973
 Poland
 Same as above
 Reduced data will become available after 11/1975.
 Tables and plots of the hourly mean absorption,
 absorption in the first min. of each hour and
 the maximum absorption for each hour as well as
 US100 information will be available.
 No response received to inquiry for updating material
 in 1980 or 1983.

B08 Ionospheric Absorption - Method A2 (Riometer (Cont.))

 BIJORNVA, NORWAY

 ITEM: 2019
 DATE: 13/01/84
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 74.51
 STATION LONGITUDE ----- E 14.14
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- RFL LAR
 Riometer (A2)
 RAW DATA ----- Strip chart, Digital cassettes
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Auroral Observatory
 Post. Box
 No.4011 Transva
 Norway
 ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Staaning
 Geophys. Dept., Building 14B
 Technical University of Denmark
 DK-2800 Lyngby
 Denmark
 ADDITIONAL COMMENTS -----

 CAPE ZHELANIZA, USSR

 ITEM: 2374
 DATE:
 DISCIPLINE ----- B08 Ionospheric Absorption - Method A2 (Riometer)
 STATION LATITUDE ----- N 70.3
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Polar cap absorption measurements: Riometer
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 CAMPBELL ISLAND

 ITEM: 2026
 DATE: 01/08/83
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 52.60
 STATION LONGITUDE ----- E 169.10
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1965-1969, 1973 to present
 OBSERVING SCHEDULE ----- CONTINUOUS
 INSTRUMENT DESCRIPTION ----- Riometer (A2) 30 MHz
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- Special purposes only
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES (for cooperative studies)
 OFFICER IN CHARGE
 PEL Atmospheric Station, DSIR
 LAUDER
 NEW ZEALAND
 ADDRESS FOR INFORMATION ABOUT STATION ----- Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 CASEY, ANTARCTICA

 ITEM: 2029
 DATE: 01/06/84
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 66.54
 STATION LONGITUDE ----- E 110.36
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1975 to present
 OBSERVING SCHEDULE ----- REGULAROUS
 INSTRUMENT DESCRIPTION ----- Standard 30 MHz riometer. Continuous operation.
 Solid-State receiver, calibrated automatically
 daily.
 RAW DATA ----- Paper chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 DIRECTOR, ANTARCTIC DIVISION
 DEPARTMENT OF SCIENCE & TECHNOLOGY
 CHANNEL HIGHWAY
 KINGSTON, 7150, TASMANIA
 AUSTRALIA
 ADDRESS FOR INFORMATION ABOUT STATION ----- Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

B08 Ionospheric Absorption - Method A2 (Riometer (Cont.))

 COLLEGE, USA

 ITEM: 203
 DATE: 22/07/83
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 64.87
 STATION LONGITUDE ----- E 212.18
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Gorrset 30 MHz Riometer, continuous recording
 at 3 inch/h on strip chart.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Archives
 Geophysical Institute
 University of Alaska
 Fairbanks, AK 99701
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Part of university of Alaska N-S meridian chain thru
 Fairbanks.

 DANMARKSHAVN, GREENLAND

 ITEM: 722
 DATE: 13/01/84
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 76.66
 STATION LONGITUDE ----- E 341.37
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Viggo Neble Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDITIONAL COMMENTS -----

 DANEBORG, GREENLAND

 ITEM: 2036
 DATE: 13/01/84
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 74.30
 STATION LONGITUDE ----- E 339.19
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Viggo Neble Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 DK-2800 Lyngby
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 DK-2800 Lyngby
 Denmark
 ADDITIONAL COMMENTS -----

 DAVIS, ANTARCTICA

 ITEM: 136
 DATE: 01/06/84
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 68.58
 STATION LONGITUDE ----- E 77.97
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard 30 MHz riometer. Continuous operation.
 Solid state receiver. Calibration is done auto-
 matically daily.
 RAW DATA ----- Paper chart
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director, Antarctic Division,
 Department of Science & Technology
 Channel Highway
 Kingston, Tasmania, 7150
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B08 Ionospheric Absorption - Method A2 (Riometer) (Cont.)

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*****
DISCIPLINE ----- B08 Ionospheric Absorption - Method A2(Riometer)
STATION LATITUDE ----- N 67.2
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Polar cap absorption measurements: Riometer
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
                             directory from information contained in a World Data
                             Center-B catalog and UAG-83.
                             No confirmation or additional information was received
                             upon inquiry to World Data Center-B.
    
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*****
GENERAL BELGRANO, ANTARCTICA
*****
ITEM: 919
DATE: 01/28/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2(Riometer)
STATION LATITUDE ----- S 77.47
STATION LONGITUDE ----- E 321.20
ALTERNATE NAMES ----- Belgrano
                             Graf Belgrano
DATES OF OPERATION ----- 06/1962 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION -----
RAW DATA ----- Strip charts
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Horacio A. Szameuve
                             Instituto Antartico Argentino
                             Cerro 1248
                             Buenos Aires
                             Argentina
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 4 months.
                             Data are published by Instituto Antartico Argentino
                             as Scientific Contributions.
    
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*****
FORT YUKON, USA
*****
ITEM: 175
DATE: 22/07/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (riometer)
STATION LATITUDE ----- N 66.56
STATION LONGITUDE ----- E 214.78
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1961 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- A.R.I. 30 MHz Riometer. Continuous chart record-
                             ing: 3 inch/h
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Archives
                             Geophysical Institute
                             University of Alaska
                             Fairbanks, AK 99701
                             USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
COPENHAGEN, GREENLAND
*****
ITEM: 725
DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 69.26
STATION LONGITUDE ----- E 306.49
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Riometer (A2)
RAW DATA ----- Strip chart, Digital cassettes
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Data reports
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Viggo Heble Jensen
                             Geophys. Dept., Building 349
                             Technical University of Denmark
                             Lyngby DK-2800
                             Denmark
ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning
                             Geophys. Dept., Building 349
                             Technical University of Denmark
                             Lyngby DK-2800
                             Denmark
ADDITIONAL COMMENTS -----
    
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B08 Ionospheric Absorption - Method A2 (Riometer) (Cont.)

.....
 GOTHAR, GREENLAND

 ITEM: 723
 DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 64.19
 STATION LONGITUDE ----- E 30R.27
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Viron Nehle-Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA -----
 Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDITIONAL COMMENTS -----

.....
 HEISS ISLAND, USSR

 ITEM: 236
 DATE:

DISCIPLINE ----- B08 Ionospheric Absorption - Method A2 (Riometer)
 STATION LATITUDE ----- N 73.8
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPER: IUN ----- 1964 to present
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Polar cap absorption measurements: Riometer
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and IAG-BJ. No confirmation or additional information was received upon inquiry to World Data Center-B.

.....
 HALLEY BAY, ANTARCTICA

 ITEM: 228
 DATE: 15/07/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 75.52
 STATION LONGITUDE ----- E 533.37
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- David Andersen type DA-R7 Riometer, continuous measure of cosmic noise at 27.6 MHz. Instrument similar to Ily riometer (Little and Leinbach, Proc. I.R.E., Vol 47, 2(1959)). Chart speed 1 or 2 inches/min. Antenna 3 element Yagi directed at South celestial pole.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Computer printout
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Chilton
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- World Data Centre - C1
 SERL
 Rutherford Appleton Laboratory
 94 61/3
 Chilton Oxon OX11 0QX
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Regularly scheduled data normally available after 6-12 months (processed in yearly batches).

.....
 HERMANUS, REP. OF S. AFRICA

 ITEM: 245
 DATE: 01/01/80

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 34.42
 STATION LONGITUDE ----- E 19.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 12/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Mark II Riometer (model ARJ-100C), continuous recording of 30 MHz cosmic radio noise, chart speed 3 inches/min, participation in AFGL network 12/1962-6/1970.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic Observatory (CSIR)
 PO Box 32
 Hermanus 7200
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Records used inter alia for confirmation of geomagnetic solar flare effects (SFEs). No response received to inquiry for updating material in 1983.

B08 Ionospheric Absorption - Method A2 (Riometer) (Cont.)

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*****
HIRAISO, JAPAN
*****
ITEM: 260
DATE: 22/07/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 36.37
STATION LONGITUDE ----- E 140.62
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 4RI-100c Riometer, 30 & 50 MHz
RAW DATA ----- Strip Chart, 6 cm/h
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Table (Space Radio Data, a complete
table of SIDs observed by RRL)

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Solar Radio Research Section
Hiraiso Branch, Radio Research Labs.
Nakaminato, Ibaraki, 311-12
Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.
    
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*****
KIRUNA, SWEDEN
*****
ITEM: 313
DATE: 01/01/80

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 67.84
STATION LONGITUDE ----- E 20.42
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1958 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Riometer
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- KIRUNA GEOPHYSICAL DATA
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Library
Kiruna Geophysical Institute
Kiruna S-98101
Sweden
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1983.
    
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*****
JANNAEYEN, NORWAY
*****
ITEM: 2127
DATE: 04/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 70.93
STATION LONGITUDE ----- E 8.74
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1979 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Riometer (A2)
RAW DATA ----- Strip chart, ink pen, magnetic tape
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Peter Stauning
Danish Meteorological Institute
Division of Geophysics
Lyngbyvej 100
DK-2100 Copenhagen
Denmark
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
LYCKSELE, SWEDEN
*****
ITEM: 369
DATE: 01/08/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 64.62
STATION LONGITUDE ----- E 18.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1962 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Riometer (A2)
RAW DATA ----- Strip chart, magnetic tape
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Sve Klång
Ionospheric Observatory
Box 100
Lycksele, S-92100
Sweden
ADDRESS FOR INFORMATION ABOUT DATA ----- Library
Kiruna Geophysical Institute
Kiruna, S-98101
Sweden
ADDITIONAL COMMENTS -----
    
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B08 Ionospheric Absorption - Method A2 (Riometer (Cont.))

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*****
ITEM: 374
DATE: 01/06/84
*****
MACQUARIE ISLAND
*****
DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- S 54.50
STATION LONGITUDE ----- E 158.45
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Narrow band 30 MHz riometer (Standard) riometer
Australian Antarctic Division, Kingston, Double
Island, antenna directed at zenith, calibrated
noise source switched on daily, chart speed
4 cm/hr.
RAW DATA ----- Paper chart
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Paper chart
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Director, Antarctic Division
Department of Science & Technology
Pangloss House
Kingston, 1161, Tasmania
Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM: 2377
DATE: 01/06/84
*****
DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 40.00
STATION LONGITUDE ----- E 175.75
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION -----
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Research Manager
M. Matheson, Antarctic Observations
P.O. Box 400, Great Gable
Roper Bay, NT 14 05
AUST.
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 12 months.

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*****
ITEM: 690
DATE: 01/06/84
*****
MAWSON, ANTARCTICA
*****
DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- S 67.60
STATION LONGITUDE ----- E 62.88
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1968 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 1PS 30 and 40 MHz riometer, ionospheric absorption
measurement, 30 and 40 MHz solid state riometer in con-
tinuous operation, chart speed 6 cm per hour,
data also recorded digitally, sampled every 10
seconds as of 01/1983.
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, microfiche, magnetic tape
Computer printout by special request
Provisional: 81-monthly microfiche
Final: One microfiche per month
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Assistant Secretary
Ionospheric Prediction Service
P.O. Box 702
Darlinghurst, N.S.W. 2010
Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 14 months.

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*****
ITEM: 2377
DATE:
*****
MINNY, ANTARCTICA
*****
DISCIPLINE ----- B08 Ionospheric Absorption - Method A2 (Riometer)
STATION LATITUDE ----- N 75.8
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1961 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Polar cap absorption measurements: Riometer
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
directory from information contained in a World Data
Center-B catalog and IAG-82.
No confirmation or additional information was received
upon inquiry to World Data Center-B.

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B08 Ionospheric Absorption - Method A2 (Riometer (Cont.))

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*****
MOUZEL'ZHAYA, ANTARCTICA
*****
ITEM: 2376
DATE:

DISCIPLINE ----- B08 Ionospheric Absorption - Method A2 (Riometer)
STATION LATITUDE ----- N -67.6
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Polar cap absorption measurements: Riometer
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
    
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ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

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*****
MORLESK, USSR
*****
ITEM: 2374
DATE: 06/20/76

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 69.00
STATION LONGITUDE ----- E 86.70
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Riometer (A2)
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Bulletins
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. W. M. Trofeyev
Stoizmir
D.P.L. 4
Irkutsk 33
USSR
    
```

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1990.

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*****
NARSARSSUQ, GREENLAND
*****
ITEM: 724
DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 85.17
STATION LONGITUDE ----- E 334.54
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Riometer (A2)
RAW DATA ----- Strip chart, Digital cassettes
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Data Reports
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Viggo Nilsen Jensen
Geophys. Dept., Building 344
Technical University of Denmark
Lyngby, Denmark
Denmark
    
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ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning

ADDITIONAL COMMENTS -----

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*****
NOVOLASAREVSKAYA, ANTARCTICA
*****
ITEM: 2379
DATE:

DISCIPLINE ----- B08 Ionospheric Absorption - Method A2 (Riometer)
STATION LATITUDE ----- N -66.2
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Polar cap absorption measurements: Riometer
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
    
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ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

B08 Ionospheric Absorption - Method A2 (Riometer) (Cont.)

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*****
NYAALESUND, NORWAY
*****
ITEM: 711
DATE: 04/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 79.00
STATION LONGITUDE ----- E 12.00
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1966 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Riometer (A2)
RAW DATA ----- Strip chart, pen and ink, magnetic tape
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER -----
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Dr. Peter Stauning
Danish Meteorological Institute
Divisio. of Geophysics
Lyngbyvej 100
DK-2100 Copenhagen
Denmark

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
POKER FLAT, USA
*****
ITEM: 466
DATE: 22/07/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 65.13
STATION LONGITUDE ----- E 212.52
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1971 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- A.R.I. 30 MHz Riometer, continuous chart recording 3 inch/h.
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Archives
Geophysical Institute
University of Alaska
Fairbanks, AK 99701
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
NYAALESUND, NORWAY
*****
ITEM: 718
DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- N 78.92
STATION LONGITUDE ----- E 11.92
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Riometer (A2)
RAW DATA ----- Strip chart, Digital cassettes
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Data reports
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Auroral Observatory
Post Box
N-9001 Tromso
Norway
Peter Stauning
Geophys. Dept., Building 349
Technical University of Denmark
Lyngby DK-2800
Denmark

ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS -----

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*****
PORT AUX FRANCAIS, KERGUELEN
*****
ITEM: 303
DATE: 01/01/80

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
STATION LATITUDE ----- S 49.35
STATION LONGITUDE ----- E 70.27
ALTERNATE NAMES ----- Kerguelen
DATES OF OPERATION ----- 02/1962 (30 MHz) to present
OBSERVING SCHEDULE ----- 01/1975 station moved
INSTRUMENT DESCRIPTION ----- REGULAR
Aerospace Riometers, continuous recording on
chart and magnetic tape (30, 25, 20.5 and 15 MHz)
RAW DATA ----- Strip chart, digital magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables of absorption values every
5 minutes (30 MHz)
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Monsieur le Dir. des Lab. Scientifiques
T.A.A.F.
27 rue Dudinot
Paris 75700
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Laboratoire de Geophysique Externe
4 Avenue de Neptune
Saint Maur 94100
France

ADDITIONAL COMMENTS ----- Station moved in January 1975 (former location
549.35 E70.24).
No response received to inquiry for updating material
in 1983.

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B08 Ionospheric Absorption - Method A2 (Riometer (Cont.))

ITEM: 2123
DATE: 04/02/84

RAMFJORDMOEN, NORWAY

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 69.54
 STATION LONGITUDE ----- E 19.72
 ALTERNATE NAMES ----- Tromsø
 DATES OF OPERATION ----- 01/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer 30 MHz and 40 MHz
 RAW DATA ----- Strip chart, digital cassette tape
 DATA REDUCTION PRACTICE ----- MONTHS
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip chart, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Peter Stauning
 Danish Meteorological Institute
 Division of Geophysics
 Lyngbyvej 135
 DK-2100 Copenhagen
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 2124
DATE: 04/02/84

RAMFJORDMOEN, NORWAY

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 69.54
 STATION LONGITUDE ----- E 19.72
 ALTERNATE NAMES ----- Tromsø
 DATES OF OPERATION ----- 01/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer 30 MHz and 40 MHz
 RAW DATA ----- Strip chart, digital cassette tape
 DATA REDUCTION PRACTICE ----- MONTHS
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip chart, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Peter Stauning
 Danish Meteorological Institute
 Division of Geophysics
 Lyngbyvej 135
 DK-2100 Copenhagen
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 2108
DATE: 01/09/83

SANAE, ANTARCTICA

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 70.31
 STATION LONGITUDE ----- E 357.64
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1979 to present
 OBSERVING SCHEDULE ----- Intermittent Operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Riometer, 50 MHz, 30 MHz and 20 MHz double
 dipole antennas. La Jolla Sciences riometers.
 RAW DATA ----- Strip chart, 2 second digital
 magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Strip chart copies, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Cosmic Ray Research Unit
 Department of Physics
 Potchefstroom Univ. for CHE
 Potchefstroom 2520
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 719
DATE: 13/01/84

SONDRE STROMFUORD, GREENLAND

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 67.02
 STATION LONGITUDE ----- E 309.29
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip chart, digital cassette
 DATA REDUCTION PRACTICE ----- MONTHS
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Vlado Nehle Jensen
 Geophys. Dept., Buiidina 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA -----
 Peter Stauning
 Geophys. Dept., Buiidina 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDITIONAL COMMENTS -----

B08 Ionospheric Absorption - Method A2 (Riometer) (Cont.)

STATION NORD, GREENLAND
 ITEM: 2165
 DATE: 11/11/74

DISCIPLINE ----- B08 Ionospheric Absorption Method A2 (Riometer)
 STATION LATITUDE ----- N 61.65
 STATION LONGITUDE ----- E 343.30
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip chart, digital cassette
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 11 MONTHS
 FORM OF REDUCED DATA ----- Data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Viggo Neble Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 DK-2800 Lyngby
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 DK-2800 Lyngby
 Denmark
 ADDITIONAL COMMENTS -----

TERRE ADELIE, ANTARCTICA
 ITEM: 602
 DATE: 27/01/76

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 66.05
 STATION LONGITUDE ----- E 140.02
 ALTERNATE NAMES ----- Dumont d'Urville
 DATES OF OPERATION ----- 01/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer, continuous recording of absorption on chart and magnetic tape, on 75, 30.1, 20.5 and 13.7 MHz.
 RAW DATA ----- Strip chart, digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 15 MONTHS
 FORM OF REDUCED DATA ----- Tables of absorption values every 5 minutes (30.1 MHz)
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Directeur des Laboratoires Scientifiques
 T.A.A.F.
 27 rue Oudinot
 Paris 75700
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Laboratoire de Geophysique (externe)
 4 Av de Neptune
 Saint Maur 94100
 France
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

SYDVA, ANTARCTICA
 ITEM: 586
 DATE: 01/08/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 69.00
 STATION LONGITUDE ----- E 39.35
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Mark II AR1 100 C. Absorption - Method A2 (Riometer), 20, 30 and 50 MHz, continuously recording. Strip chart; 6 cm/hour.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR - SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Photographic paper
 DATA ROUTINELY PUBLISHED ----- JACE DATA REPORTS (IONOSPHERE), annually issued by National Science Museum (now Polar Research Institute)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: United Kingdom
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric Radio Prediction Section
 Radio Research Laboratories
 2-1, Nukui-Kitamachi 4-chome
 Kojimachi-shi, Tokyo 104
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Office for Ionosphere
 Radio Research Laboratories
 2-1, Nukui-Kitamachi 4-chome
 Kojimachi-shi, Tokyo 104
 Japan
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 15 months.

THORSMAVN, FAERIE ISLANDS
 ITEM: 717
 DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 62.03
 STATION LONGITUDE ----- F 363.24
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Viggo Neble Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK
 Denmark
 ADDITIONAL COMMENTS -----

B08 Ionospheric Absorption - Method A2 (Riometer) (Cont.)

 THULE, GREENLAND

ITEM: 726
 DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 77.51
 STATION LONGITUDE ----- E 290.77
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Viggo Nebel Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 Lyngby DK-2800
 Denmark
 ADDITIONAL COMMENTS -----

 TROMSO, NORWAY

ITEM: 706
 DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 69.70
 STATION LONGITUDE ----- E 19.00
 ALTERNATE NAMES ----- Ranfjord
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip charts, Digital cassettes
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Auroral Observatory
 Post Box
 N-9001 Tromso
 Norway
 ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 DK-2800 Lyngby
 Denmark
 ADDITIONAL COMMENTS ----- Copies of data on request, limited by our capacity.

 TJORNES, ICELAND

ITEM: 2172
 DATE: 13/01/84

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 66.20
 STATION LONGITUDE ----- E 342.90
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA ----- Strip chart, Digital cassettes
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Data reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Viggo Nebel Jensen
 Geophys. Dept., Building 349
 Technical University of Denmark
 DK-2800 Lyngby
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Peter Stauning
 Geophys. Dept., Building 349
 Technical University of Denmark
 DK-2800 Lyngby
 Denmark
 ADDITIONAL COMMENTS -----

 TULSA (TUL), USA

ITEM: 2213
 DATE: 06/07/83

DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 35.91
 STATION LONGITUDE ----- E 264.21
 ALTERNATE NAMES ----- Oklahoma Geophysical Observatory
 DATES OF OPERATION ----- 1961 to present (this discipline 1962
 to present)
 OBSERVING SCHEDULE ----- Continuous
 INSTRUMENT DESCRIPTION ----- ARI-100B Mark II Riometer 30 mhz
 RAW DATA ----- Ink on strip chart-chart moves at
 76 mm/h.
 DATA REDUCTION PRACTICE ----- Occasional reduction for special
 projects & student projects
 REGULAR REDUCED DATA AVAILABLE AFTER ----- Not available
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- Raw data offered to WDC-A for
 microfilming whenever their
 program expands to include this
 type of data.
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Raw data available
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jim Lawson
 Oklahoma Geophysical Observatory
 Box B
 Leonard, Ok 74043-0008
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Studies at TUL are primarily regional and global
 seismology but we wish to increase effectiveness
 of present MONSEE observations and add others, as
 funding allows. We are particularly interested in
 obtaining loaned or surplus equipment for cooperative
 projects with other groups.

B08 Ionospheric Absorption - Method A2 (Riometer (Cont.))

 UPIICE, CZECHOSLOVAKIA

 ITEM: 798
 DATE: 01/01/80
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 50.30
 STATION LONGITUDE ----- E 16.01
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer (A2) at 29 MHz and at 32 MHz
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- Evaluation of SCNA effects and solar radio bursts
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Hvezdarna Uvice
 Observatory Uvice
 Czechoslovakia 54232
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 USHUAIA, ARGENTINA

 ITEM: 813
 DATE: 01/01/80
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- S 54.80
 STATION LONGITUDE ----- E 291.70
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- Riometer (A2)
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Bulletins or reports
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- LIARA
 Avenida del Libertador No. 327
 1638 Vicente Lopez
 Buenos Aires
 Argentina
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 UPPSALA, SWEDEN

 ITEM: 650
 DATE: 01/08/83
 DISCIPLINE ----- B08 Ionospheric Absorption-Method A2 (Riometer)
 STATION LATITUDE ----- N 59.80
 STATION LONGITUDE ----- E 17.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer, type La Jolla Sciences, ionospheric absorption, frequency 30 MHz, antenna two half-wave dipoles, beam width 60°. Analog output on strip chart recorder, 20 mm per hour.
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. Harald Dorblom
 Uppsala Ionospheric Observatory
 Uppsala S-755 90
 Sweden
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

B09 Ionospheric Absorption - Method A3 (CW Fieldstrength)

 AKITA, JAPAN

 ITEM: 6
 DATE: 27/12/84

 DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-
 Strength)
 STATION LATITUDE ----- N 39.73
 STATION LONGITUDE ----- E 140.14
 ALTERNATE NAMES ----- Ak. 539
 DATES OF OPERATION ----- 01/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Field strength recorder
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Annual Report of JJY Field Strength
 Data
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: WDC-C2
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Akita Radio Wave Observatory
 Radio Research Laboratories
 6-1, Tegata-Sumiyoshi-cho
 Akita-shi, Akita-ken 010
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Radio Wave Division
 Radio Research Laboratories
 2-1, Nukui-Kitamachi 4-chome
 Kodaneishi, Tokyo 184
 Japan
 ADDITIONAL COMMENTS -----

 EBRO, SPAIN

 ITEM: 624
 DATE: 11/07/83

 DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-
 strength)
 STATION LATITUDE ----- N 40.82
 STATION LONGITUDE ----- E -49
 ALTERNATE NAMES ----- Tortosa
 DATES OF OPERATION ----- 09/1967 to 08/1969
 08/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionospheric Absorption - field strength A3,
 continuously
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Japan
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio del Ebro
 Roquetes
 Tarragona
 Spain
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Operated from 9/1967 to 8/1969 and 8/1970 to pre-
 sent. For original records send to Max Planck
 Institut Lindau for data 1967 and 1968; from 1979 to
 present sent to the Ebro Observatory.

 DOLGOSHELIE, USSR

 ITEM: 794
 DATE: 00/00/75

 DISCIPLINE ----- B09 Ionospheric Absorption-Method (CW Field-
 strength)
 STATION LATITUDE ----- N 66.03
 STATION LONGITUDE ----- E 43.24
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- CW Fieldstrength (A3)
 RAW DATA ----- Magnetic tape, strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jacques Vigneron
 Groupe de Recherches Ionospheriques
 Centre National d'Etudes des Telecom.
 Saint Maur 94100
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in
 1980 or 1983.

 GENOVA, ITALY

 ITEM: 748
 DATE: 15/07/83

 DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-
 strength)
 STATION LATITUDE ----- N 44.55
 STATION LONGITUDE ----- E 8.95
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- CW Fieldstrength (A3)
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Monthly and annual bulletins,
 microfilm
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Antonio Elena
 Instituto Geofisica
 Corso Europa, 345-1
 I-16132 Genova
 Italy
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B09 Ionospheric Absorption - Method A3 (CW Fieldstrength) (Cont.)

 HIRAIISO, JAPAN

ITEM: 261
 DATE: 22/07/83

DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-strength)
 STATION LATITUDE ----- N 36.37
 STATION LONGITUDE ----- E 140.62
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Fieldstrength meter, 10, 15 MHz (MW + MWV) continuously recording on strip chart at 12 cm/h.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN issued monthly by RRL (15 MHz)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: United Kingdom
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Hiraiso Branch
 Radio Research Laboratories
 3601 Isozaki-machi
 Nakaminato-shi
 Ibaraki-Ken 311-12
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- WDC C2 for Ionosphere
 Radio Research Laboratories
 2-1, Nuku-i-Kitamachi 4-chrome
 Koganei-shi, Tokyo 184
 Japan
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.
 CCIR Network (15 MHz)

 KODAIKANAL, INDIA

ITEM: 766
 DATE: 11/07/83

DISCIPLINE ----- B09 Ionospheric Absorption-Method Aa (CW Field-strength)
 STATION LATITUDE ----- N 11.21
 STATION LONGITUDE ----- E 77.50
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- CW Fieldstrength (A3), 6.2 MHz
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- J. H. Sastri
 Indian Institute of Astrophysics
 Bangalore 560014
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KEFLAVIK, ICELAND

ITEM: 2080
 DATE: 01/08/83

DISCIPLINE ----- B09 Absorption Method A3 (CW Field-strength)
 STATION LATITUDE ----- N 63.96
 STATION LONGITUDE ----- E 337.28
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 04/1979 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (4-OMSOD/41)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KUHLUNGSBORN, GDR

ITEM: 325
 DATE: 01/08/83

DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-strength)
 STATION LATITUDE ----- N 54.12
 STATION LONGITUDE ----- E 11.77
 ALTERNATE NAMES ----- Obs fur Ionospharenforschung
 Zentral Institut fur Solar-
 Terrestrische Physik (HMI)
 DATES OF OPERATION ----- 1948 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- A3 absorption measurements, continuous records.
 RAW DATA ----- Paper records
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/2 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- GEOPHYSICALISCHE BEOBSACHTUNGS-
 ERGEBNISSE (Geophysical Data) HMI
 monthly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. Entzian
 Observatorium fur Ionospharenforschung
 Mitschurin Str. 4-6
 Kuhlungsborn DDR 2565
 GDR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The monthly bulletin (Geophysical Data) is available
 from Akad. d. Wissenschaften der DDR, Zentralinsti-
 tut fur solar-terrestrische Physik (HMI), DDR 1199
 Berlin-Adlershof.

B09 Ionospheric Absorption - Method A3 (CW Fieldstrength) (Cont.)

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*****
LADIS, AZORES                                ITEM: 2067
*****                                DATE: 01/20/83

DISCIPLINE ----- B09 Absorption Method A3 (CW Fieldstrength)
STATION LATITUDE ----- N 34.77
STATION LONGITUDE ----- E 331.44
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 06/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA -----
DATA REDUCTION PRACTICE ----- Cassette tapes (hourly data)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
JS Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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MONROVIA, LIBERIA                            ITEM: 2111
*****                                DATE: 01/08/83

DISCIPLINE ----- B09 Ionospheric Absorption - Method A3 (CW Field-
strength)
STATION LATITUDE ----- N 6.43
STATION LONGITUDE ----- E 109.14
ALTERNATE NAMES ----- Brew
DATES OF OPERATION ----- 02/1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA -----
DATA REDUCTION PRACTICE ----- Some strip charts (continuous),
coding forms (hourly data)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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LUNPING, TAIWAN, CHINA                       ITEM: 367
*****                                DATE: 01/01/80

DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-
strength)
STATION LATITUDE ----- N 25.00
STATION LONGITUDE ----- E 121.17
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1973 to present
OBSERVING SCHEDULE ----- Special
INSTRUMENT DESCRIPTION ----- CW Field Strength (A3)
RAW DATA -----
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Computer printouts
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Yinn-Nien Huang
Telecommunication Laboratories
P.O. Box 71
Chung-Li 320
Taiwan, China
Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- No response received to inquiry for updating material
in 1983.
ADDITIONAL COMMENTS -----

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NAVAL OCEAN SYSTEMS CENTER, USA              ITEM: 2111
*****                                DATE: 01/08/83

DISCIPLINE ----- B09 Ionospheric Absorption - Method A3 (CW Field-
strength)
STATION LATITUDE ----- N 32.70
STATION LONGITUDE ----- E 242.75
ALTERNATE NAMES ----- NELC, NEL
DATES OF OPERATION ----- 09/1978 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA -----
DATA REDUCTION PRACTICE ----- Cassette tapes (hourly data)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cs - based data available.

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B09 Ionospheric Absorption - Method A3 (CW Fieldstrength) (Cont.)

 NORDBEICH, FRG

 ITEM: 364
 DATE: 01/09/83
 DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-
 strength)
 STATION LATITUDE ----- N 53.57
 STATION LONGITUDE ----- E 7.10
 ALTERNATE NAMES ----- Luechow
 DATES OF OPERATION ----- 01/1970 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Continuous Field Strength recordings of distant
 radio transmitters, 26 frequencies
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 25 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Monthly report available
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Im. Lambolt
 Forschungsinstitut für BBP
 P.O. Box 5000
 4400 Hammstadt
 FRG
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above.
 ADDITIONAL COMMENTS ----- The station moved from Luechow to Nordbeich in June 1970.

 SABANA SECA, PUERTO RICO, USA

 ITEM: 2140
 DATE: 01/08/83
 DISCIPLINE ----- B09 Absorption-Method A3 (CW Fieldstrength)
 STATION LATITUDE ----- N 18.45
 STATION LONGITUDE ----- E 293.78
 ALTERNATE NAMES ----- SAN JS
 San Juan
 DATES OF OPERATION ----- 08/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-OMSD/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 PANSKA VES, CZECHOSLOVAKIA

 ITEM: 822
 DATE: 00/00/75
 DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-
 strength)
 STATION LATITUDE ----- N 50.53
 STATION LONGITUDE ----- E 14.57
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1961 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- CW Fieldstrength (A3)
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Bulletins, microfilm (tables)
 DATA ROUTINELY PUBLISHED ----- SWF events (monthly)
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Pavel Triska
 Geophysical Inst, Czechoslovak Acad Sci
 Bozni 11
 Praha 4, Sportlov 141 31
 Czechoslovakia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980 or 1983.

 SYDNEY, AUSTRALIA

 ITEM: 582
 DATE: 01/06/84
 DISCIPLINE ----- B09 Solar Magnetic Fields
 STATION LATITUDE ----- S 33.97
 STATION LONGITUDE ----- E 150.77
 ALTERNATE NAMES ----- Fieurs
 DATES OF OPERATION ----- 01/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- HF Field Strength Monitor. Crystal-controlled
 receivers, 4.9, 7.5, 9.66 and 12 MHz. Recording
 transmissions from Brisbane and Melbourne
 respectively.
 RAW DATA ----- Telemetered to IPS Sydney H.O.
 DATA REDUCTION PRACTICE ----- NONE MONTHS
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Fieurs Field Station
 University of Sydney/IPS
 Kemps Creek, N.S.W. 2171
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA -----
 Disturbance Warning Section
 Ionospheric Prediction Service
 Dept. of Science, P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia
 ADDITIONAL COMMENTS ----- Data supplied to IONOS network via URSIGRAM.

B09 Ionospheric Absorption - Method A3 (CW Fieldstrength) (Cont.)

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*****
TERRE ADELIE, ANTARCTICA
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ITEM: 792
DATE: 01/01/80

DISCIPLINE ----- B09 Ionospheric Absorption-Method A3 (CW Field-
strength)
STATION LATITUDE ----- S 56.40
STATION LONGITUDE ----- E 140.01
ALTERNATE NAMES ----- Dumont d'Urville
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- CW Fieldstrength (A3)
RAW DATA ----- Magnetic tape, strip chart
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tabular matter
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Jacques Vigneron
Groupe de Recherches Ionospheriques
Centre National d'Etudes des Telecom.
Saint Maur 94100
France
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1983.

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B10 Ionospheric Drifts

 CHUBU, JAPAN

ITEM: 2031
 DATE: 01/08/83

DISCIPLINE ----- B10 Ionospheric Drifts
 STATION LATITUDE ----- N 35.27
 STATION LONGITUDE ----- E 137.01
 ALTERNATE NAMES ----- Kasugai
 DATES OF OPERATION ----- 07/1979 to present
 OBSERVING SCHEDULE ----- Continuous
 INSTRUMENT DESCRIPTION ----- HF Duplexer shift recorder HF standard radio waves: JUY, BPV, WNVH frequencies: 10, 8, 5, 2.5 MHz Real-time recording

RAW DATA ----- Record on discharge recording paper
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES

ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Dr. T. Yonezawa
 Chubu Institute of Technology
 1200 Matsumoto-cho
 Kasugai-shi, Aichi-ken, 487
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available at any time
 Raw data are preserved as are, no reductions are being made at this time.

 IKHUTSK, USSR

ITEM: 862
 DATE: 01/05/84

DISCIPLINE ----- B10 Ionospheric Drifts
 STATION LATITUDE ----- N 52.5
 STATION LONGITUDE ----- E 104.0
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionospheric Drift Measurements

RAW DATA ----- Paper records, film, magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Journal tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- S102MIK
 P.O.B. 4
 68467 Ikrutsk 33
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 POLUM, GDR

ITEM: 2035
 DATE: 16/07/83

DISCIPLINE ----- B10 Ionospheric Drifts
 STATION LATITUDE ----- N 51.32
 STATION LONGITUDE ----- E 13.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1959 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Automatic equipment for DI and absolute height measurements in the LF range.

RAW DATA ----- Printed digital results
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- (PHYSIKALISCHE BEOBSACHTUNGSERGEBNISSE (Physical Data))
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES

ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Dr. Schneider
 geophysikalisches Observatorium
 POB 1041
 10116
 GDR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The magnetic field data are available
 for data to WDC-A, pattern for IZU Central Institut
 for Geophysikalische Beobachtung, POB 1199
 10116 Berlin, GDR

 ROSTOV, USSR

ITEM: 2338
 DATE: 01/05/84

DISCIPLINE ----- B10 Ionospheric Drifts
 STATION LATITUDE ----- N 47.2
 STATION LONGITUDE ----- E 39.7
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ionospheric Drift Measurements

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Research Physical Institute
 Rostov State University
 Prospekt Stachki, 144
 344040 Rostov
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B10 Ionospheric Drifts (Cont.)

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*****
UDAIPUR, INDIA
*****
ITEM: 2176
DATE: 01/07/84

DISCIPLINE ----- B10 Ionospheric Drifts
STATION LATITUDE ----- N 24.5
STATION LONGITUDE ----- E 73.7
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1971 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Spaced receiver technique (D1), vertical echo
                                fading observations at 2.3, 2.5, 3.0, 5.0 MHz,
                                hourly observations, using different geometries
                                and different types of antennae.
RAW DATA ----- Recording on 35 mm film
DATA REDUCTION PRACTICE ----- Regular computer analysis
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. R.K. Rai
                                           Department of Physics
                                           University of Udaipur
                                           Udaipur (Raj.)
                                           India
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
URBANA, USA
*****
ITEM: 2051
DATE: 21/08/83

DISCIPLINE ----- B10 Ionospheric Drifts
STATION LATITUDE ----- N 40.17
STATION LONGITUDE ----- E 271.84
ALTERNATE NAMES ----- Aeronomy Laboratory Field Station
DATES OF OPERATION ----- 02/1971 to present
OBSERVING SCHEDULE ----- Intermittent operation
                                Regular
INSTRUMENT DESCRIPTION ----- 2.66 MHz spaced antenna drift experiment.
                                Horizontal velocities obtained every minute.
RAW DATA ----- Apple disks
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/4 MONTHS
FORM OF REDUCED DATA ----- Computer printouts, plots
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Aeronomy Laboratory
                                           Department of Electrical Engineering
                                           University of Illinois
                                           1406 W. Green Street
                                           Urbana, IL 61801
                                           USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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B11 Ionospheric Scintillations from Satellite Beacons

 BIELSKA, POLAND

ITEM: 916
 DATE: 10/09/75

DISCIPLINE ----- B11 Ionospheric Scintillations from Satellite Beacons
 STATION LATITUDE ----- N 51.84
 STATION LONGITUDE ----- E 20.79
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Commercial receivers with converters and antennas working on 40 and 41 MHz; INIASAT satellite beacon signals are received and recorded. Strip chart recorders speed 6 cm/m, occasionally higher. Every satellite pass with zenith distance greater than 70 degrees is recorded, except on weekends and holidays.
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Plots, tables of IEL, AFGL scintillation index
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. W. Wernik
 Institute of Geophysics
 Polish Academy of Science
 ul. Pasteura 3
 P.O. Box 155
 Warsaw 00-973
 Poland
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Reduced data are available for each half-min period. No response received to inquiry for updating material in 1980 or 1983.

 HIRAIKO, JAPAN

ITEM: 205H
 DATE: 2/92/80

DISCIPLINE ----- B11 Ionospheric Backscatter
 STATION LATITUDE ----- N 36.37
 STATION LONGITUDE ----- E 140.63
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- About 2/1980 planned (4/1979 to present only for 136 MHz of Geostationary Satellite EIS-2)
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Faraday rotation recording equipment. Frequencies are 32 GHz (pilot), 3.94 GHz (beacon) and 136 MHz (telemetry) of Geostationary Satellite ECS.
 RAW DATA ----- Strip chart 17 cm/h
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. K. Shinno
 Special Research Section for Space Physics
 Radio Research Laboratories
 2-1, Nukui-kitamachi 4-chome
 Koganei-Shi, Tokyo 184
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 HAIFA, ISRAEL

ITEM: 941
 DATE: 01/08/83

DISCIPLINE ----- B11 Ionospheric Scintillations from Satellite Beacons
 STATION LATITUDE ----- N 32.47
 STATION LONGITUDE ----- E 35.09
 ALTERNATE NAMES ----- Radio Observatory NCSP
 DATES OF OPERATION ----- 11/1964 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Teledyne Micronetic Faraday Polarization Tracking System, crossed Yagi antennas.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Computer printout
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Z. Haiminer
 Radio Observatory, NCSP
 P.O. Box 411
 Haifa
 Israel
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LUNPING, TAIWAN, CHINA

ITEM: 2284
 DATE: 13/01/84

DISCIPLINE ----- B11 Ionospheric Backscatter
 STATION LATITUDE ----- N 25.00
 STATION LONGITUDE ----- E 121.10
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Polarimeter, total electron content from geostationary satellites, continuous recording at chart speed of 6 cm/hour of Faraday Rotation of 136 MHz geostationary satellite signal. Scintillation data are taken from the amplitude channel.
 RAW DATA ----- Strip chart, tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Computer printouts, graphical plots
 DATA ROUTINELY PUBLISHED ----- Report of Lunping Observatory, scintillation published by Telecommunication Lab, M.O.C., Taiwan, China
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Yinn-Nien Huang, Director
 Telecommunication Lab, M.O.C.
 P.O. Box 71
 Chung-Li 320
 Taiwan, China
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

B11 Ionospheric Scintillations from Satellite Beacons (Cont.)

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*****
ITEM: 2439
DATE: 01/06/84
*****
MAJOR AREA: ISLAND, AUSTRALIA
*****
DISCIPLINE ----- B11 Ionospheric Backscatter
STATION LATITUDE ----- S 54.44
STATION LONGITUDE ----- E 154.97
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1979 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 150 MHz satellite receiver, chart recording at 4
cm/min for 30 minutes while satellite visible.
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- IRREGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTH
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Director, Antarctic Division
Dept. of Science and Technology
Channel Highway
Kingston, Tasmania 7153
Australia
Prof. J. A. Makowicz
Physics Dept.
University of Queensland
St. Lucia, Queensland 4067
Australia
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS ----- The data reduction practice is for event analysis only.

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*****
ITEM: 1053
DATE: 24/02/75
*****
TAIPEI, TAIWAN, CHINA
*****
DISCIPLINE ----- B11 Ionospheric Scintillations from Satellite
Beacons
STATION LATITUDE ----- N 25.20
STATION LONGITUDE ----- E 121.50
ALTERNATE NAMES ----- RWRL, NTU
DATES OF OPERATION ----- 10/1968 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Satellite Beacon Receivers, 10-element
rotating Yagi antenna, VHF converter, HF com-
munication receiver, dual channel recorder,
regulated power supply, 24 h observations, chart
speed 15 mm/min
RAW DATA ----- Dual channel recording chart
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Graphical plots, tables, computer
printouts
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Radio Wave Research Laboratory
Dept of Electrical Engineering
National Taiwan University
Taipei
Taiwan, China
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Member of the Joint Satellite Studies Group;
sponsored by JFGL in Bedford, MA USA.
No response received to inquiry for updating
material in 1980 or 1983.

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*****
ITEM: 1158
DATE: 21/12/78
*****
SAGAMORE HILL, USA
*****
DISCIPLINE ----- B11 Ionospheric Scintillations from Satellite
STATION LATITUDE ----- N 42.63
STATION LONGITUDE ----- E 289.18
ALTERNATE NAMES ----- Hamilton
Det 2, 4 WW
DATES OF OPERATION ----- 03/1972 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- ALDI 2000 VHF Polarimeter, Crossed Yagi Antenna
RAW DATA ----- Analog recording of signal amplitude
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Det 2, 4 WW
Box 415
St. Hamilton, MA 01942
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Mr. Jack Klobuchar
AFGL/115
Hanscom AFB, MA 01731
USA
ADDITIONAL COMMENTS ----- Part of the USAF AWS SESS.

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B13 Whistlers and VLF Emissions (Cont.)

..... ITEM: 202H
 ANIDYA, NORWAY DATE: 21/08/83

 DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 60.17
 STATION LONGITUDE ----- E 16.01
 ALTERNATE NAMES ----- Oksøasen
 DATES OF OPERATION ----- 08/1977 to 04/1982 and 10/1983 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- VLF Emission Receiver. The receiver is located at a low noise site with data transmission to the range. A power line rejection system provides good signal to noise conditions at low frequencies.
 RAW DATA ----- Paper chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- NINE
 Andoya Rocket Range
 P.O. Box 60
 8480 Andenes
 Norway
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

..... ITEM: 1032
 BELEM, BRAZIL DATE: 01/08/83

 DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 1.39
 STATION LONGITUDE ----- E 311.56
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between OMEGA signals at one or more of these frequencies: 10.2, 11.3, 13.6 kHz. (2 Tracor 599R receivers).
 RAW DATA ----- Some strip charts (continuous), some coding forms (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks, magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSOD/43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way phase. Some signal strength recording instruments used.

..... ITEM: 36
 ATIBAJA, ITAPETINGA, BRAZIL DATE: 01/08/83

 DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- S 23.50
 STATION LONGITUDE ----- E 313.50
 ALTERNATE NAMES ----- Itapetinga
 Sao Paulo
 DATES OF OPERATION ----- 1965 to present
 Station moved in 1975
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- VLF Tracking Receivers (3). VLF long distance propagation.
 RAW DATA ----- Strip chart, tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAR, Boulder, Colorado USA 80323, YES)
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- 11 PIZZO PIAZZA
 IMPERIAAL
 Instituto de Pesquisas Espaciais
 Caixa Postal 515
 12.260- Sao Jose dos Campos, Sao Paulo
 Brazil
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Station moved from Umuarama to Atibaja in 1975.

..... ITEM: 1011
 BERMUDA DATE: 01/01/80

 DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 32.26
 STATION LONGITUDE ----- E 295.12
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between OMEGA signals at one or more of these frequencies: 10.2 kHz, 13.6 kHz, digitized hourly readings from strip charts (speed 1 inch/h). (2 Tracor 599R receivers, 1968-1979). 07/1979 an MX-1104 was installed and the 2 Tracor receivers were subsequently removed.
 RAW DATA ----- Some strip charts (continuous), some coding forms (hourly data), cassette data tape (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks, magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSOD/43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way phase. Some signal strength recording instruments used.
 No response received to inquiry for updating material in 1983.

B13 Whistlers and VLF Emissions (Cont.)

 CAMPBELL ISLAND

ITEM: 80
 DATE: 01/08/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- S 52.50
 STATION LONGITUDE ----- E 169.20
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1972 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 VLF recordings 0.3-10 kHz or 1-15 Hz. Vertical
 triangular loop aligned Invariant north/south.
 Pre-amplifier, 1/4 inch 4 track 2 channel tape
 recorder at 3 3/4 ips. Recordings coincide with
 recordings at Dunedin and (normally) with VLF
 recordings from the ISIS satellites taken at
 Lauder, N. Z. until 1980. NASA-36 Time Code
 from 1976.

RAW DATA ----- Analog magnetic tape
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 - 18 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film of Dynamic Spectra
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. L. Dowden
 Physics Dept., Univ. of Otago
 Box 56
 Dunedin
 New Zealand
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Coordinated with station at Dunedin and Hobart. NASA-36
 time code was added 10/1975. Special purpose data
 usually available after 12-24 months.

 CHUBU, JAPAN

ITEM: 966
 DATE: 01/08/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 35.32
 STATION LONGITUDE ----- E 137.44
 ALTERNATE NAMES ----- Yamoka
 Chubu Institute of Technology
 Kasugai
 Second Division, Chubu Institute for Scientific
 and Industrial Research
 01/1967 to present

DATES OF OPERATION ----- REGULAR
 OBSERVING SCHEDULE ----- Whistlers: 1-9 kHz, 50-52 min at every hour.
 INSTRUMENT DESCRIPTION ----- Analog magnetic tape
 RAW DATA ----- REGULAR SPECIAL
 DATA REDUCTION PRACTICE ----- 3 MONTHS
 REGULAR REDUCED DATA AVAILABLE AFTER ----- Tables
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Dr. T. Yonezawa
 Chubu Institute of Technology
 1200 Matsumoto-cho
 Kasugai-shi, Aichi-ken, 487
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 2 months.

 CARIBOU PEAK, USA

ITEM: 467
 DATE: 01/01/80

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 65.3
 STATION LONGITUDE ----- E 212.55
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1973 to present
 OBSERVING SCHEDULE ----- INTERMITTENT
 INSTRUMENT DESCRIPTION ----- VLF Receiver, 10-4 kHz, discrete frequencies.
 Record taken for 1 minute every 15 minutes on
 direct recording tape at 3/4 IPS. Intensities
 are recorded in f-m mode on magnetic tape.

RAW DATA ----- Analog magnetic tape
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. Richard Heacock
 Geophysical Institute
 University of Alaska
 Fairbanks, Ak 99701
 USA
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

 DUNEDIN, NEW ZEALAND

ITEM: 154
 DATE: 01/08/83

DISCIPLINE ----- B13 whistlers and VLF Emissions
 STATION LATITUDE ----- S 45.79
 STATION LONGITUDE ----- E 170.48
 ALTERNATE NAMES ----- Swampy Summit
 DATES OF OPERATION ----- 1966 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 VLF recordings, various bandwidths, mainly
 0.3-10 kHz, 1-15 kHz, 1-30 kHz, vertical
 triangular loops, low noise preamplifiers, 1/2
 inch 7 channel, 1/4 inch 4 track 2 channel
 tape recorders. Observing schedule since 1972
 has been linked to VLF recording in the ISIS
 satellites taken at Lauder, N.Z. until 1980.
 Other recordings have been made during special
 activity periods. NASA-36 time code since
 1972.

RAW DATA ----- Analog magnetic tape
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film of dynamic spectra
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. L. Dowden
 Physics Dept, Univ. of Otago
 Box 56
 Dunedin
 New Zealand
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Recordings are also made at Campbell Island. In 1973
 (Aug & Sept) Dunedin and Campbell Island participated
 in VLF transmission experiment with the Aerospace
 Corporation.

B13 Whistlers and VLF Emissions (Cont.)

 DURBAN, REP. OF S. AFRICA

 ITEM: 2081
 DATE: 01/02/84

 DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- S 29.97
 STATION LONGITUDE ----- E 30.95
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1958 to present
 OBSERVING SCHEDULE ----- REGULAR: During passes of Isis I and Isis II
 INSTRUMENT DESCRIPTION ----- Satellite tracker system and VLF receiver
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- As Required
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, sonagrams, and 16 mm film
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. A. R. W. Hughes or P. A. Makerly
 Physics Dept, Univ. of Natal
 King George V Avenue
 Durban 4001, Natal
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 HALLEY BAY, ANTARCTICA

 ITEM: 229
 DATE: 07/07/83

 DISCIPLINE ----- B13 whistlers and VLF Emissions
 STATION LATITUDE ----- S 75.52
 STATION LONGITUDE ----- L 333.05
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1967 to present
 Station to be moved in 02/1984
 Intermittent operation
 OCCASIONAL
 OBSERVING SCHEDULE ----- VLF Goniometer, broad band VLF radio receiver
 INSTRUMENT DESCRIPTION ----- bandwidth 0.3-20 kHz. Simulated rotation of loop
 antenna enables direction of arrival of signals
 to be determined. Twin-track recordings made
 either continuously or one minute in five on
 magnetic tape at a speed of 19 cm/s (7.5 ips).
 VLF signals on first track, timing and calibration
 information on second track. Routine schedule of
 observations had been done in the past but now
 observations are made when VLF activity is high or
 for special collaborative programs, e.g. in
 conjunction with U.S. station Siple and also Senae.
 RAW DATA ----- Analog magnetic tape (1/4 inch)
 DATA REDUCTION PRACTICE ----- Special
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Film, paper spectrograms, tables,
 graphical plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- The Director
 British Antarctic Survey
 Madingley Road
 Cambridge CB3 0ET
 England
 ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. K. Bullough or Dr. A. J. Smith
 Dept. of Physics, The Hicks Building
 The University of Sheffield
 Sheffield S3 7RH
 England
 ADDITIONAL COMMENTS ----- No data available for 1968. Station is continually
 moving slowly westward at a rate of about 400 m/yr. In
 1967 station was rebuilt about 3 km east of its previous
 location. Special purpose data usually available after
 18 months (long delay in receiving tapes from Antarctica).
 Paper on goniometer technique: PLANETARY AND SPACE
 SCI., 21, 913-923, 1973.

 GENERAL BELGRAND, ANTARCTICA

 ITEM: 2055
 DATE: 01/08/83

 DISCIPLINE ----- B13 whistlers and VLF Emissions
 STATION LATITUDE ----- S 77.07
 STATION LONGITUDE ----- E 321.20
 ALTERNATE NAMES ----- Belgrano
 DATES OF OPERATION ----- 1975 to present
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Receiver
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Horacio Cezenueve
 Instituto Antartico Argentino
 Cerro 1248
 Buenos Aires
 Argentina
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 HERMANUS, REP. OF S. AFRICA

 ITEM: 246
 DATE: 15/05/84

 DISCIPLINE ----- B13 whistlers and VLF Emissions
 STATION LATITUDE ----- S 34.42
 STATION LONGITUDE ----- E 19.23
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1973 to present
 INSTRUMENT DESCRIPTION ----- VLF Receiver, continuous graphical record of
 s-ferrics at selected frequencies including
 27 kHz.
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Graphics
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G.J. Kuhn
 Hermanus Magnetic Observatory
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data are available as photo copies of specific
 events only.

B13 Whistlers and VLF Emissions (Cont.)

 ITEM: 1014
 DATE: 01/01/80
 HESTUNA, NORWAY

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 66.53
 STATION LONGITUDE ----- E 12.85
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1967 to present
 OBSERVING SCHEDULE ----- Station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 OMEGA Receiver, phase differences between OMEGA signals at one or more of these frequencies: 10.2, 11.3, 13.6 kHz, digitized hourly readings from strip charts (speed 1 inch/h). (3 ITT AN/WRN-2 Receivers)

RAW DATA ----- Some strip charts (continuous), some coding forms (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks, magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kagoshima Observatory
 Research Institute of Atmospheric
 Nagoya University
 Honjo
 Tarumizu, Kagoshima 891-21
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Research Institute of Atmospheric
 Nagoya University
 3-13 Honohara
 Toyokawa, Aichi 442
 Japan

ADDITIONAL COMMENTS ----- Station at N 31.51 E 130.76 from 6/1967 to 4/1974 with a gap in operation 5/1970-6/1971. Antenna site moved to this station in 1974 and stationary operation to present.
 Temporary use of goniometers. Data sent to WDC-C (Radio Research Laboratories, Koganei, Tokyo) since 9/1975.
 No response received to inquiry for updating material in 1983.

 ITEM: 290
 DATE: 20/08/83
 KAGOSHIMA, JAPAN

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 31.48
 STATION LONGITUDE ----- E 130.71
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Whistler recorder, frequency range 500 to 8,000 Hz, recording on magnetic tape, 50-52 min every hour, VLF emissions continuous recording by Miss recorder.

RAW DATA ----- Analog magnetic tape, some strip charts (continuous)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kagoshima Observatory
 Research inst of Atmospheric
 Nagoya University
 Honjo, Tarumizu, Kagoshima 891-21
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Research Institute of Atmospheric
 Nagoya University
 3-13 Honohara
 Toyokawa, Aichi 442
 Japan

ADDITIONAL COMMENTS ----- Station at N 31.51 E 130.76 from 6/1967 to 4/1974. Antenna site moved to this station in 1974 and stationary operation to present.

 ITEM: 300
 DATE: 01/01/80
 KASHIMA, JAPAN

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 35.95
 STATION LONGITUDE ----- E 140.65
 ALTERNATE NAMES ----- Satellite Control Section
 Kashima Branch
 Radio Research Labs
 DATES OF OPERATION ----- 09/1970 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 VLF Receiver, telemetry of ISIS VLF data, ISIS VLF Receiver on satellite 50 Hz - 30 kHz wide band VLF electric field, 2 passes/week. 1) VLF spectrum film (0-10 kHz, film speed 20 cm/min), 2) Narrow band 6 frequency intensity vs time (or latitude data). See RADIO AND SPACE DATA, Part 3, VLF Emissions, 1975-1983, from RRL, Japan.

RAW DATA ----- Film, strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 10 MONTHS
 FORM OF REDUCED DATA ----- Film, strip chart
 DATA ROUTINELY PUBLISHED ----- RADIO AND SPACE DATA, Radio Research Labs, Tokyo 184

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Tadanori Onda
 Radio Research Laboratories
 Koganei-shi
 Tokyo 184
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- We are members of ISIS Working Group Meeting. Data available on spectrum film (0-10 kHz range), and strip charts of 6 frequencies (300 Hz, 1.5 kHz, 5 kHz, 8 kHz, 16 kHz, 25 kHz) intensity vs time (or latitude), published since 1975.
 No response received to inquiry for updating material in 1983.

B13 Whistlers and VLF Emissions (Cont.)

 LA MOURE, USA

ITEM: 1023
 DATE: 01/07/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 46.56
 STATION LONGITUDE ----- E 261.36
 ALTERNATE NAMES ----- North Dakota
 DATES OF OPERATION ----- 10/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- OMEGA 1104 Receiver, phase differences between OMEGA signals at one or more of these frequencies: 10.2, 11.3, 13.6 kHz.

RAW DATA ----- Some strip charts (continuous),
 Some coding forms (hourly data)
 Cassette tape (hourly data)

DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HT (G-0NS00/43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way phase. Some signal strength recording instruments used. Plans are for as many as 60 monitor stations.

 MANSON, ANTARCTICA

ITEM: 2101
 DATE: 01/06/84

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- S 67.60
 STATION LONGITUDE ----- E 62.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/78 to present
 OBSERVING SCHEDULE ----- Intermittent
 INSTRUMENT DESCRIPTION ----- VLF Recordings 0.3 - 8 kHz vertical loop
 RAW DATA ----- Analog magnetic tape,
 1 7/8 ips, 2-channels 4-tracks

DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film of dynamic spectra
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. L. Dowden
 Physics Dept., University of Otago
 Box 56
 Dunedin
 New Zealand

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Temporary VLF Recorder approximately conjugate to Tromsø and near ESRO-GEOS field line for MPAL ionospheric heating experiment.

 LEICESTER, UNITED KINGDOM

ITEM: 338
 DATE: 01/08/83

DISCIPLINE ----- B13 whistlers and VLF Emissions
 STATION LATITUDE ----- N 52.62
 STATION LONGITUDE ----- E 358.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- VLF Receivers: TRACOR 599Js, TRACOR 599Rs (since 1982). Since 1978 two TRACOR 700 and one REDIFON MV1. Transmitters monitored since 1978: OMEGA stations A, B, D, F at 10.2 kHz and 13.6 kHz.

RAW DATA ----- 1975-1978: chart records
 1978 to present: fully digitized

DATA REDUCTION PRACTICE ----- Certain data are reduced to lines of position and position fixes

REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Plots

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. T. B. Jones
 University of Leicester
 Physics Department
 Leicester LE1 7RH
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Similar recordings available since January 1982 from Wick, Scotland, United Kingdom.

 MOSHIRI, JAPAN

ITEM: 409
 DATE: 01/01/80

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 44.36
 STATION LONGITUDE ----- E 142.27
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- Station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 Whistler recorder, Plasmaspheric Electron Density and Plasmaspheric Whistler Ducts. A usual whistler observing apparatus; frequency range 500-8000 Hz, recording on magnetic tape, tape speed 9.5 cm/s; 2-min observation starting at 50 min every hour.

RAW DATA ----- Analog magnetic tape

DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Whistler Report; table of hourly values of whistler occurrence rate and dispersion of each day, consisted of 5 or 6 sheets per month.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- YES: Tokyo
 YES
 Moshiri Observatory
 Research Inst of Atmos
 Nagoya Univ, Moshiri
 Morokanai, Hokkaido 074-07
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Research Institute of Atmosphere
 Nagoya University
 3-13 Nonohara
 Toyokawa, Aichi 442
 Japan

ADDITIONAL COMMENTS ----- 07/1957-11/1962 station operated at Wakkanaï M45.4 E141.7. Since 11/1962 continuing at Moshiri.
 No response received to inquiry for updating material in 1983.

B13 Whistlers and VLF Emissions (Cont.)

 MOSHIRI, JAPAN

ITEM: 410
 DATE: 01/01/80

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 44.36
 STATION LONGITUDE ----- E 142.27
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1963 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Hiss Recorder. Behavior of magnetospheric particles associated with VLF Emissions. A usual hiss intensity observing apparatus; four point frequencies 0.5, 2.5, 5.0, 8.0 kHz, measurements of time rate at 4 given percentage, average level and minimum level; loop antenna, strip chart speed 6 cm/h, digital paper tape sampled once per 4 minutes.

RAW DATA ----- Strip chart, digital paper tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Whistlers and VLF Emissions; table of hourly values of whistler occurrence rate of each day and type of VLF Emissions, one sheet per month.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Moshiri Observatory
 Research Inst of Atmos
 Nagoya Univ, Moshiri
 Horokanai, Hokkaido 074-07
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Research Inst of Atmospheric
 Nagoya Univ
 3-13 Honohara
 Toyokawa, Aichi 442
 Japan

ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 PORT AUX FRANCAIS, KERGUELEN

ITEM: 304
 DATE: 07/07/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- S 49.44
 STATION LONGITUDE ----- E 70.42
 ALTERNATE NAMES ----- Kerguelen
 DATES OF OPERATION ----- 03/1964 to present
 OBSERVING SCHEDULE ----- 1975 station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 Broadband VLF recordings (0.4 - 10 kHz), AC magnetometer with telemetry, low noise preamplifiers, 1/4 inch 4 track 2 channel, 1/2 inch 7 channel tape recorders. Recordings regularly made for 1 min at 50 min past the hour. Other recordings are made when whistlers activity is high, for special collaborative programs, or in conjunction with satellite passes. Telemetry of ISIS and ARCAD VLF data. Integrated notes recorder in 8 channels (3 ELF and 5 VLF).

RAW DATA ----- Analog magnetic tape,
 Strip chart (5 mm/min)
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film of dynamic spectra, paper spectrograms

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- M. le Chef de la Mission de Recherche
 T.A.A.F.
 34, rue des Renaudes
 75017 Paris
 France

ADDRESS FOR INFORMATION ABOUT DATA ----- Mademoiselle Y. Corcuff
 Lab. de Physique de la Haute Atmosphere
 Le Deffend
 SIGNALOUX-BEAUVOIR
 86800 Saint Julien l'Ars
 France

ADDITIONAL COMMENTS ----- Station moved in January 1975 (former location S49.35, E70.20).

 MINNAPK, USA

ITEM: 1035
 DATE: 21/08/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 36.57
 STATION LONGITUDE ----- E 285.71
 ALTERNATE NAMES ----- PUKUM
 DATES OF OPERATION ----- 01/1971 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- OMEGA 1104 Receiver, phase differences between OMEGA signals at one or more of these frequencies: 10.2, 11.3, 13.6 kHz.

RAW DATA ----- Cassette data tape (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSOD/43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way phase. Some signal strength recording instruments used. Plans are for as many as 60 monitor stations.

 JAMEIRO, BRAZIL

ITEM: 1029
 DATE: 01/08/83

DISCIPLINE ----- B13 Whistlers and VLF Emission
 STATION LATITUDE ----- S 22.87
 STATION LONGITUDE ----- E 316.87
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1973 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between OMEGA signals at one or more of these frequencies: 10.2, 13.6 kHz, digitized hourly readings from strip charts (speed 1 inch/h). (2 Tracor 599R receivers).

RAW DATA ----- Some strip charts (continuous)
 some coding forms (hourly data)
 cassette data tape (hourly data)
 Regular
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSOD/43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way phase. Some signal strength recording instruments used.

B13 Whistlers and VLF Emissions (Cont.)

ITEM: 749
DATE: 15/07/83

ROBURENT, ITALY

DISCIPLINE ----- B13 Whistlers and VLF Emissions
STATION LATITUDE ----- N 44.30
STATION LONGITUDE ----- E 7.88
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- ELF, VLF and higher frequency observations,
1-15 kHz
RAW DATA -----
DATA REDUCTION PRACTICE ----- MONTHS
REGULAR REDUCED DATA AVAILABLE AFTER ----- Monthly and annual bulletins,
FORM OF REDUCED DATA ----- microfilm
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Antonio Elena
Istituto Geofisica
Corso Europa, 345-1
I-16132 Genova
Italy
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

ITEM: 529
DATE: 01/02/84

SANAE, ANTARCTICA

DISCIPLINE ----- B13 Whistlers and VLF Emissions
STATION LATITUDE ----- S 70.31
STATION LONGITUDE ----- E 357.48
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Broad Band VLF Receiver
RAW DATA ----- 6.35 mm Magnetic tape
DATA REDUCTION PRACTICE ----- As required
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- 16 mm Film, sonagrams, 6.35 mm magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. M. W. J. Scourfield or P. A. Wakerly
Physics Dept, University of Natal
King George V Avenue
Durban 4001
Rep. of S. Africa
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

ITEM: 526
DATE: 27/01/84

SAKUSHIMA, JAPAN

DISCIPLINE ----- B13 Whistlers and VLF Emissions
STATION LATITUDE ----- N 34.73
STATION LONGITUDE ----- E 137.05
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1957 to present
OBSERVING SCHEDULE ----- Station moved
REGULAR
INSTRUMENT DESCRIPTION ----- Whistler recorder, Plasmaspheric Electron Density
and Plasmaspheric Whistler Ducts. A used whistler
observing apparatus; frequency range 500-8000
Hz, recording on magnetic tape, tape speed 9.5
cm/s, 7-minute observation starting at 50 minutes
every hour.
RAW DATA ----- Analog magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- Whistler Report; table of hourly
values of whistler occurrence rate
and dispersion of each day, con-
sisting of 5 or 6 sheets per month
available
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES: Tokyo
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Sakushima Observatory
Res Inst of Atmospheric
Nagoya University
Sakushima, I-shiki
Aichi 444-04
Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- Res Institute of Atmospheric
Nagoya University
3-13 Honohara
Toyokawa, Aichi 442
Japan
ADDITIONAL COMMENTS ----- 07/1957 - 05/1966 station operated at Toyokawa,
N34.83, E137.37, gap period 06/1966 - 01/1967,
since 02/1967 continuing at Sakushima.
Temporary use of direction finding.

ITEM: 2082
DATE: 01/02/84

SANAE, ANTARCTICA

DISCIPLINE ----- B13 Whistlers and VLF Emissions
STATION LATITUDE ----- S 70.31
STATION LONGITUDE ----- E 357.65
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- VLF Goniometer system. Synoptic 1 in 5, also
some continuous collaborative schedules
RAW DATA ----- 6.35 mm Magnetic tape
DATA REDUCTION PRACTICE ----- As Required
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- 6.35 mm Magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES (after 1/8/84)
DATA AVAILABLE ON REQUEST ----- Prof. A. R. W. Hughes or P. A. Wakerly
Physics Dept, Univ. of Natal
King George V Avenue
Durban 4001, Natal
Rep. of S. Africa
ADDRESS FOR INFORMATION ABOUT STATION ----- Same as above
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

B13 Whistlers and VLF Emissions (Cont.)

 SAO JOSE DOS CAMPOS, BRAZIL

ITEM: 2062
 DATE: 21/08/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- S 23.2
 STATION LONGITUDE ----- E 313.5
 ALTERNATE NAMES ----- Itapetinga Radio Observatory
 DATES OF OPERATION ----- 01/1966 to present
 OBSERVING SCHEDULE ----- IRREGULAR
 INSTRUMENT DESCRIPTION ----- VLF tracking receivers, atomic frequency standard
 RAW DATA ----- Strip charts, magnetic tapes(some)
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- INPE
 Institute Pesq. Espaciais
 C.P. 515
 12200 - S. Jose dos Campos, SP
 Brazil
 ADDRESS FOR INFORMATION ABOUT DATA ----- INPE
 c/o Dr. L. R. Piazza
 Institute Pesq. Espaciais
 C.P. 515
 12200 - S. Jose dos Campos, SP
 Brazil
 ADDITIONAL COMMENTS ----- Since 1980 the "Centro de Radio - Astronomia e
 Astrofisica", CRAAM, was absorbed by Brazilian Space
 Agency, INPE. It is the same group

 SOGRA, USSR

ITEM: 791
 DATE: 00/00/75

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 62.80
 STATION LONGITUDE ----- E 46.25
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- ELF, VLF and higher frequency observations,
 10-1000 Hz, 0.5-12 kHz, 10-500 kHz
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jacques Vigneron
 Groupe de Recherches Ionospheriques
 Centre National d'Etudes des Telecom.
 Saint Maur 94100
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1980
 or 1983.

 SAO PAULO, BRAZIL

ITEM: 759
 DATE: 04/01/84

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- S 23.50
 STATION LONGITUDE ----- E 313.50
 ALTERNATE NAMES ----- Itapetinga Radio Observatory
 DATES OF OPERATION ----- 1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- VLF Receivers
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, strip charts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- INPE (CRAAM)
 Itapetinga R.O.
 C.P. 515
 12200 San Jose dos Campos
 Brazil
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Measurements in Antarctica since 1982, but not on a
 regular basis.
 Measurements of VLF propagations.

 SUGADAIRA, JAPAN

ITEM: 580
 DATE: 01/01/80

DISCIPLINE ----- B13 Whistlers and VLF Emissions
 STATION LATITUDE ----- N 36.51
 STATION LONGITUDE ----- E 138.35
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Whistler detector. Wideband VLF Receiver
 (delta antenna of 20 X 20 m sq, preamplifier of
 Volt Gain 51dB, 72dB, low pass filter with cutoff
 frequency 14 kHz, Teacs 3 channel magnetic tape
 recorder). Observing schedule (two 80 s record-
 ings at 20 min. and 50 min. past the hour con-
 trolled by automatic switching system).
 Magnetic tape is exchanged every 3 days.
 RAW DATA ----- Sonagram
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots, computer
 printouts
 DATA ROUTINELY PUBLISHED ----- Whistler Data at Sugadaira Space
 Radio Wave Observatory, Vol. 1
 (1970) to Vol. 10 (1979) are avail-
 able, tables, graphical plots.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Takeo Yoshino
 SUGADAIRA Space Radio Wave Obs.
 Univ. Electro-Communications
 1-5-1 Chofugaoka
 Chofu-shi, Tokyo 182
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

B13 Whistlers and VLF Emissions (Cont.)

```

*****
SYOWA, ANTARCTICA
*****
ITEM: 587
DATE: 07/07/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
STATION LATITUDE ----- S 69.00
STATION LONGITUDE ----- E 39.58
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1973 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- VLF receiver (0.1 - 100 kHz) by using telemetry.
Intensity records of selected frequency bands
(0.35, 0.75, 1.2, 2, 4, 8, 30, 60, 95 kHz)

RAW DATA ----- Wide-band record on audio tapes,
Intensity record on digital tapes.
DATA REDUCTION PRACTICE ----- Frequency-time spectrum and hard copy
monitor
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- The National Institute of Polar Research
Kaga 1-9-10, Itabashi-ku
Tokyo 173
Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
THULE AB, GREENLAND
*****
ITEM: 2215
DATE: 01/04/84

DISCIPLINE ----- B13 Whistlers and VLF Emissions
STATION LATITUDE ----- N 76.5
STATION LONGITUDE ----- E 291.3
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/74 to present
OBSERVING SCHEDULE ----- Continuous
INSTRUMENT DESCRIPTION ----- 5-40 kHz pulse transmitter at Thule AB,
Greenland with digital receiving and re-
cording system at Thule, Greenland

RAW DATA ----- Digital tape recorder
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer plots
DATA ROUTINELY PUBLISHED ----- RADC in house reports
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- John E. Rasmussen
RADC/EEPI/565
Hanscom AFB, MA 01731
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
SYOWA, ANTARCTICA
*****
ITEM: 2290
DATE: 08/07/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
STATION LATITUDE ----- S 69.00
STATION LONGITUDE ----- E 39.35
ALTERNATE NAMES ----- Radio Research Laboratories
National Institute of Polar Research
DATES OF OPERATION ----- 06/1976 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- REGULAR
VLF electric field receiver (50 Hz - 30 kHz) of
ISIS-1 and ISIS-2.

RAW DATA ----- Film, strip chart
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Film, strip chart
DATA ROUTINELY PUBLISHED ----- Radio and Space Data No. 9, 1981
and Radio and Space Data No. 13, 1983, RRL

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Tadanori Ondoh
Radio Research Labs
Koganei-shi, Tokyo 184
Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Member of ISIS Working Group Meeting.

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*****
TIHANY, HUNGARY
*****
ITEM: 610
DATE: 01/09/83

DISCIPLINE ----- B13 Whistlers and VLF Emissions
STATION LATITUDE ----- N 46.90
STATION LONGITUDE ----- E 17.89
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1954 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- VLF emission and whistler recorder, whistler
recordings on the 50-52 minute of every hour,
tape speed 19 cm/s.

RAW DATA ----- Analog magnetic tape, tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6-12 MONTHS
FORM OF REDUCED DATA ----- Table, graphical plots, com-
puter printouts
DATA ROUTINELY PUBLISHED ----- Publication of the Hungarian
Geophysical Institute Roland
Eotvos: Annual Report Tihany
Geophysical Observatory.

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. Laszlo Hegymegi
Hungarian Geophysical Institute
Columbus u. 17-23
Budapest H-1140
Hungary
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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B14 Atmospheric Radio Noise

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*****
EBRO, SPAIN
*****
ITEM: 625
DATE: 11/07/83

DISCIPLINE ----- B14 Atmospheric Radio Noise
STATION LATITUDE ----- N 40.82
STATION LONGITUDE ----- E 0.49
ALTERNATE NAMES ----- Tortosa
DATES OF OPERATION ----- 01/1958 to present
INSTRUMENT DESCRIPTION ----- Atmospheric radio noise, continuous, integrated
in order to observe SEAs

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- TABLES
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES: Occasionally
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- YES
Observatorio del Ebro
Roquetes
Tarragona
Spain
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
KANDILLI, TURKEY
*****
ITEM: 2075
DATE: 01/02/84

DISCIPLINE ----- B14 Atmospheric Radio Noise
STATION LATITUDE ----- N 41.06
STATION LONGITUDE ----- E 29.06
ALTERNATE NAMES ----- Istanbul
DATES OF OPERATION ----- 01/01/79 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- A VLF Receiver operates at 25, 27, 31.8 kHz.
Chart speed 30 mm/H.

RAW DATA ----- Some strip charts
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- YES
Bosphorus University
Kandilli Observatory
Heliophysics Service
Cengelkoy, Istanbul
Turkey
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after one month.

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*****
HESTONIA, USA
*****
ITEM: 1016
DATE: 01/08/83

DISCIPLINE ----- B14 Atmospheric Radio Noise
STATION LATITUDE ----- N 66.53
STATION LONGITUDE ----- E 12.85
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between OMEGA
signals at one or more of these frequencies:
10.2, 11.3, 13.6 kHz.
(1 Litcom receiver).

RAW DATA ----- Some strip charts (continuous),
some coding forms (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- YES
Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-0NS010/43)
2100 2nd St., S.W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
phase. Some signal strength recording instruments
used.

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*****
KINGSTON, USA
*****
ITEM: 311
DATE: 01/07/83

DISCIPLINE ----- B14 Atmospheric Radio Noise
STATION LATITUDE ----- N 41.31
STATION LONGITUDE ----- E 288.27
ALTERNATE NAMES ----- Kingston ELF Station
Univ. of Rhode Island - ELF
DATES OF OPERATION ----- 01/1967 to 1974
Intermittent operation
OBSERVING SCHEDULE ----- REGULAR until 1975
INSTRUMENT DESCRIPTION ----- ELF (Extremely Low Frequency) magnetic and elec-
tric field receivers, 3-30 Hz, 2 orthogonal com-
ponents of horizontal magnetic field--vertical
coils, 44000 turns, 2 m diameter, sensitivity
milli-gamma/square root of Hz; vertical electric
field--10 m high ball antenna. Recording is con-
tinuous (except during local thunderstorm) on
0.0375 IPS magnetic tape until 1974 -- now used
only intermittently.

RAW DATA ----- Analog magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
FORM OF REDUCED DATA ----- Graphical plots

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- YES
Charles Polk
University of Rhode Island
Dept of Electrical Engineering
Kingston, RI 02881
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Integrated power spectra of selected periods avail-
able on digital magnetic tape; paper charts showing
availability of data periods and unusual level
changes also available. Regular data are summaries
of amplitude data; special data are power spectra of
selected periods, usually available after 4 months.
Station information in AFGL GEOPHYSICS AND SPACE
DATA BULLETIN, Vol X, No 1, 1973. Description of
electric field equipment and calibration in IEEE
TRANS ON ANTENNAS AND PROPAGATION, Vol AP-21, 7/1973.

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B14 Atmospheric Radio Noise (Cont.)

 KUHUNGSBURN, GDR

ITEM: 942
 DATE: 01/08/83

DISCIPLINE ----- B14 Atmospheric Radio Noise
 STATION LATITUDE ----- N 54.12
 STATION LONGITUDE ----- E 11.77
 ALTERNATE NAMES ----- Obs. fur Ionospharenforschung Zentralinstitut
 fur Solar-Terrestrische Physik (HMI)
 DATES OF OPERATION ----- 1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Continuous atmospheric noise measurements
 RAW DATA ----- Paper records, some film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- GEOPHYSIKALISCHE BEOBSACHTUNGS-
 ERGEBNISSE (Geophysical Data)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES; Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. Entzian
 Observatorium fur Ionospharenforschung
 M. schurin Str. 4-6
 Kuhlingsborn DDR 2565
 GDR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The monthly bulletin Geophysical Data is available
 from Akad. de. Wissenschaften der DDR, Zentralinsti-
 tut fur solar-terrestrische Physik (HMI), DOK 1199
 Berlin-Adlershof.

 UPICE, CZECHOSLOVAKIA

ITEM: 799
 DATE: 00/00/75

DISCIPLINE ----- B14 Atmospheric Radio Noise
 STATION LATITUDE ----- N 50.30
 STATION LONGITUDE ----- E 16.01
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Atmospheric Radio Noise at 27 kHz
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Evaluation of SEA effects
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Same as address for station
 ADDRESS FOR INFORMATION ABOUT STATION ----- Hvezdarna Uvice
 Observatory Uvice
 Czechoslovakia 54232
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980 or 1983.

 ONDREJOV, CZECHOSLOVAKIA

ITEM: 804
 DATE: 00/00/75

DISCIPLINE ----- B14 Atmospheric Radio Noise
 STATION LATITUDE ----- N 49.92
 STATION LONGITUDE ----- E 14.98
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Atmospheric Radio Noise at 27 kHz
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- Evaluation of SEA effects
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Address of Observatory
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. L. Krivsky
 Astronomical Institute
 Ondrejov 25165
 Czechoslovakia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980 or 1983.

 USUJAJA, ARGENTINA

ITEM: 814
 DATE: 01/01/80

DISCIPLINE ----- B14 Atmospheric Radio Noise
 STATION LATITUDE ----- S 54.80
 STATION LONGITUDE ----- E 291.70
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1969 to present - Not in operation
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Atmospheric Radio Noise
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Bulletins or reports
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- LIARA
 Avenida del Libertador No. 327
 1538 Vicente Lopez
 Buenos Aires
 Argentina
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1983.

B14 Atmospheric Radio Noise (Cont.)

ITEM: 657
DATE: 07/07/83

.....
VALLEY COTTAGE, USA
.....

DISCIPLINE ----- B14 Atmospheric Radio Noise
STATION LATITUDE ----- N 41.07
STATION LONGITUDE ----- E 286.45
ALTERNATE NAMES ----- A1 AAVSO
DATES OF OPERATION ----- 03/1955 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 4 VLF receivers and recorder (graphic) for indirect Detection of Solar Flares, sudden ionospheric disturbances. Designed and built most modern integrated circuit receivers (costing about \$35) for many of our 58 worldwide stations in our group network. Observing schedule 24 hour continuous. Chart speed 1 inch per hour. Reporting monthly to NOAA, Boulder, Colorado.

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR NON
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, paper tape
DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- David Warshaw
Solar Division, AAVSO
141 Quaspeck Blvd
Valley Cottage, NY 10989
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Continuously monitored by radio receivers in the VLF region and record sudden enhancement of atmospherics, sudden enhancement of signals and short wave fadeouts and record these on strip chart recorders moving at 1 inch per hour on a 24 hour basis. D. Warshaw is the creator of the worldwide network of SW observers of the American Association of Variable Star Observers (AAVSO).

ITEM: 2194
DATE: 02/21/84

.....
ZILINA, CZECHOSLOVAKIA
.....

DISCIPLINE ----- B14 Atmospheric Radio Noise
STATION LATITUDE ----- N 49.12
STATION LONGITUDE ----- E 18.45
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Atmospheric Radio noise at 17 kHz
RAW DATA -----
DATA REDUCTION PRACTICE ----- Evaluation of solar flare effects
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Hvezdarná Zilina
Observatory Zilina
Borik 01000
Czechoslovakia
Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS -----

ITEM: 806
DATE: 01/01/80

.....
KSETIN, CZECHOSLOVAKIA
.....

DISCIPLINE ----- B14 Atmospheric Radio Noise
STATION LATITUDE ----- N 49.21
STATION LONGITUDE ----- E 17.59
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Atmospheric Radio Noise at 35 kHz
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. L. Krivsky
Astronomical Institute
Udřetov 25165
Czechoslovakia
Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

B15 Partial Reflection Data

 AHMEDABAD, INDIA

ITEM: 735
 DATE: 01/01/80

DISCIPLINE ----- B15 Partial Reflection Data
 STATION LATITUDE ----- N 23.01
 STATION LONGITUDE ----- E 72.60
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Partial Reflection Sounder
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION --- Prof. Ram Gopal Rastogi
 Physical Research Laboratory
 Narvaingpura
 Ahmedabad, Gujarat 380009
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

 URBANA, USA

ITEM: 652
 DATE: 15/07/83

DISCIPLINE ----- B15 Partial Reflection Data
 STATION LATITUDE ----- N 40.17
 STATION LONGITUDE ----- E 271.84
 ALTERNATE NAMES ----- Aeronomy Laboratory Field Stat
 DATES OF OPERATION ----- 11/1/72 to present
 OBSERVING SCHEDULE ----- Operation Intermittent
 INSTRUMENT DESCRIPTION ----- REGULAR
 2-region partial reflections, daily observations
 of electron density 70 to 85 km at noon. Elec-
 tron densities are calculated from daily differ-
 ential absorption measurements taken over a peri-
 od of one hour centered at noon. In quarterly
 world days normal runs are made. The data are
 processed in real time on a PDP-15/40 computer.

RAW DATA ----- Computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Computer printouts, plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Aeronomy Lab, Dept Electrical Engineering
 University of Illinois
 1406 West Green Street
 Urbana, Illinois 61801
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data are available from November 20, 1972 onwards,
 except for June-September 1974. There are several
 other short gaps (one day up to one week) caused by
 equipment failures. Reduced data are computer
 printouts of electron density, available immedi-
 ately. Plots of 72, 76.5 and 81 km electron density,
 and 81 km AX/AU are available after about 2 months.

 TRONSO, NORWAY

ITEM: 708
 DATE: 04/01/84

DISCIPLINE ----- B15 Partial Reflection Data
 STATION LATITUDE ----- N 69.58
 STATION LONGITUDE ----- E 19.22
 ALTERNATE NAMES ----- Tromso
 DATES OF OPERATION ----- 1975 to present
 OBSERVING SCHEDULE ----- IRREGULAR
 INSTRUMENT DESCRIPTION ----- Partial Reflection Sounder
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Asgeir Brekke
 Auroral Obs, Univ of Tromso
 P.O. Box 953
 Tromso N-9001
 Norway
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Copies of data on request, limited by our capacity.

C. Flare-Associated Events

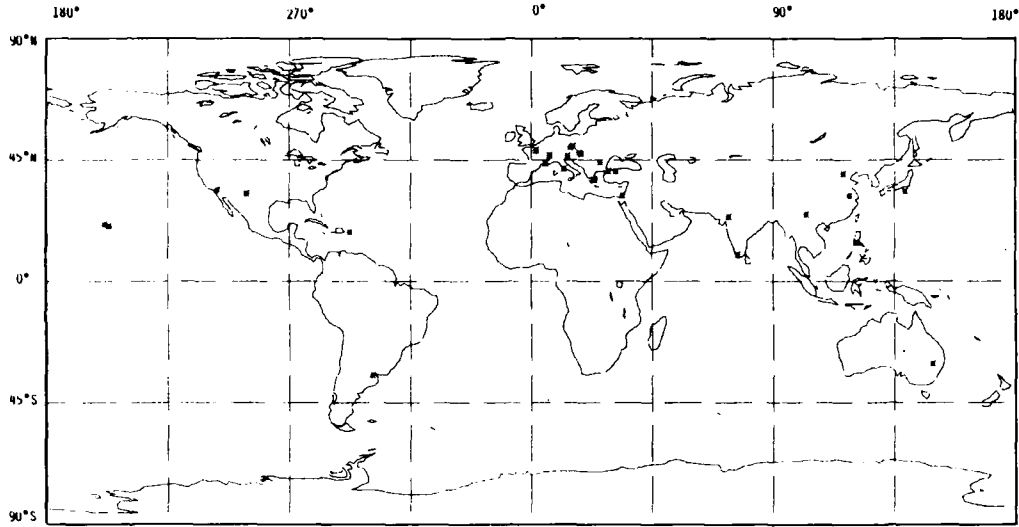
C. Flare-Associated Events

Below is a listing of the four maps contained for this discipline:

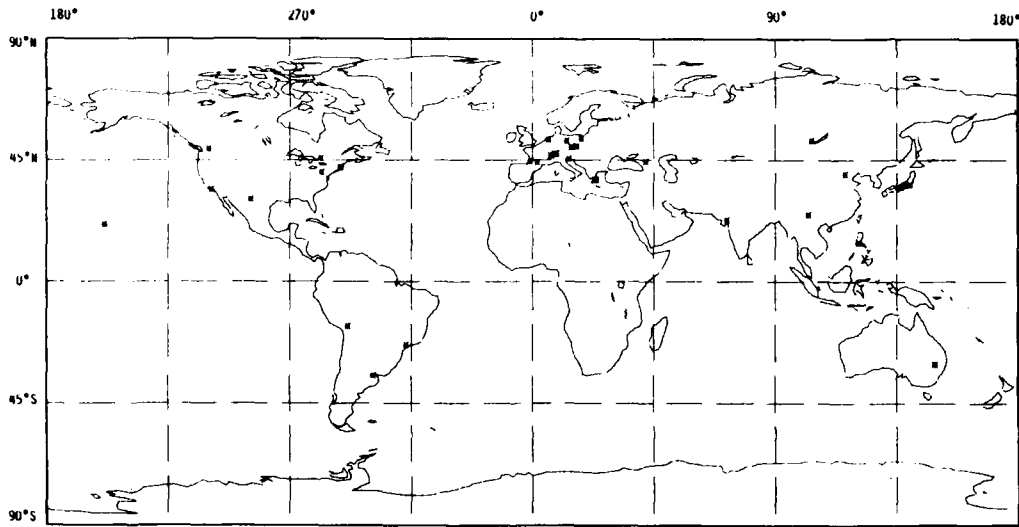
- C01 H-Alpha Flares
- C03 Solar Radio Events, Fixed Frequency
- C04 Solar Radio Spectrograms of Events
- C06 Sudden Ionospheric Disturbances
- C11 Solar Protons—Other Types of Measurements

Note that some of the maps have incorporated more than one subdiscipline.
Each of the maps is clearly labelled.

C.1 Maps

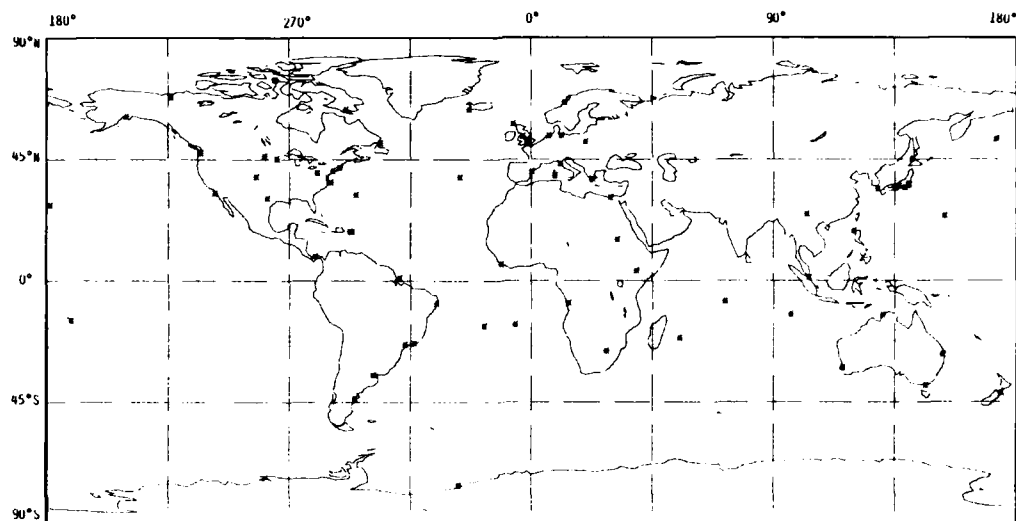


C01 H-ALPHA FLARES

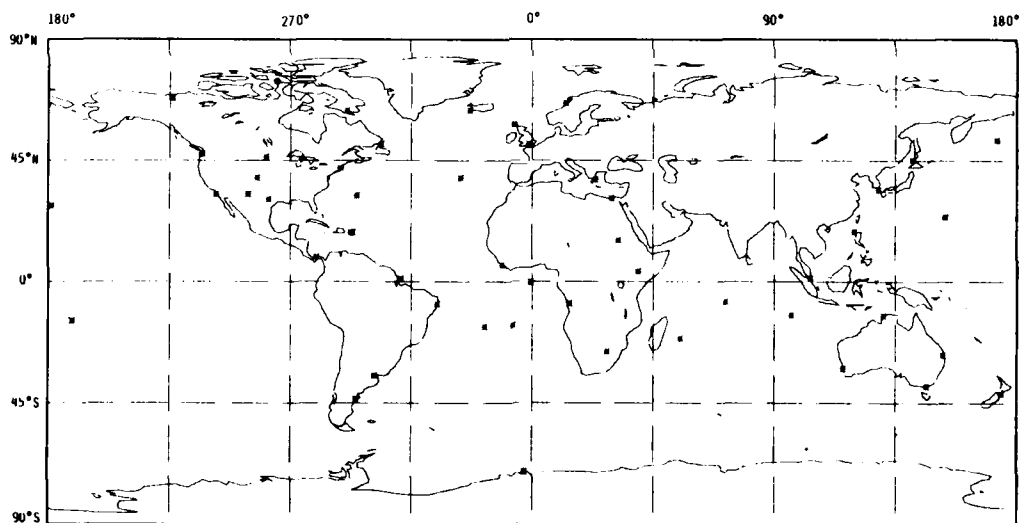


**C03 SOLAR RADIO EVENTS, FIXED FREQUENCY
C04 SOLAR RADIO SPECTROGRAMS OF EVENTS**

C.1 Maps (Cont.)



C06 SUDDEN IONOSPHERIC DISTURBANCES



C11 SOLAR PROTONS - OTHER TYPES OF MEASUREMENTS

C01 H-Alpha Flares

```

*****
ATHENS, GREECE
*****
ITEM: 1150
DATE: 15/07/83

DISCIPLINE ----- C01 H-Alpha Flares
STATION LATITUDE ----- N 37.85
STATION LONGITUDE ----- E 23.72
ALTERNATE NAMES ----- Det 3, 2d Weather Wing
DATES OF OPERATION ----- 12/1965 to present
OBSERVING SCHEDULE ----- Limited
Daily sunrise to sunset optical patrol terminated
in Sep 1976.
Limited optical patrol has been conducted since
1976.
O/A 1 Oct 79, daily optical patrol hours will be
06 - 14 Z.
INSTRUMENT DESCRIPTION ----- Razdow MS-250 Optical Telescope (H-alpha)
RAW DATA ----- Film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
FORM OF REDUCED DATA ----- Logs
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Det 3, 2nd Weather Wing
APO
New York, NY 09223
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- NOA
Thession (306)
Athens
Greece
ADDITIONAL COMMENTS ----- Data are the property of the National Observatory of
Athens (NOA).
The solar observatory moved from the heart of Athens
(near the Acropolis) to Pendelli Hill (10 miles NE of
the old site) in May 1973.

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*****
BIG BEAR, USA
*****
ITEM: 57
DATE: 01/08/83

DISCIPLINE ----- C01 H-Alpha Flares
STATION LATITUDE ----- N 34.16
STATION LONGITUDE ----- E 243.87
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Full disk refractor, H-alpha patrol. 8.6 inch
vacuum refractor, full disk solar observations in
H-alpha, 20 s intervals, 1400-0100 UT.
RAW DATA ----- 35 mm film
DATA REDUCTION PRACTICE ----- For scientific study only
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Position, area and brightness of flares
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- H. Zirin
California Inst. of Technology, 264-33
1201 E. California Blvd.
Pasadena, CA 91125
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Backup data from Caltech. Daily solar pictures available
through WDC-A.

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*****
BERN, SWITZERLAND
*****
ITEM: 2267
DATE: 07/07/83

DISCIPLINE ----- C01 H-Alpha Flares
STATION LATITUDE ----- N 46.45
STATION LONGITUDE ----- E 7.27
ALTERNATE NAMES ----- Uecht
Locarno
DATES OF OPERATION ----- 1970 to present
OBSERVING SCHEDULE ----- During activity and fine weather
INSTRUMENT DESCRIPTION ----- Coelstat. f = 2.20 m, D = 15 cm, Zeiss 1/4 A,
CCD-Camera. Digital images (1 image/second),
digital grating spectrograph with 15 channels.
RAW DATA ----- Film, 9-track tape
DATA REDUCTION PRACTICE ----- Image processing
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, images, plots
DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Applied Physics
University of Berne
Attention: N. Kaempfer
Sidlerstrasse 5
CH-3012 Bern
Switzerland
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
BUCHAREST, ROMANIA
*****
ITEM: 933
DATE: 01/02/84

DISCIPLINE ----- C01 H-Alpha Flares
STATION LATITUDE ----- N 44.41
STATION LONGITUDE ----- E 26.05
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- H-alpha filter, photographic patrol of the
chromosphere with 1/2 A Hale filter (refractor
10/150 cm) with 15 and 40 mm diameter image of
the sun.
RAW DATA ----- Film, photographic plate
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables, film, photographic prints
DATA ROUTINELY PUBLISHED ----- OBSERVATIONS SOLAIRES,
SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: Meudon
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Emilia Tifrea
Center of Astronomy and Space
Cutiitul de Argint 5
Bucharest 75212
Romania
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 2 months.

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C01 H-Alpha Flares(Cont.)

 BUENOS AIRES, ARGENTINA

ITEM: 934
 DATE: 24/02/76

DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- S 34.55
 STATION LONGITUDE ----- E 301.27
 ALTERNATE NAMES ----- San Miguel
 DATES OF OPERATION ----- 01/1966 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- H-alpha Spectroheliograph, Gregory axis, 30 cm aperture in solar tower 12 m high. 3 frames during the day.

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Photographic paper
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- San Miguel
 Observatorio Nacional de Fisica Cosmica
 Av. Mitre 3100
 San Miguel, Buenos Aires 1663
 Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Intermittent operation -- some minor interruptions due to mechanical and electronic problems.
 No response to inquiry for updating material in 1980 or 1983.

 GEORGIANA OBSERVATORY, HUNGARY

ITEM: 2246
 DATE: 22/07/83

DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 47.52
 STATION LONGITUDE ----- E 19.04
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1980 to present
 OBSERVING SCHEDULE ----- All year: whenever weather permits
 INSTRUMENT DESCRIPTION ----- Solar photos are usually made by the following telescopes: 317.5/4762 mm Cassegrain-reflector, 110/500 mm teleobjective with an effective focus of 1000 or 1500 mm (in Barlow system), 100/1000 mm Maksutov-Cassegrain with an effective focus of 2000 or 3000 mm (Barlow), 100/2000 mm refractor. Sunspots are projected usually with a 120/1200 mm refractor onto a screen for establishing their position. Limb flares and prominences are observed in H-alpha either by a 60/800 mm special prominence scope or by a 152/1524 mm refractor with an effective focal length of 4572 mm (Barlow system). At present this refractor is not used because it will be altered to be a special prominence scope. Sunspot and prominence dimensions are stated by filar or optical micrometers.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Occasionally: Communications of the Georgiana Observatory, Prominence Series
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES: through the Observatory
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Peter Hedervari
 H. 1023 Budapest
 II Arpad fejedelem utja 40-41
 Hungary

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data is also sent to the Naval Observatory, Washington DC; Mitaka Observatory, Tokyo; and Ondrejov Observatory, Ondrejov.
 Communications of the Georgiana Observatory is only limitedly available; it is basically published for a few observatories and WDC-A.

 CULGOORA, AUSTRALIA

ITEM: 129
 DATE: 01/06/84

DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- S 30.32
 STATION LONGITUDE ----- E 149.57
 ALTERNATE NAMES ----- I.P.S. Solar Observatory
 DATES OF OPERATION ----- 06/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Continuous daylight to dark visual (thru 5 inch diameter objective Razdow Telescope) and photographic (one exposure/60 s) solar patrol. Continuous solar patrol to assist with ionospheric disturbance warnings. Intend to operate for many, many more years.

RAW DATA ----- 35 mm black and white film (negatives and positives)
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Films, photographic prints, printed data list
 DATA ROUTINELY PUBLISHED ----- YES (WDC-A)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Officer in Charge
 I.P.S. Solar Observatory
 P.O. Box 372
 Narrabri 2390
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose observations are usually available after 1 day.

 HALEAKALA, USA

ITEM: 226
 DATE: 01/01/80

DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- N 20.71
 STATION LONGITUDE ----- E 203.74
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha Filter Telescope, cinema flare patrol. Instrument incorporates 0.5A H-alpha filter. Image diameter 1.4 cm. Observing schedule is normally 1800-2400 UT daily except weekends, with exposures at 1/min. During periods of activity this is increased to 10/min.

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Marie McCabe
 Institute for Astronomy
 2680 Woodlawn Drive
 Honolulu, HI 96822
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 9/1964-9/1969 Data was reduced and tables of flares and prominences, etc. sent to WDC-A. 10/1969-present Patrol hours only sent to WDC-A. Prior to 1974 observing schedule covered all daylight hours with periods of shorter observations.
 No response received to inquiry for updating material in 1983.

C01 H-Alpha Flares(Cont.)

HAUTE PROVENCE, FRANCE
 ITEM: 242
 DATE: 01/10/83

DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- N 43.93
 STATION LONGITUDE ----- E 5.72
 ALTERNATE NAMES ----- Observatoire de Haute-Provence
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Monochromatic heliograph, H-alpha images of the
 chromosphere, automatic instrument, 1 image/min,
 every day, H-alpha observation with a Lyot filter,
 bandpass 0.75A.

RAW DATA ----- Photographic films
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Flare lists
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dept d'Astr. Solaire et Planetaire DASOP
 Observatoire de Meudon
 Place Jules Jansen
 Meudon, Hauts de Seine 92190
 France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The instrument has been shut down for service in
 1973 and 1974.

ISTANBUL, TURKEY
 ITEM: 2257
 DATE: 01/09/83

DISCIPLINE ----- C01 H-alpha flares
 STATION LATITUDE ----- N 41.01
 STATION LONGITUDE ----- E 31.93
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- Two observations per day between the hours of
 0630 and 0930 UT
 INSTRUMENT DESCRIPTION ----- Aperture: 12 cm
 Focal length: 232 cm
 Filter Lyot No. 15
 Pass Band 0.69 A

RAW DATA ----- Visual observations, occasional
 photographs. Flares are marked on
 sunspot maps
 DATA REDUCTION PRACTICE ----- Determination of heliographic
 coordinates of flares, the beginning
 and ending times of flares, and
 estimation of flare importance.
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Flare positions, importance and duration
 DATA ROUTINELY PUBLISHED ----- Irregularly
 DATA SENT TO WDC-A ----- YES: monthly
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- University Observatory
 University - Istanbul
 Turkey

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

MURBANOVO, CZECHOSLOVAKIA
 ITEM: 273
 DATE: 01/01/80

DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- N 47.87
 STATION LONGITUDE ----- E 18.19
 ALTERNATE NAMES ----- Slovak Center of Amateur Astronomy
 DATES OF OPERATION ----- 09/1968 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Spectroheliograph is used for observing H-alpha
 flares and measurements of H-alpha line width.
 Data about the H-alpha line width during flare
 and position are tabulated. The flare is observed
 visually.

RAW DATA ----- Photographic plate, film, strip
 chart, tables, drawings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA),
 IAU QUARTERLY BULLETIN ON
 SOLAR ACTIVITY
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES: Meudon
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Bohuslav Lukac
 The Slovak Center of Amateur Astronomy
 Komarnanska x 65
 Murbanovo, SSR 947 UI
 Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Observations were intermittent from 11/1972 to
 12/1973.
 No response received to inquiry for updating material
 - 1983.

IZMIRAN, USSR
 ITEM: 2380
 DATE:

DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- Restricted by weather conditions
 INSTRUMENT DESCRIPTION ----- Tower solar telescope with birefringent H-
 alpha-filter "Opton" (the band of 0.25A moved
 over H-alpha contour within $\pm 1.0A$ per 0.25A).
 Spectrograph.

RAW DATA ----- Spectrograms for measuring sunspot magnetic
 fields.

DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

C01 H-Alpha Flares(Cont.)

 KANDILLI, TURKEY

 ITEM: 960
 DATE: 01/02/84
 DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 41.06
 STATION LONGITUDE ----- E 29.06
 ALTERNATE NAMES ----- Istanbul
 DATES OF OPERATION ----- 1965 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Zeiss refractor 15/225 cm. A5 objective,
 0.25A H-alpha Zeiss filter
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Bosphorus University
 Kandilli Observatory
 Heliophysics Service
 Cengelkoy, Istanbul
 Turkey
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available immediately.

 KASAKH ASTRONOMICAL INST., USSR

 ITEM: 7381
 DATE:
 DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- High altitude station (~3000 m), Coronagraph
 (D = 53 cm, F = 8 m), H-alpha filter "Halle",
 Solar image size = 160 mm, Vector magnetograph,
 horizontal solar telescope A01-5,
 Filtergrams, Zeiss coronagraph
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and IAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 KANZELHOEHE, AUSTRIA

 ITEM: 962
 DATE: 03/01/84
 DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 46.68
 STATION LONGITUDE ----- E 13.91
 ALTERNATE NAMES ----- Sonnenobsv. der Univ Graz
 DATES OF OPERATION ----- 05/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Patrol Telescope with 0.7 A H-alpha filter,
 10 cm diameter objective, Lyot filter, 15 mm
 image diameter changed to 22 mm in the future,
 24 x 36 sq mm film format, max. 6 frames/min.
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, photographic prints
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Sonnenobservatorium Kanzelhoehe
 Universitaet Graz
 Sattendorf A-9520
 Austria
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.

 KOUJIKANAL, INDIA

 ITEM: 764
 DATE: 11/07/83
 DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 10.25
 STATION LONGITUDE ----- E 77.50
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha visual flare patrol, 6563A
 RAW DATA ----- Sketches, Spectroheliograms
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. K. K. Sivaraman
 Indian Institute of Astrophysics
 Bangalore 560033
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

C01 H-Alpha Flares(Cont.)

.....
 MANILA, PHILIPPINES

 DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 14.64
 STATION LONGITUDE ----- E 121.04
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Refractor with H-alpha filter, 10
 inch aperture, H-alpha image of sun by visual,
 electro-optical and photographic (lapsed time),
 35 mm photograph at 1 minute intervals from sun-
 rise to sunset.
 RAW DATA ----- 35 mm film, records, videotape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Manila Observatory
 P.O. Box 1231
 Manila
 Philippines
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Auxiliary equipment. Vacuum spectroheliograph, white
 light camera.

ITEM: 998
 DATE: 15/07/83

.....
 MEUDON, FRANCE

 DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 48.80
 STATION LONGITUDE ----- E 2.23
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1967 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 REGULAR
 INSTRUMENT DESCRIPTION ----- Heliograph with variable wavelength up to $\pm 1.5 \text{ \AA}$
 of H-alpha, H-alpha images of the chromosphere,
 automatic instrument, 1 observation/minute, each
 observation includes 1 image at H-alpha centre
 and 1 of 2 images apart of H-alpha, bandpass
 0.0 \AA, possibility to use polarization observa-
 tions during periods of interesting activity of
 the sun.
 RAW DATA ----- Photographic films
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dept Astronomie Solaire et Planetaire
 Observatoire de Meudon, DASIP
 Place Jules Janssen
 Meudon, Hauts de Seine 92190
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The instrument was displaced to Sines (Portugal) in
 1971 for a year.

ITEM: 1006
 DATE: 01/09/83

.....
 MEUDON, FRANCE

 DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- N 48.80
 STATION LONGITUDE ----- E 2.23
 ALTERNATE NAMES ----- Observatoire de Meudon (DASIP)
 DATES OF OPERATION ----- 1956 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Monochromatic heliograph; H-alpha observations
 of the chromosphere. Automatic instrument,
 1 image/min, every day, Lyot filter bandpass
 0.7 \AA.
 RAW DATA ----- Photographic film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Lists of Flares
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dept Astr Solaire et Planetaire (DASIP)
 Observatoire de Meudon
 Place Jules Janssen
 Meudon, Hauts de Seine 92190
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 400
 DATE: 01/10/83

.....
 MITAKA/TOKYO, JAPAN

 DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 35.67
 STATION LONGITUDE ----- E 139.55
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 14 cm Monochromatic heliograph with a Lyot Filter
 band pass of 0.75 \AA
 RAW DATA ----- 35 mm films
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Table
 DATA ROUTINELY PUBLISHED ----- Monthly Bulletin on Solar Phenomena
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Solar Physics Division
 Tokyo Astronomical Observatory
 Mitaka, Tokyo 181
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

ITEM: 1060
 DATE: 18/07/83

C01 H-Alpha Flares(Cont.)

MOUNT SAYAN OBSERVATORY, USSR

ITEM: 2382
DATE:

DISCIPLINE ----- C01 H-Alpha Flares
STATION LATITUDE ----- N
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1963 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Solar telescope with panorama magnetograph.
Coronagraph (IDWR).
RAW DATA -----
DATA REDUCTION PRACTICE ----- Photoheliograms of sunspots, drawings
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

PALEHUA, USA

ITEM: 1118
DATE: 13/07/83

DISCIPLINE ----- C01 H-Alpha Flares
STATION LATITUDE ----- N 21.38
STATION LONGITUDE ----- E 201.93
ALTERNATE NAMES ----- Det 6, 1st Weather Wing
DATES OF OPERATION ----- 10/1969 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- USAF, AM/FMU-1, Solar Observatory Optical Network (SOON) and AN/FRR-95, Radio Solar Telescope Network (RSTN) telescope systems. The SOON is an automated H-alpha patrol telescope with white light and spectral line capabilities. The RSTN monitors solar energy at eight discrete frequencies (245., 410, 610, 1415, 2695, 4995, 8800 and 15400 MHz); a sweep frequency interferometer monitors the 25 to 75 MHz range. H-alpha histograms and RSTN data are stored on magnetic tape for archival at WDC-A. High frequency receivers are monitored for short wave fadeouts.

RAW DATA ----- Film, strip charts, drawings, magnetic tape

DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- Through WDC-A
ADDRESS FOR INFORMATION ABOUT STATION ----- Det 6, 1st Weather Wing
Hickam AFB, HI 96853
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

ONDREJOV, CZECHOSLOVAKIA

ITEM: 802
DATE: 23/08/83

DISCIPLINE ----- C01 H-alpha Flares
STATION LATITUDE ----- N 49.92
STATION LONGITUDE ----- E 14.98
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Heliograph with 0.7 A filter at 6563 A (H-alpha). Whole misc pictures
RAW DATA ----- 35 mm fi
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
FORM OF REDUCED DATA ----- Tabular matter (list of observations), microfilm
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Pavel Ambroz
Astronomical Institute
Solar Division
Ondrejov 251 65
Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

PEKING, CHINA

ITEM: 2156
DATE: 24/11/83

DISCIPLINE ----- C01 H-Alpha Flares
STATION LATITUDE ----- N 40.10
STATION LONGITUDE ----- E 116.33
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR: 0000-0700 UT Daily
INSTRUMENT DESCRIPTION ----- H-alpha chromospheric telescope with a filter of 0.5 A bandwidth, 135 film
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Flare table
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA) and Chinese SOLAR-GEOPHYSICAL DATA
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Beijing Astronomical Observatory
Academia Sinica
Beijing
China

ADDRESS FOR INFORMATION ABOUT DATA ----- Solar Department
Beijing Astronomical Observatory
Academia Sinica
Beijing
China
ADDITIONAL COMMENTS -----

C01 H-Alpha Flares(Cont.)

.....
 ITEM: 907
 DATE: 15/07/83

.....
 FANTOLI, GREECE

DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 38.05
 STATION LONGITUDE ----- E 23.76
 ALTERNATE NAMES ----- Athens
 DATES OF OPERATION ----- National Observatory of Athens
 OBSERVING SCHEDULE ----- 05/1965 to present
 INSTRUMENT DESCRIPTION ----- Station moved
 Razlow H-alpha telescope, visual and photographic
 H-alpha patrol with a 10 inch refractor (one
 picture per minute).

RAW DATA ----- film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Tables, films, photographic paper
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Neudon
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Institute
 National Observatory of Athens
 Athens 106
 Greece

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 0.5 months.
 Station moved in 5-1973 from N37.97 E23.72.

.....
 ITEM: 1122
 DATE: 13/07/83

.....
 RAMEY, USA

DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 18.50
 STATION LONGITUDE ----- E 292.80
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- AN/FMQ-7 Solar Optical Telescope System, used
 for routine flare patrol (daily from sunrise to
 sunset); H-alpha observations at 6563A with line
 shifting capability of +/- 1A; 35 mm automatic
 flare patrol camera (rate available).

RAW DATA ----- film, photographic prints, forms,
 drawings
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3-6 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- DET 3, 3rd Weather Wing (MAC)
 c/o Postmaster
 FPO
 Miami, FL 34050
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Nat'l Geophys & Solar-Terrest Data Center
 NOAA/EDS
 Boulder, CO 80303
 USA

ADDITIONAL COMMENTS -----

.....
 ITEM: 2181
 DATE: 01/03/84

.....
 PURPLE MOUNTAIN, CHINA

DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 32.07
 STATION LONGITUDE ----- E 118.82
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- REGULAR
 OBSERVING SCHEDULE ----- 0000-0830 UT, daily
 INSTRUMENT DESCRIPTION ----- Lyot-type chromospheric telescope
 (aperture 140 mm)

RAW DATA ----- Cinematographic films
 DATA REDUCTION PRACTICE ----- Manual
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Monthly table
 DATA ROUTINELY PUBLISHED ----- Solar-Geophysical Data (NOAA)
 Chinese Solar-Geophysical Data
 YES

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Purple Mountain Observatory
 Academia Sinica
 Nanjing
 China
 Mr. Xie Gaofeng
 Purple Mountain Observatory
 Academia Sinica
 Nanjing
 China

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

.....
 ITEM: 743
 DATE: 01/01/80

.....
 ROME, ITALY

DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- N 41.90
 STATION LONGITUDE ----- E 12.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- REGULAR
 OBSERVING SCHEDULE ----- H-alpha Spectroheliograph, 6563A
 INSTRUMENT DESCRIPTION ----- Photographs
 RAW DATA ----- REGULAR
 DATA REDUCTION PRACTICE ----- 1 MONTHS
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA ----- NO
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Maria Torelli
 Osservatorio Astronomico di Roma
 Via del Parco Mellini, 84
 Rome 00136
 Italy

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

C01 H-Alpha Flares(Cont.)

 SACRAMENTO PEAK, USA

ITEM: 498
 DATE: 01/09/83

DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- N 32.78
 STATION LONGITUDE ----- E 254.68
 ALTERNATE NAMES ----- Sac Peak
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha flare patrol. Telescope coupled to a Halle 1/2A Band Pass birefringent filter. 76 mm image recorded on 35 mm film. Observes sun from sunrise to 2400 UT. Normal rate = 1 picture per minute, flare rate = 1 picture per 5 seconds.

RAW DATA ----- Negative film, tables giving time and location of solar events
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables listing times and locations of solar events
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE IN REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Mr. Jack Zirker
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA
 ADDRESS FOR INFORMATION ABOUT DATA -----
 Lou B. Gillham
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA
 ADDITIONAL COMMENTS ----- Station operates in conjunction with white light patrol. Flare patrol is housed in Hilltop Dome.

 TEL AVIV, ISRAEL

ITEM: 597
 DATE: 01/09/83

DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- N 32.13
 STATION LONGITUDE ----- E 34.53
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 12.5 inch telescope. H-alpha patrol. Medium resolution patrol, partial disk coverage, 15 s interval 0700-1500 daily.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Films
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE IN REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 M. Zirin
 California Inst. of Technology, 264-33
 1201 F. California Blvd.
 Pasadena, CA 91125
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Physical location of telescope: Tel Aviv - Solar Telescope, wise Observatory, Tel Aviv University, Ramat Aviv, Israel

 SACRAMENTO PEAK, USA

ITEM: 502
 DATE: 01/09/83

DISCIPLINE ----- C01 H-alpha Flares
 STATION LATITUDE ----- N 32.78
 STATION LONGITUDE ----- E 254.68
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1455 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 1) Rig dome spectroheliograph. Double pass monochromator - 4 inch solar image recorded on film. Normal schedule: daily 03, H-alpha, CaK spectroheliograms. Occasionally schedule continues observations when activity level is high.
 2) Littrow spectrograph, spectra and slit jaw pictures. 13 m focal length, single or double pass, occasionally scheduled, output on 35 mm or 70 mm film, magnetic tape, analog charts. 3) Spectroheliograph and Littrow spectrograph are fed by 30 cm coudolast and 40 cm coronagraph telescope.
 RAW DATA ----- 4 inch solar image on film
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE IN REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Mr. Jack Zirker
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA
 ADDRESS FOR INFORMATION ABOUT DATA -----
 Lou B. Gillham
 Sacramento Peak Observatory
 Sunspot, NM 88349
 USA
 ADDITIONAL COMMENTS -----

 UDAIPUR, INDIA

ITEM: 2283
 DATE: 22/07/83

DISCIPLINE ----- C01 H-Alpha Flares
 STATION LATITUDE ----- N 24.10
 STATION LONGITUDE ----- E 74.00
 ALTERNATE NAMES ----- Solar Observatory
 DATES OF OPERATION ----- 12/1978 to present
 OBSERVING SCHEDULE ----- Or controlled days
 INSTRUMENT DESCRIPTION ----- 15 cm aperture optical telescope, H-alpha filter and multislit spectrograph for H-alpha.
 RAW DATA ----- H-alpha time lapse photographic data.
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- No
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE IN REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 A. Bhatnagar, Director
 Udaipur Solar Observatory
 11 Vidya Marg
 Udaipur 313001
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- If international campaign is required for solar-terrestrial programme, this station can participate.

C01 H-Alpha Flares(Cont.)

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*****
UECHT, SWITZERLAND
*****
ITEM: 1067
DATE: 07/07/83

DISCIPLINE ----- C01 H-Alpha Flares
STATION LATITUDE ----- N 46.85
STATION LONGITUDE ----- E 7.27
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1979 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Telescope aperture 15-20 cm, focal length
                                228-235 cm, H-alpha filters at H-alpha line
                                center with 0.5 A and 0.75 A halfwidths,
                                photographic registration on 35 mm film every
                                10 seconds and digital registration with
                                100x100 photodiode matrix every second.
RAW DATA ----- Photographic film and digital tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Negatives and tape
DATA ROUTINELY PUBLISHED ----- Report of Solar Division (Address below)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- A. Magun
                                                Institute of Applied Physics
                                                Sidlerstr. 5
                                                Berne CH-3012
                                                Switzerland
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS ----- Co-investigators are T. Liesler, N. Kampfer,
                            C. Ruchti, H. Wienl.
    
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*****
UPICE, CZECHOSLOVAKIA
*****
ITEM: 797
DATE: 01/01/80

DISCIPLINE ----- C01 H-alpha Flares
STATION LATITUDE ----- N 50.30
STATION LONGITUDE ----- E 16.01
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- H-alpha/Spectroheliograph at 6563A
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Hvezdarve Upice
                                                Observatory Upice
                                                Czechoslovakia 54232
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
                            in 1983.
    
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C01 H-Alpha Flares(Cont.)

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*****
YUNNAN, CHINA
*****
ITEM: 2297
DATE: 25/11/83

DISCIPLINE ----- C01 H-alpha flares
STATION LATITUDE ----- N 25.03
STATION LONGITUDE ----- E 102.78
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Monochromatic heliograph, image diameter 24 mm,
                                H-alpha filter bandpass 0.5A,
                                35 mm film
RAW DATA -----
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Lists of flares
DATA ROUTINELY PUBLISHED ----- MONTHLY SOLAR ACTIVITY OF YUNNAN
                                OBSERVATORY
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Wu Ming-Chan
                                Solar Division
                                Yunnan Observatory
                                Kunming
                                China
ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. Li Su-Chuan
                                Solar Division
                                Yunnan Observatory
                                Kunming
                                China
ADDITIONAL COMMENTS -----

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CO2 Solar Local Magnetic Fields

 ITEM: 59
 DATE: 01/08/83

 KASAKH ASTRONOMICAL INST., USSR

 DISCIPLINE ----- CO2 Solar Local Magnetic Fields
 STATION LATITUDE ----- N 34.16
 STATION LONGITUDE ----- E 243.49
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR, 1400-0100 LT.
 INSTRUMENT DESCRIPTION ----- 10 inch (25 cm) vacuum refractor, high resolution
 patrol, multiple wavelengths, magnetic fields,
 35 mm film and digital data
 For scientific use only
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- H. Zirin
 California Inst. of Technology, 264-33
 1201 E. California Blvd.
 Pasadena, CA 91125
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 ITEM: 2383
 DATE: 01/08/83

 DISCIPLINE ----- CO2 Solar Local Magnetic Fields
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- High altitude station (~3000 m), Coronagraph
 (D = 53 cm, F = 8 m), H-alpha filter "Halle",
 Solar image size = 160 mm, Vector magnetograph:
 horizontal solar telescope ADU-5,
 Filtergrams, Zeiss coronagraph
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 ITEM: 930
 DATE: 10/05/84

 KITT PEAK, USA

 DISCIPLINE ----- CO2 Solar Local Magnetic Fields
 STATION LATITUDE ----- N 39.98
 STATION LONGITUDE ----- E 254.72
 ALTERNATE NAMES ----- Boulder Observatory
 SOLTERWARM
 DATES OF OPERATION ----- 05/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- H-alpha Telescope (Razdow 120), eyepiece, TV
 monitor, 35 mm film, Daily photos.
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- 2 in film, prints
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
 NOAA H/1/SE2
 325 Broadway
 Boulder, CO 80303
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 ITEM: 980
 DATE: 15/12/83

 DISCIPLINE ----- CO2 Solar Local Magnetic Fields
 STATION LATITUDE ----- N 31.96
 STATION LONGITUDE ----- E 248.40
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1970 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 Regular
 INSTRUMENT DESCRIPTION ----- Solar photospheric magnetograms, 512-channel
 Babcock type magnetograph, 1 arcsec pixel, in
 the H&R&B and He I D30. Observations are made
 daily. On-line CRT gives immediate record
 which is transmitted to SEL Forecast Center
 (Boulder, CO) by phone.
 RAW DATA ----- film, magnetic tape, computer
 printouts
 DATA REDUCTION PRACTICE ----- SPECIAL NINE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- film (fixed pattern noise removed)
 magnetic tape, etc.
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- H. Livingston
 Kitt Peak National Observatory
 P.O. Box 28732
 Tucson, AZ 85726
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Investigator's Service (same address). Special
 purpose data available immediately. Observations
 were made monthly from 12/1970, made daily from
 04/1973.

C02 Solar Local Magnetic Fields (Cont.)

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*****
MOUNT SAYAN OBSERVATORY, USSR
*****
ITEM: 2384
DATE:

DISCIPLINE ----- C02 Solar Local Magnetic Fields
STATION LATITUDE ----- N
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1963 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Solar telescope with panorama magnetograph,
Coronagraph (12"IR).
RAW DATA ----- Photoheliograms of sunspots, drawings
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

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ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

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*****
SAN FERNANDO OBSERVATORY, USA
*****
ITEM: 2147
DATE: 09/01/84

DISCIPLINE ----- C02 Solar Local Magnetic Fields
STATION LATITUDE ----- N 34.31
STATION LONGITUDE ----- E 241.51
ALTERNATE NAMES ----- SFO/CSUN
DATES OF OPERATION ----- 04/1969 to present
OBSERVING SCHEDULE ----- IRREGULAR (Programatic)
INSTRUMENT DESCRIPTION ----- 61/28 cm vacuum telescope and spectroheliograph,
70 mm film or 512 diode array; 15 cm full disk
H-alpha telescope, 15 cm white-light telescope,
1.5 m radio dish at 10.7 cm.
RAW DATA ----- 70 mm film (calibrated), film and
digital intensity for spot areas.
DATA REDUCTION PRACTICE ----- As needed for sponsored programs
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Film and magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- On request, when available
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. A. Chapman
Dept. of Physics and Astronomy
CSUN
Northridge, CA 91330
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- SFO/CSUN
14031 San Fernando Road
Syman, CA 91342
USA
ADDITIONAL COMMENTS ----- Allied staff are: Dr. A. D. Herzog
Dr. J. K. Lawrence
Dr. P. H. Richter
Elevation 1217.2 feet above sea-level.

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C03 Solar Radio Events, Fixed Frequency

 AHMEDABAD, INDIA

ITEM: 732
 DATE: 01/09/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 23.07
 STATION LONGITUDE ----- E 72.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- A C3 - C4 combined model, quarter hour at 75° EMT. Data is recorded on 35 mm film every 15 minutes.
 DATA REDUCTION PRACTICE ----- Film is enlarged and scaled manually
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Computer listing contains tables of hourly values, monthly mean and median values of ionospheric parameters viz. F_oF₂, F_oF₁, h'x₂, h'F, F_oE, F_oE_s, MUF₂. Hourly values of ionospheric parameters as mentioned above are circulated to about 60 stations world-wide.
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES: Japan, USSR, USA
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. P. Rajhavarao
 Physical Research Laboratory
 Navrangpura
 Ahmedabad 380 009
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data not available for the following periods:
 01/1974 to 08/1974 and 03/1982 to 01/1983.

 BURN, SWITZERLAND

ITEM: 226A
 DATE: 01/01/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 46.85
 STATION LONGITUDE ----- E 7.27
 ALTERNATE NAMES ----- Solar Radio Observatory Birmsthus
 DATES OF OPERATION ----- 1941 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Eight solar polarimeter (1. V) for 3.1, 5.2, 9.4, 11.8, 19.6, 35.0, 50.0, 92.5 GHz and spectrometer at 3.7 GHz with high temporal (0.005 seconds) and spectral resolution (30 channels over 200 MHz with spectral resolution between 0.5 and 30 MHz).
 RAW DATA ----- 9-track tape, strip chart
 DATA REDUCTION PRACTICE ----- Regular for events with levels > 5% of sunlevel before event
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Tables, plots, magnetic tape
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Applied Physics
 University of Bern
 Attention: Dr. A. Magin
 Sidlerstrasse 5
 CH-3012 Bern
 Switzerland
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ATHENS, GREECE

ITEM: 1151
 DATE: 15/01/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 37.28
 STATION LONGITUDE ----- E 27.32
 ALTERNATE NAMES ----- Oct 2, 4th Weather wing
 DATES OF OPERATION ----- 1949 to present
 OBSERVING SCHEDULE ----- Station moved
 The observatory moved from the heart of Athens (near the Acropolis) to Pentelli Hill (10 miles NE of the old site) in May 1973.
 INSTRUMENT DESCRIPTION ----- AF10 Radio Telescopes, AF10 Interometer.
 Observatory operates from sunrise to sunset daily, monitors four discrete radio frequencies (1415, 2695, 1096, and 890 MHz), monitors total electron content (24 hours).
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 120 MONTHS
 FORM OF REDUCED DATA ----- Logs, chart rolls
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Oct 2, 4th Weather wing
 AF10
 New York, NY 10023
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- National Observatory of Athens (NOA),
 Thessaloniki
 Athens
 Greece
 ADDITIONAL COMMENTS ----- Data are the property of the NOAA.

C03 Solar Radio Events, Fixed Frequency (Cont.)

 BLEIEN, SWITZERLAND

 ITEM: 158
 DATE: 26/07/83
 DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 47.44
 STATION LONGITUDE ----- E 8.77
 ALTERNATE NAMES ----- Durnten
 Zurich/Bleien
 DATES OF OPERATION ----- 12/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Digitized solar radio spectra and polarization
 of events at programmed frequencies between 100
 and 1000 MHz. Computer tunable receiver, 2000
 measurements/s with 1, 3 or 10 MHz bandwidth.
 Frequency programs are often changed and sometimes
 cover only a narrow band thus allowing high
 time resolution.
 RAW DATA ----- IBM compatible magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/4 MONTHS
 FORM OF REDUCED DATA ----- Lists, profiles, plots, tape, film
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Radio Astronomy Group
 Institute of Astronomy
 ETH-Zentrum
 8092 Zurich
 Switzerland
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data available as: lists of events, time and fre-
 quency profiles, isodensity plots, calibrated data
 on tape and film visualization. Instrument was moved
 from Durnten (N 47.28, E 8.85) to Bleien on 06/1979.

 BUENOS AIRES, ARGENTINA

 ITEM: 827
 DATE: 01/01/75
 DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- S 34.55
 STATION LONGITUDE ----- E 301.27
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar Radio Bursts at 3 cm
 RAW DATA ----- Pen and ink strip charts
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip charts, bulletins
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. J. R. Seibold
 Dept de Fisica Solar, Obs Nac de Fisica
 Av. Mitre 3100
 San Miguel
 Argentina
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980 or 1983.

 BORDEAUX, FRANCE

 ITEM: 2164
 DATE: 01/02/84
 DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 44.84
 STATION LONGITUDE ----- E 359.47
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1968 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Wurzburg-type radiotelescope (7.5 m) at
 930 MHz with analogic receiver
 RAW DATA ----- Total radio flux of the Sun at 930 MHz
 DATA REDUCTION PRACTICE ----- Analogic mode
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Paper list of solar flux and events
 DATA ROUTINELY PUBLISHED ----- Monthly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. F. Pomeyrol
 Observatoire de l'Universite de Bordeaux
 B.P. 21
 33270 Floirac
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Automatic system for data acquisition and
 reduction developed, but not yet in operation.

 CHUBU, JAPAN

 ITEM: 964
 DATE: 01/08/83
 DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 35.27
 STATION LONGITUDE ----- E 137.01
 ALTERNATE NAMES ----- Chubu Institute of Technology
 Kasuga
 Second Division, Chubu Institute for Scientific
 and Industrial Research
 DATES OF OPERATION ----- 01/1967 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- VLF stations: NWC 22.3 kHz, continuously.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Dr. T. Yonezawa
 Chubu Institute of Technology
 1200 Matsumoto-cho
 Kasuga-shi, Aichi-ken, 487
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 2 months.

C03 Solar Radio Events, Fixed Frequency (Cont.)

 CULGOORA, AUSTRALIA

ITEM: 130
 DATE: 01/06/84

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- S 30.32
 STATION LONGITUDE ----- E 149.57
 ALTERNATE NAMES ----- CSIRO Solar Observatory
 DATES OF OPERATION ----- 09/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Radioheliograph with radiospectrograph, radio source positions and polarizations of solar activity. Heliograph: One 2-D picture of sun each second between approx. 2300 and 0500 UT at one of these frequencies: 80, 160, 320 MHz in LH and RH circ. pol., or unpol. 43 MHz.

RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer maps
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA, (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. McLean
 CSIRO Solar Observatory
 P. O. Box 94
 Narrabri, N.S.W. 2390
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. K. V. Sheridan
 CSIRO Division of Radiophysics
 P.O. Box 76
 Epping, N.S.W. 2121
 Australia

ADDITIONAL COMMENTS ----- Special purpose observations are usually available after several months.

 HIRAIISO, JAPAN

ITEM: 950
 DATE: 22/07/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 36.37
 STATION LONGITUDE ----- E 140.62
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Five Solar radio flux at 100, 200, 500, and 9500 MHz. Continuously recording on strip chart at 18 cm/h.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Table
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN, monthly issued by HRL

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: United Kingdom
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Solar Radio Research Sect.
 HiraIso Branch
 Radio Research Laboratories
 3601 Isozaki-machi
 Hamanato-5-1, Ibaraki-Ken
 311-12
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- WDC C2 for Ionosphere
 Radio Research Laboratories
 2-1, Nukui-Kitamachi 4-chome
 Koganei-shi, Tokyo 184
 Japan

ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.

 DWINGELOO, THE NETHERLANDS

ITEM: 1086
 DATE: 01/01/80

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 52.81
 STATION LONGITUDE ----- E 6.40
 ALTERNATE NAMES ----- Dwingeloo Observatory
 Netherlands Foundation Radio Astronomy
 DATES OF OPERATION ----- 12/1968 to present
 Station moved
 Intermittent operation
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Multi-channel Radio Spectrograph, spectrograms of events, 60-channels, intensity and circular polarization, resolution 1 MHz, 10 ms, coverage 500-660 MHz; recording on film and during short intervals on digital magnetic tape (calibrated recording); observations scheduled according to expected solar activity.

RAW DATA ----- Film, partly digital magnetic tape
 partly strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Photo prints, graphical plots
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Radio Sterrawacht Dwingeloo
 Netherlands Foundation Radio Astronomy
 ATTN: Dr. C. Slottje
 Dwingeloo
 Netherlands

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- Regular data available on film, special purpose data available on digital mag tape after 1 month. Former station location: Nera (N52.23 E05.08) until 8/1972. Gaps in operation: 8-12/1971, 8-12/1972, 12/1973-1/1974, 4-5/1974, 8-11/1974. No response received to inquiry for updating material in 1983.

 IRKUTSK, USSR

ITEM: 854
 DATE: 00/00/75

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 52.47
 STATION LONGITUDE ----- E 104.03
 ALTERNATE NAMES ----- Zui
 DATES OF OPERATION ----- 12/1958 to present
 Intermittent operation
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar Radio Bursts at 3.2 cm, daily observations

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Drawings
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. V. E. Stepanov
 Sibirskiy 664697
 P.O.R. 4
 33
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980.

C03 Solar Radio Events, Fixed Frequency (Cont.)

 ITAPETINGA (IMPE), ATIBAIA, BRAZIL

ITEM: 1078
 DATE: 12/04/84

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- S 23.18
 STATION LONGITUDE ----- E 313.44
 ALTERNATE NAMES ----- CRAAM
 San Paulo
 SAO
 ITA
 DATES OF OPERATION ----- 1966 to present
 Station moved from Umuarama in 1969
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 7 GHz Solar Polarimeter, right and left-hand
 polarization
 RAW DATA ----- Strip chart, analog magnetic tape, tables
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, plots
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA, quarterly bulletin
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- P. Kaufmann
 IMPE, CRAAM
 C.P. 515
 12200 San Jose dos Campos
 Brazil
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1) CRAAM and Itapetinga are operated by IMPE: Instituto
 de Pesquisas Espaciais, in an agreement with Mackenzie
 University, San Paulo.
 2) The 7 GHz operation was temporarily stopped in 1983 for
 complete change in electronics. The upgraded polarimeter
 is back in operation since April 1984.

 KISLOVODSK, USSR

ITEM: 978
 DATE: 29/04/75

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 44.70
 STATION LONGITUDE ----- E 42.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1947 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Radio Telescope with mirrors 2 and 3 m,
 interferometer
 RAW DATA ----- Photos, tables, charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, photos
 DATA ROUTINELY PUBLISHED ----- SOLAR DATA (Pulkovo Obs)
 Zurich Quarterly Solar Bulletin
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kislovodsk Station of Pulkovo Obs
 P.O. Box 1
 Kislovodsk 357741
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980.

 IZMIRAN, USSR

ITEM: 2385
 DATE:

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Radiometers at 202 and 3000 MHz. Spectrographs
 in the 45 - 90 MHz and 180 - 230 MHz ranges.
 Tower solar telescope with birefringent H-
 alpha-filter "Opton" (the band of 0.25A moved
 over H-alpha contour within $\pm 1.0A$ per 0.25A).
 Two spectrographs, one with range 102 - 173 MHz
 and another with range 180 - 230 MHz.
 RAW DATA ----- Spectrograms for measuring sunspot magnetic
 fields.
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 LA PAZ, BOLIVIA

ITEM: 330
 DATE: 21/01/76

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- S 16.30
 STATION LONGITUDE ----- E 291.91
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar Radio/Optical Phenomena
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, punched paper tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Instituto de Investigaciones Fisicas
 Laboratorio de Fisica Cosmica
 Universidad Mayor de San Andres
 La Paz
 Bolivia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980 or 1983.

C03 Solar Radio Events, Fixed Frequency (Cont.)

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*****
MANILA, PHILIPPINES
*****
ITEM: 1000
DATE: 15/07/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
STATION LATITUDE ----- N 14.64
STATION LONGITUDE ----- E 121.08
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1968 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 5 Solar Radiometers for 8800, 4995, 2695, 1415,
606, and 245 MHz, sunrise to sunset observations
of the Dicke type radiometer at 0.1 mm/s.

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- The Director
Manila Observatory
P.O. Box 1231
Manila
Philippines

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
ONDREJOV, CZECHOSLOVAKIA
*****
ITEM: 801
DATE: 01/01/80

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
STATION LATITUDE ----- N 49.92
STATION LONGITUDE ----- E 14.98
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Total Solar Radio Flux at 37, 56 and 115 cm
(260, 536 and 808 MHz)
Magnetic tape

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tabular matter, microfilm
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. L. Krivsky
Astronomical Institute
Ondrejov 25165
Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Alternate name for information: Dr. Antonin Tlamicha.
No response received to inquiry for updating material
in 1983.
    
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*****
NANCAY, FRANCE
*****
ITEM: 433
DATE: 22/07/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
STATION LATITUDE ----- N 44.40
STATION LONGITUDE ----- E 2.20
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Global flux: 169 MHz; 408 MHz. No accurate
calibration, available for radioburst observa-
tions.

RAW DATA ----- Paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Montique Pick
Meudon Observatory
U.A.S.O.P.
Meudon 92190
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
OTTAWA, CANADA
*****
ITEM: 2263
DATE: 13/07/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
STATION LATITUDE ----- N 45.96
STATION LONGITUDE ----- E 281.93
ALTERNATE NAMES ----- ARO: Algonquin Radio Observatory
DATES OF OPERATION ----- 1947 to present
OBSERVING SCHEDULE ----- Daily, sunrise to sunset
INSTRUMENT DESCRIPTION ----- 6-foot (1.82 m) parabolic reflector
RAW DATA ----- Chart records of solar bursts at
2800 MHz
DATA REDUCTION PRACTICE ----- Calculation of burst peak flux and
tabulation of start and stop times.
REGULAR REDUCED DATA AVAILABLE AFTER ----- After the 10th day of following month.
FORM OF REDUCED DATA ----- Tabulation and profiles of outstanding
events.
DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA (NOAA),
ARO REPORTS: monthly and yearly
YES: Boulder
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Herzberg Institute of Astrophysics
Attention: M. B. Bell
National Research Council
Ottawa K1A 0R6
Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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C03 Solar Radio Events, Fixed Frequency (Cont.)

 PALEHUA, USA

ITEM: 1119
 DATE: 13/07/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 21.38
 STATION LONGITUDE ----- E 201.93
 ALTERNATE NAMES ----- Oct 6, 1st Weather Wing
 DATES OF OPERATION ----- 10/1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- USAF, AN/FMQ-7, Solar Observatory Optical Network (SOON) and AN/FRR-95, Radio Solar Telescope Network (RSTN) telescope systems. The SOON is an automated H-alpha patrol telescope with white light and spectral line capabilities. The RSTN monitors solar energy at eight discrete frequencies (245, 410, 610, 1415, 2695, 4995, 8800 and 15400 MHz); a sweep frequency interferometer monitors the 25 to 75 MHz range. H-alpha histograms and RSTN data are stored to magnetic tape for archival to WDC-A.

RAW DATA ----- Film, strip charts, drawings, magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Through WDC-A
 ADDRESS FOR INFORMATION ABOUT STATION ----- Oct 6, 1st Weather Wing
 Hickam AFB, HI 96853
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 PENN STATE U, USA

ITEM: 775
 DATE: 00/00/75

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 40.82
 STATION LONGITUDE ----- E 282.13
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar Radio Events on 406, 960, 2700, 10 700 MHz. Also on 36 and 50 MHz.

RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip charts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. John P. Megen
 Dept of Astronomy, Pennsylvania State U
 525 Davey Laboratory
 Univ Park, PA 16802
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

 PEKING, CHINA

ITEM: 2122
 DATE: 24/11/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 40.10
 STATION LONGITUDE ----- E 116.33
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR: 0000-0800 UT, daily
 INSTRUMENT DESCRIPTION ----- Two sets of Dicke type receivers with fixed wavelength at 3.2 cm and 10 cm respectively.

RAW DATA ----- Pen recorder
 DATA REDUCTION PRACTICE ----- Manual
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Monthly table
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 Chinese SOLAR-GEOPHYSICAL DATA
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Beijing Astronomical Observatory
 Academia Sinica
 Beijing
 China
 ADDRESS FOR INFORMATION ABOUT DATA ----- Radio Astronomical Observatory
 Beijing Astronomical Observatory
 Academia Sinica
 Beijing
 China
 ADDITIONAL COMMENTS -----

 PENTELI, GREECE

ITEM: 908
 DATE: 15/07/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 38.05
 STATION LONGITUDE ----- E 23.86
 ALTERNATE NAMES ----- Athens
 National Observatory of Athens
 DATES OF OPERATION ----- 08/1970 to present
 INSTRUMENT DESCRIPTION ----- Radio Telescope on fixed frequencies 1445, 2695, 4995, 8800 MHz with a 90 inch antenna.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Tables, films, photographic paper
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Meudon
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Astronomical Institute
 National Observatory of Athens
 Athens 306
 Greece
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 0.5 months.

C03 Solar Radio Events, Fixed Frequency (Cont.)

 PENTILTON, CANADA

ITEM: 2264
 DATE: 13/07/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 49.32
 STATION LONGITUDE ----- E 240.38
 ALTERNATE NAMES ----- DRAD: Dominion Radio Astrophysical Observatory
 DATES OF OPERATION ----- 1964 to present
 OBSERVING SCHEDULE ----- Daily, sunrise to sunset
 INSTRUMENT DESCRIPTION ----- 6-foot (1.82 m) parabolic reflector
 RAW DATA ----- Chart records of solar bursts at 2700 MHz
 DATA REDUCTION PRACTICE ----- Calculation of peak flux and tabulation of start and stop times
 REGULAR REDUCED DATA AVAILABLE AFTER ----- After the 10th day of the following month
 FORM OF REDUCED DATA ----- Tabulation and profiles of outstanding events
 DATA ROUTINELY PUBLISHED ----- SOLAR GEOPHYSICAL DATA
 ARO REPORTS: monthly and yearly
 YES: Boulder
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Herzberg Institute of Astrophysics
 Attention: M. B. Bell
 National Research Council
 Ottawa K1A 0R6
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SAGAMORE HILL, USA

ITEM: 1160
 DATE: 21/12/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 42.63
 STATION LONGITUDE ----- E 289.18
 ALTERNATE NAMES ----- Hamilton
 DATES OF OPERATION ----- Det 2, 4 MW
 01/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar Radio Telescope, total flux and bursts at 242, 410, 610, 1415, 2695, 4995, 8800, 15400 MHz, sunrise to sunset patrol, cyclic radiometer, multi-channel recorders, 1/2 inch/min and 6 mm/min, antennas: parabola solar tracker, 28 ft diameter/single sideband for 245, 410, 606, 1415 MHz, 8 ft diameter/dual sideband for 15.4 GHz. Make noon flux measurements on all.
 RAW DATA ----- Analog strip charts, charts, drawings, digital data since 1975
 DATA REDUCTION PRACTICE ----- Daily
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- AS REQUIRED
 DATA ROUTINELY PUBLISHED ----- AFGL in-house, SOLAR-GEOPHYSICAL DATA (NOAA), IAU Quarterly (OBSA)
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 Det 2, 4 MW
 Box 415
 S. Hamilton, MA 01982
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- AFGL/PHP
 Hanscom AFB, MA 01731
 USA
 ADDITIONAL COMMENTS ----- Dates of start of monitoring: 245 MHz (7/1969), (245 MHz changed to 242 MHz Sep 79), 410 MHz (9/1971), 606 MHz (1/1966), 1415 MHz (1/1966), 2695 MHz (1/1966), 4995 MHz (4/1966), 8800 MHz (1/1966), 15.4 GHz (1/1968), 35 GHz (1/1969 - 6/1983). Sagamore Hill Solar Radio Observatory is the key station of the USAF AMS Solar Radio Network of 4 stations of the Space Environmental Support System. Data are used in calibrations, warnings of special purpose data available immediately. Teletype data sent via USAF Automated Weather Network.

 SAGAMORE HILL, USA

ITEM: 236
 DATE: 01/12/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 42.63
 STATION LONGITUDE ----- E 289.18
 ALTERNATE NAMES ----- Hamilton
 DATES OF OPERATION ----- 01/1966 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Solar radio bursts on eight frequencies
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape (ASCII)
 DATA ROUTINELY PUBLISHED ----- SGO, NOAA: Boulder, CO, USA.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 Mr. Ed Cliver
 AFGL (PHP)
 Hanscom AFB
 Bedford, MA 01731
 USA
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SAN FERNANDO OBSERVATORY, USA

ITEM: 2152
 DATE: 09/01/84

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 34.31
 STATION LONGITUDE ----- E 241.51
 ALTERNATE NAMES ----- SFO/CSUN
 DATES OF OPERATION ----- 04/1969 to present
 OBSERVING SCHEDULE ----- IRREGULAR (Programmatic)
 INSTRUMENT DESCRIPTION ----- 61/28 cm vacuum telescope and spectroheliograph, 70 mm film or 512 diode array; 15 cm full disk H-alpha telescope, 15 cm white-light telescope, 1.5 m radio dish at 10.7 cm.
 RAW DATA ----- 70 mm film (calibrated), film and digital intensity for spot areas.
 DATA REDUCTION PRACTICE ----- As needed for sponsored programs
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Film and magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- On request, when available
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 Dr. G. A. Chapman
 Dept. of Physics and Astronomy
 CSUN
 Northridge, CA 91330
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- SFO/CSUN
 14031 San Fernando Road
 Sylmar, CA 91342
 USA
 ADDITIONAL COMMENTS ----- Allied staff are: Dr. A. D. Herzog
 Dr. J. K. Lawrence
 Dr. P. H. Richter
 Elevation 1217.2 feet above sea-level.

C03 Solar Radio Events, Fixed Frequency (Cont.)

 TORUN, POLAND

ITEM: 1090
 DATE: 27/08/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 53.10
 STATION LONGITUDE ----- E 18.55
 ALTERNATE NAMES ----- Nicolaus Copernicus University
 Pwnice Astronomical Obs
 DATES OF OPERATION ----- 10/1958 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 REGULAR
 INSTRUMENT DESCRIPTION ----- Simple interferometer, total flux observations at 127 MHz; interferometer consists of 2 antennas placed 23.7 m (10 wavelengths) apart along E-W direction. Sine wave pattern signal is detected in a Dicke radiometer of 230 kHz IF bandwidth and 2 s LF time constant. Chart speed is 16 cm/h. Data reduced manually. See also Report UAG-83, Part 1, p. 130 (1982).

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA) complete data of outstanding occurrences since 1/1975, and SOLNECHNYE DANNYE (Leningrad) since 1/1980.

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES: Kazimierz Borkowski
 ADDRESS FOR INFORMATION ABOUT STATION ----- Torun Radio Astronomy Observatory
 Nicolaus Copernicus University
 Chopina 12/18
 Torun PL 87-100
 Poland

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 127 MHz observations for 10/1958-1/1960 made with parabolic (12 m dish) antenna, interferometer observations carried out since 9/1960. Gaps in observations (longer than or equal to 1 month): 2-8/1960, 7/1972, 1-5/1973, 7/1974. Co-investigators: Prof. S. Gorgolewski, G. Gawronska

 TRIESTE, ITALY

ITEM: 1065
 DATE: 01/08/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequencies
 STATION LATITUDE ----- N 45.64
 STATION LONGITUDE ----- E 13.88
 ALTERNATE NAMES ----- Basovizza Observing Station, IAST
 DATES OF OPERATION ----- 03/1966 to present
 Station moved
 Intermittent operation
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- The antenna is a parabolic disc of 10 m diameter. It is in operation from January 1964. We measure daily (from sunrise to sunset) the total flux density at 237 MHz. Circular polarization measurements at the same frequency started on November 1964. From March 1974 the polarimetric channels at 237, 327, 408, 505, 606 and 790 MHz are operating. L- and H-handed outputs are recorded separately on analogic magnetic tape with a time constant of 0.01 s. The 237 MHz channel is recorded also on paper strip, as L-R and L+R, at 20 cm/h.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer plots
 DATA ROUTINELY PUBLISHED ----- OSSERVAZIONI SOLARI quarterly bulletin, hourly mean values of flux density and polarization data, also distinctive events

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Radio - Solar Group
 Trieste Astronomical Observatory
 T.B. Tiepolo 11
 P.O. Box Succursale Trieste 5
 I-34131 Trieste
 Italy

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Gaps in operation: only flux density measurements during: 3/1972 - 6/1972 and 1/1973 - 3/1973. No measurements during: 2/1972, 12/1972, 6/1973 - 8/1973, 10/1974 and 10/1975 - 7/1976. Special purpose data available in 3 months. Station moved 3/1967 from N45.76 E13.95. Fixed antenna was in operation daily for 8 hours during 3/1966 - 11/1969. The channels at 505, 606, 790 MHz are not calibrated due to strong TV interferences.

 TREMSDORF, GDR

ITEM: 1064
 DATE: 01/08/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 52.28
 STATION LONGITUDE ----- E 13.13
 ALTERNATE NAMES ----- Zentralinst Solar-Terrestriech Physik (HMI)
 Obs Solare Radioastronomie Tremsdorf
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Radiometer and Radiopolarimeter, measurement of intensity and polarization of total solar radio flux at different frequencies; observing time 0800-1400 UT during winter and 0700-1500 UT during summer. Absolutely calibrated measurements at 9400, 1500 MHz. Radiometers at 9400, 3000, 510, 234 MHz; polarimeters at 9400, 1500, 775, 113, 64, 40, 30 MHz (circular polarization). Time resolution 25 s at 9400, 3000, 1500 MHz and less than 0.1 s at the other frequencies.

RAW DATA ----- Paper records, film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Several lists
 DATA ROUTINELY PUBLISHED ----- SOLARE BEOBSACHTUNGSERGEBNISSE (Solar Data) Akad. d. Wissenschaften d. DDR, Zentralinst f. solar-terrestriech Physik (HMI), DDR-1199 Berlin-Adlershof, Tables are published monthly

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Henry Aurass
 Zentralinst f solar-terrestriech Physik
 Telegrafenberg Haus 550, Bereich C1
 Potsdam DDR-1500
 GDR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 UCHT, SWITZERLAND

ITEM: 646
 DATE: 07/07/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
 STATION LATITUDE ----- N 46.85
 STATION LONGITUDE ----- E 7.27
 ALTERNATE NAMES ----- BUWI
 DATES OF OPERATION ----- 10/1979 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Freq. = 11.6 GHz, BW=300 MHz, int. time = 1 sec, circ. Pol., ang. res = 1 degree.
 Freq. = 36 GHz, BW = 800 MHz, int. time = 1 sec, circ. Pol., ang. res = 1 degree.
 Freq. = 92.5 GHz, BW = 600 MHz, int. time = 0.2 sec, circ. Pol., ang. res = 12 degrees.
 Freq. = 3.2 GHz, BW=100 MHz, int. time = 0.1 sec, circ. Pol., ang. res = 1 degree.
 Freq. = 8.4 GHz, BW=10 and 1 MHz, int. time = 0.2 sec, all Stokes parameters, ang. res = 1 degree.
 Freq. = 8.4 GHz, BW=10 and 1 MHz, int. time = 0.1 sec, all Stokes parameters, ang. res = 1 degree.
 Freq. = 5.0 GHz, BW= 100 MHz, int. time = 0.1 sec, circ. Pol., ang. res = 1 degree.

RAW DATA ----- Paper and digital recording with 15 bit resolution on tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Computer-printout, plots and tape
 DATA ROUTINELY PUBLISHED ----- Report of Solar Division (address below)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- A. Nagun
 Institute of Applied Physics
 Silderstrasse 5
 CH-3012
 Switzerland

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Co-Investigators are T. Liesler, N. Kampfer, C. Rucht, H. Wühl

C03 Solar Radio Events, Fixed Frequency (Cont.)

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*****
UPICE, CZECHOSLOVAKIA
*****
ITEM: 796
DATE: 08/01/79

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
STATION LATITUDE ----- N 50.30
STATION LONGITUDE ----- E 16.91
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Total Solar Radio Flux at 56 cm
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Hvezdarna Upice
Observatory Upice
Upice 54232
Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1983.

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*****
YUNNAN, CHINA
*****
ITEM: 2298
DATE: 25/11/83

DISCIPLINE ----- C03 Solar Radio Events, Fixed Frequency
STATION LATITUDE ----- N 25.03
STATION LONGITUDE ----- E 102.78
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Monochromatic heliograph, image diameter 24 mm,
H-Alpha filter bandpass 0.5A.
RAW DATA ----- 35 mm film
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Lists of flares
DATA ROUTINELY PUBLISHED ----- MONTHLY SOLAR ACTIVITY OF YUNNAN
OBSERVATORY
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Wu Hsiao-Chan
Solar Division
Yunnan Observatory
Kunming
China

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. Li Su-Chuan
Solar Division
Yunnan Observatory
Kunming
China

ADDITIONAL COMMENTS -----

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C04 Solar Radio Spectrograms of Events

 BERN, SWITZERLAND

ITEM: 2274
 DATE: 07/07/83

DISCIPLINE ----- C04 Solar Radio Spectrograms of Events
 STATION LATITUDE ----- N 46.85
 STATION LONGITUDE ----- E 7.27
 ALTERNATE NAMES ----- Solar Radio Observatory Bumishus
 DATES OF OPERATION ----- 1971 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Eight solar polarimeters (I, V,) for 3.1, 5.2, 8.4, 11.8, 19.6, 35.0, 50.0, 92.5 GHz and spectrometer at 3.7 GHz with high temporal (0.005 seconds) and spectral resolution (30 channels over 200 MHz with spectral resolution between 0.5 and 30 MHz).

RAW DATA ----- 9-track tape and strip charts
 DATA REDUCTION PRACTICE ----- Regular for events with level > 5% of sunlevel before the event
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Tables, plots, magnetic tape
 DATA ROUTINELY PUBLISHED ----- Solar-Geophysical Data (NOAA)
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. A. Magun
 Institute of Applied Physics
 University of Bern
 Sidlerstrasse 5
 CH-3012 Bern
 Switzerland
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 CULGOORA, AUSTRALIA

ITEM: 936
 DATE: 01/06/84

DISCIPLINE ----- C04 Solar Radio Spectrograms of Events
 STATION LATITUDE ----- S 30.12
 STATION LONGITUDE ----- E 149.57
 ALTERNATE NAMES ----- CSIRO Solar Observatory
 DATES OF OPERATION ----- 01/1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Radiospectrograph, dynamic radio spectra 8 MHz to 8 GHz at approximately 2100-0600 UT, film speed 1 cm/min. Radio Spectro-polarimeter, degree of circular polarization, 26 to 220 MHz at approximately 2100-0700 UT, film speed 1 cm/min. Acousto-optic spectrograph, high sensitivity dynamic spectra, 30 to 80 MHz, 70 to 100 MHz, 140 to 170 MHz and 317 to 332 MHz at approximately 2230-0530 UT, film speed 4 cm/min. The acousto-optic spectrograph is only operated during special events.
 Film (70 mm)

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, photographic prints
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Mr. W. J. Payten
 CSIRO Solar Observatory
 P.O. Box 94
 Narrabri, N.S.W. 2390
 Australia
 Dr. D. J. McLean
 CSIRO Division of Radiophysics
 P.O. Box 76
 Epping, N.S.W. 2121
 Australia

ADDRESS FOR INFORMATION ABOUT DATA -----
 He participate on request in STP studies, ATM-SkyLab, Apollo, S.M.M. and similar space experiments. Special purpose data available after several months.

ADDITIONAL COMMENTS -----

 BLEIEN, SWITZERLAND

ITEM: 159
 DATE: 26/07/83

DISCIPLINE ----- C04 Solar Radio Spectrograms of Events
 STATION LATITUDE ----- N 47.44
 STATION LONGITUDE ----- E 8.72
 ALTERNATE NAMES ----- Durnten
 Zurich/Bleien
 DATES OF OPERATION ----- 08/1972 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Solar radio spectrograph, solar radio spectrograms of events from 100 to 1000 MHz. Sweep frequency receiver, sweep rate 4 Hz; frequency resolution 1 MHz; recording on 35 mm film with a speed of 1.25 m/min; sensitivity 60 sfu at 300 MHz. Observing from local sunrise to sunset all days of the week.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/2 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film, list of observing times and events
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES Toyokawa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Radio Astronomy Group
 Institute of Astronomy
 ETH-Zentrum
 8092 Zurich
 Switzerland
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 The station moved from Zurich (N47.38, E08.50) to Durnten (N47.28, E08.85) on 05/1974, and to Bleien on 06/1979.

C04 Solar Radio Spectrograms of Events (Cont.)

 IZMIRAN, USSR

ITEM: 2386
 DATE: *****

DISCIPLINE ----- C04 Solar Radio Spectrograms of Events
 STATION LATITUDE ----- N
 STATION LONGITUDE ----- E
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Radiometers at 202 and 3000 MHz. Spectrograms
 in the 45 - 90 MHz and 180 - 230 MHz ranges.
 Tower solar telescope with birefringent
 H-alpha filter "Doton" (the band of 0.25A
 moved over H-alpha contour within +/- 0.0A per
 0.25A). Two spectrograms, one with range 102
 - 172 MHz and another with range 180 - 230 MHz.
 Spectrograms for measuring sunspot magnetic
 fields.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 ONDREJOV, CZECHOSLOVAKIA

ITEM: 605
 DATE: 06/07/83

DISCIPLINE ----- C04 Solar Radio Spectrograms of Events
 STATION LATITUDE ----- N 49.92
 STATION LONGITUDE ----- E 14.98
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Solar Radio Spectra at 100-1000 MHz
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- Visual
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- 35 mm film
 DATA ROUTINELY PUBLISHED ----- Solar Radio Data, monthly
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Dr. A. Tlamicha
 Astronomical Institute
 Observatory Ondrejov
 Ondrejov 251 65
 Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 NOBAYAMA, JAPAN

ITEM: 441
 DATE: 01/08/83

DISCIPLINE ----- C04 Solar Radio Spectrograms of Events
 STATION LATITUDE ----- N 35.93
 STATION LONGITUDE ----- E 138.48
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1975 to present
 OBSERVING SCHEDULE ----- 7 hours each day
 INSTRUMENT DESCRIPTION ----- 70-220 MHz (multi-channel), 200-600 MHz
 (acousto-optical)

RAW DATA ----- film
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- 35 mm film
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Nobeyama Solar Radio Observatory
 Tokyo Astronomical Observatory
 Minamimakiura, Minamisakugun,
 Nagano-ken 384-13
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SAGAMORE HILL, USA

ITEM: 522
 DATE: 21/12/83

DISCIPLINE ----- C04 Solar Radio Spectrograms of Events
 STATION LATITUDE ----- N 42.63
 STATION LONGITUDE ----- E 289.18
 ALTERNATE NAMES ----- Hamilton
 Det 2, 4 MW
 DATES OF OPERATION ----- 1965 to present
 INSTRUMENT DESCRIPTION ----- 30-80 MHz Swept Frequency Interferometer.
 Type I, II, III, IV, V Swept Frequency Burst.
 Sunrise to sunset operation daily. 1 sweep
 per second. Electrostatic recorder (Type
 1024) chart width approximately 11.0 inch.
 Chart speed is 0.50 inch per minute. Antenna
 system, 2 stationary bicone antennas.

RAW DATA ----- 3-D recording of time, frequency
 and intensity; total power
 REGULAR REDUCED DATA AVAILABLE AFTER ----- REGULAR SPECIAL
 FORM OF REDUCED DATA ----- 1 MONTHS
 DATA ROUTINELY PUBLISHED ----- Tables of burst type, timing
 information, etc., punched cards.
 1)AFGL in house, 2)NOAA - SGD,
 3)IAU Quarterly (QBSA)

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Det 2, 4 MW
 Box 415
 S. Hamilton, MA 01982
 USA
 Mr. E. Cliver
 AFGL/PHP
 Hanscom AFB, MA 01731
 USA

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Teletype data available immediately via USAF
 Automated Weather Network.

C04 Solar Radio Spectrograms of Events (Cont.)

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*****
WEISSENAU, FRG
*****
ITEM: 2275
DATE: 15/04/83

DISCIPLINE ----- C04 Solar Radio Spectrograms of Events
STATION LATITUDE ----- N 47.46
STATION LONGITUDE ----- E 9.35
ALTERNATE NAMES ----- Weissenau Station
DATES OF OPERATION ----- 8/1966 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Solar radio spectrograph 30 to 1000 MHz, six
octave bands record simultaneously, frequency
resolution 10°, power channel sweep time
0.25 seconds, Minimum flux 30 to 60 sfu,
saturation flux 300 to 500 sfu.

RAW DATA ----- 35 mm film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
FORM OF REDUCED DATA ----- Lists of burst data or film copies
upon request
DATA ROUTINELY PUBLISHED ----- Solar-Geophysical Data (NOAA),
Quarterly Bulletin on Solar Activity
(Tokyo Astronomical Institute)

DATA SENT TO MDC-A ----- YES
DATA SENT TO MDC-B ----- YES
DATA SENT TO MDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES; film copies
ADDRESS FOR INFORMATION ABOUT STATION -- Dr. H. Urbarz
7980 Rasthalde
Weissenau Station of Astronomical
Institute
Tubingen University
Ravensburg
FRG

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Forms part of international 24-hour watch on solar
radio bursts.

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C05 Solar X-ray Observations

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*****
BOULDER, USA
*****
ITEM: 923
DATE: 10/05/84

DISCIPLINE ----- C05 Solar X-ray Observations
STATION LATITUDE ----- Geosynchronous Orbit
STATION LONGITUDE ----- Geosynchronous Orbit
ALTERNATE NAMES ----- Boulder Observatory
                        SOLTERWARN
DATES OF OPERATION ----- 1974 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Satellite X-ray, Particle and Magnetic Sensors,
                        GOES-5, GOES-6; Geostationary satellites
                        with X-ray, particle and magnetic sensors provide
                        continuous data to SOLTERWARN.

RAW DATA ----- Strip charts, magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, microfilm
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ---- Space Environment Services Center
                        NOAA R/E/SE2
                        325 Broadway
                        Boulder, CO 80303
                        USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of the USA Operational Flare Patrol Network.
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C06 Sudden Ionospheric Disturbances

 A. FAANURIA, EGYPT

ITEM: 2401
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 31.20
 STATION LONGITUDE ----- E 29.87
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1981 to present
 OBSERVING SCHEDULE ----- Periodic
 INSTRUMENT DESCRIPTION ----- MX1104

RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSOD/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ARCETRI, ITALY

ITEM: 24
 DATE: 01/01/80

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 43.75
 STATION LONGITUDE ----- E 11.26
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1970 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 VLF Phasemeter, phase and amplitude recordings of
 NAA station at 17.8 kHz. TRACOR J controlled by
 a Cesium oscillator, continuous recordings, chart
 speed 4 inch/h.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- None
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Raffaele Barletti
 Arcetri Astrophysical Observatory
 Largo Enrico Fermi, 5
 Firenze 50125
 Italy
 Giuseppe Tagliaferri
 Arcetri Astrophysical Observatory
 Largo Enrico Fermi, 5
 Firenze 50125
 Italy

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Special purpose data available after 2 months.
 No response received to inquiry for updating material
 in 1983.

 ANCHORAGE, USA

ITEM: 2005
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 61.17
 STATION LONGITUDE ----- E 149.03
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1977 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MX1104

RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks;
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSOD/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

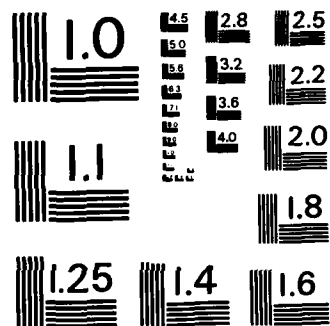
 ASCENSION ISLAND

ITEM: 2411
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 7.95
 STATION LONGITUDE ----- E 14.33
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1980 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MX-1104

RAW DATA ----- Cassette tape (hourly data)
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 USGS HQ (G-ONSOD/TP43)
 Washington, D.C. 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

C06 Sudden Ionospheric Disturbances (Cont.)

 ATTU, USA

ITEM: 2405
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 52.83
 STATION LONGITUDE ----- E 173.18
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1982 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104

RAW DATA ----- Cassette tape (hourly data)
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- None
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 USGS HQ (G-ONS00/TP43)
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 BELEM, BRAZIL

ITEM: 1033
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 1.39
 STATION LONGITUDE ----- E 311.56
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1974 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between
 OMEGA signals at one or more of these
 frequencies: 10.2, 13.6 kHz.
 (2 Tracor 599R receivers).

RAW DATA ----- Some strip charts (continuous);
 some coding forms (hourly data)

DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks;
 magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
 phase. Some signal strength recording instruments
 used.

 AUSTIN, USA

ITEM: 2404
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 30.90
 STATION LONGITUDE ----- E 262.34
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1983 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104

RAW DATA ----- Cassette tape (hourly data)
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- None
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 USGS HQ (G-ONS00/TP43)
 Washington, D.C. 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 BELSK, POLAND

ITEM: 917
 DATE: 03/06/75

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 51.84
 STATION LONGITUDE ----- E 20.79
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Riometer Mark 1000 by Aerospace Research Inc.
 with 3 element Yagi antenna directed vertically.
 The strip chart recorder speed is 6 cm/h. Work-
 ing frequency 27.6 MHz.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. W. Mernik
 Institute of Geophysics
 Polish Academy of Science
 ul. Pasteura 3
 P.O. Box 155
 Warsaw 00-973
 Poland

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Reduced data after November 1975 are tables and
 plots of the hourly mean absorption, absorption in
 the first minute of each hour and the maximum
 absorption for each hour as well as US100 informa-
 tion.
 No response received to inquiry for updating
 material in 1980 or 1983.

C06 Sudden Ionospheric Disturbances (Cont.)

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*****
BERMUDA
*****
ITEM: 1012
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 32.26
STATION LONGITUDE ----- E 295.12
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1968 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between
                                OMEGA signals at one or more of these
                                frequencies: 10.2, 13.6 kHz, digitized hourly
                                readings from strip charts (speed 1 inch/h).
                                (2 Tracor 599R receivers).
RAW DATA ----- Some strip charts (continuous);
                                some coding forms (hourly data);
                                cassette data tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
                                magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONSOD/43)
                                2100 2d St., S. W.
                                Washington DC 20593
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
                                phase. Some signal strength recording instruments
                                used. Plans are for as many as 60 monitor stations.
    
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*****
BRISBANE, AUSTRALIA
*****
ITEM: 2410
DATE: 01/06/84

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- S 27.03
STATION LONGITUDE ----- E 153.17
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1980 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONSOD/TP43)
                                2100 2d St., S. W.
                                Washington DC 20593
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
BORIN, PUERTO RICO, USA
*****
ITEM: 2413
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 18.50
STATION LONGITUDE ----- E 292.87
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1981 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONSOD/43)
                                2100 2d St., S. W.
                                Washington DC 20593
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
                                phase. Some signal strength recording instruments
                                used. Plans are for as many as 60 monitor stations.
    
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*****
BUENOS AIRES, ARGENTINA
*****
ITEM: 2020
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- S 34.62
STATION LONGITUDE ----- E 301.64
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 02/78 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
                                magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONSOD/43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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C06 Sudden Ionospheric Disturbances (Cont.)

 CAMBRIDGE, USA

ITEM: 2024
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 42.39
 STATION LONGITUDE ----- E 288.86
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 06/1977 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks;
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-0NS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 CHUBU, JAPAN

ITEM: 965
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 35.27
 STATION LONGITUDE ----- E 137.01
 ALTERNATE NAMES ----- Kasugai
 Chubu Institute of Technology
 Second Division, Chubu Institute for
 Scientific and Industrial Research
 DATES OF OPERATION ----- 01/1967 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- VLF stations: MMC 22.3 kHz
 continuous operation
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Prof. Dr. T. Yonezawa
 Chubu Institute of Technology
 1200 Matsumoto-cho
 Kasugai-shi, Aichi-ken, 487
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 2 months.

 CARRA, AUSTRALIA

ITEM: 2403
 DATE: 01/06/84

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 38.47
 STATION LONGITUDE ----- E 146.93
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1982 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA ----- Coding forms
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-0NS00/TP43)
 2100 2nd St., S. W.
 Washington, D.C. 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 COCOS, AUSTRALIA

ITEM: 2409
 DATE: 01/06/84

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 12.19
 STATION LONGITUDE ----- E 96.83
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1980
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA ----- Cassette tape (hourly data)
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-0NS00/TP43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

C06 Sudden Ionospheric Disturbances (Cont.)

 CUBI POINT, PHILIPPINES

ITEM: 2417
 DATE: 01/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 18.78
 STATION LONGITUDE ----- E 120.30
 ALTERNATE NAMES ----- Subic Bay
 DATES OF OPERATION ----- 12/1982 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/TP43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 DARWIN, AUSTRALIA

ITEM: 2037
 DATE: 01/06/84

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 12.38
 STATION LONGITUDE ----- E 130.97
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 07/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks.
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 DARMSTADT, FRG

ITEM: 2011
 DATE: 24/05/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 54.
 STATION LONGITUDE ----- E 7.
 ALTERNATE NAMES ----- Norddeich
 DATES OF OPERATION ----- 1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION -----
 We run 23 receivers at Norddeich continuously
 on 23 different frequencies and circuits
 (6 x New York, 6 x London, 5 x Oslo, 5 x
 Tokyo and 1 x Tehran). Fieldstrength
 recordings are made and short wave fades are
 evaluated from these recordings.
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- See Ursl-Code USIDS
 REGULAR REDUCED DATA AVAILABLE AFTER ----- Monday thru Friday 0600-1400 UT
 FORM OF REDUCED DATA ----- See Ursl-Code USIDS
 DATA ROUTINELY PUBLISHED ----- Daily by Telex at noon or immediately
 DATA SENT TO WDC-A ----- YES: Solterwern, Boulder, CO, USA
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Not Always
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Forschungsinstitut der DBP
 FI 34
 Postfach 5000
 D-6100 Darmstadt
 FRG
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 DIEGO GARCIA

ITEM: 2040
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 7.28
 STATION LONGITUDE ----- E 72.36
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 07/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks.
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- On-site Cs standard available.

C06 Sudden Ionospheric Disturbances (Cont.)

 EBRD, SPAIN

ITEM: 1063
 DATE: 15/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 40.82
 STATION LONGITUDE ----- E 0.49
 ALTERNATE NAMES ----- Tortosa
 DATES OF OPERATION ----- 01/1958 to present
 INSTRUMENT DESCRIPTION ----- Atmospheric radio noise, continuously,
 integrated to observe SEAs.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION --- Observatorio del Ebro
 Roquetes
 Tarragona
 Spain
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 FROBISHER BAY, CANADA

ITEM: 2052
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 63.76
 STATION LONGITUDE ----- E 291.46
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 11/1977 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- HX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks;
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 FARNBOROUGH, UNITED KINGDOM

ITEM: 2048
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 51.28
 STATION LONGITUDE ----- E 359.25
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 01/1979 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- HX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks;
 Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 U.S. Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 GOLED NUEVO, ARGENTINA

ITEM: 2056
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 43.22
 STATION LONGITUDE ----- E 294.73
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 06/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- LITCOM
 RAW DATA ----- Some strip charts (continuous),
 some coding forms (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

C06 Sudden Ionospheric Disturbances (Cont.)

 HALLEY BAY, ANTARCTICA

ITEM: 942
 DATE: 12/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 75.52
 STATION LONGITUDE ----- E 333.37
 ALTERNATE NAMES ----- Halley
 DATES OF OPERATION ----- 07/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 07/1972 - 10//1980, David Andersen Type DA-87
 Riometer, continuous measure of cosmic noise
 at 27.6 MHz. Instrument similar to IGY Riometer
 (Little and Leinbach, Proc. IRE 47, 2 (1959)),
 chart speed 1 inch/h, or 2 inch/h. Antenna 3
 element Yagi directed at South celestial pole.
 05/1981 to present, array of four La Jolla
 Sciences 30 MHz Riometers covering regions 30 km
 across in the four cardinal directions. 3 element
 Yagis at 45° to zenith. Chart speed 6 cm/h.
 Cassette logging each channel every 5 or 20 secs.
 System time constant 3 secs.

RAW DATA ----- Strip charts and digital cassettes
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 10 MONTHS
 FORM OF REDUCED DATA ----- Computer printout
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO MDC-A ----- YES
 DATA SENT TO MDC-B ----- YES
 DATA SENT TO MDC-C ----- YES: Chilton
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. J. Jarvis
 British Antarctic Survey
 Madingley Road
 Cambridge CB3 0ET
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- World Data Centre C1
 Rutherford Appleton Laboratory
 Chilton
 Didcot
 Oxfordshire OX11 0QX
 United Kingdom

ADDITIONAL COMMENTS -----

 HESTHONA, NORWAY

ITEM: 1015
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 66.53
 STATION LONGITUDE ----- E 12.85
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 05/1967 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between
 OMEGA signals at one or more of these
 frequencies: 10.2, 11.3, 13.6 kHz, digitized
 hourly readings from strip charts (speed 1
 inch/h). (1 Litrow receivers).
 Some strip charts (continuous);
 some coding forms (hourly data)

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks;
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO MDC-A ----- NO
 DATA SENT TO MDC-B ----- NO
 DATA SENT TO MDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
 phase. Some signal strength recording instruments
 used.

 HIRAIISO, JAPAN

ITEM: 951
 DATE: 22/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 36.37
 STATION LONGITUDE ----- E 140.62
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Field Strength Meter on 10, 15 MHz (MW and
 MWH), continuously recording on strip chart
 at speed of 12 cm/h.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN, monthly
 issued by RRL (15 MHz frequency)
 DATA SENT TO MDC-A ----- YES
 DATA SENT TO MDC-B ----- YES
 DATA SENT TO MDC-C ----- YES: United Kingdom
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Hiraiso Branch
 Radio Research Laboratories
 3603 Isozaki-machi
 Nakaminato-shi, Ibaraki-Ken
 311-12
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- MDC C2 for Ionosphere
 Radio Research Laboratories
 2-1, Mukai-Kitamachi 4-chome
 Koganei-shi, Tokyo 184
 Japan
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.
 Part of the CCIR Network (15 MHz).

 HOKKAIDO, JAPAN

ITEM: 2069
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 45.52
 STATION LONGITUDE ----- E 141.84
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1977 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks;
 magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO MDC-A ----- NO
 DATA SENT TO MDC-B ----- NO
 DATA SENT TO MDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

C06 Sudden Ionospheric Disturbances (Cont.)

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*****
ITEM: 277
INUBO, JAPAN DATE: 01/02/84
*****
DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 35.70
STATION LONGITUDE ----- E 140.86
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1969 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Phase Tracking VLF receiver, Omega
VLF receiver, continuously recording,
strip chart 25 mm/h.
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- IONOSPHERIC DATA IN JAPAN (RRL)
RADIO AND SPACE DATA (RRL)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Inubo Radio Wave Observatory
Radio Research Laboratories
9961 Tennodai
Choshi, Chiba 298
Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- WDC-C2 for Ionosphere
Radio Research Laboratories
2-1, Nukui-Kitanachi 4-chome
Kojanai-shi
Tokyo 108
Japan
ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.
is frequency standard (auxiliary equipment).

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ITEM: 541
ITAPETINGA(INPE), ATIBIA, BRAZIL DATE: 01/01/80
*****
DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- S 23.18
STATION LONGITUDE ----- E 313.44
ALTERNATE NAMES ----- CRAAM
San Paulo
ITA
SAD
DATES OF OPERATION ----- 1966 to present
Station moved from Umuarama in 1969
OBSERVING SCHEDULE ----- REGULAR until 1982.
INSTRUMENT DESCRIPTION ----- VLF Tracking Receivers and atomic frequency
standards.
RAW DATA ----- Strip charts
DATA REDUCTION PRACTICE ----- REGULAR (when routine)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
(when routine)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES (when available)
ADDRESS FOR INFORMATION ABOUT STATION -----
L. Rizzo Piazza
INPE (CRAAM)
C.P. 515
12200 San Jose dos Campos
Brazil
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- 1) CRAAM and Itapetinga are operated by INPE: Instituto
de Pesquisas Espaciais, in an agreement with Mackenzie
University, San Paulo.
2) VLF tracking stations are moved temporarily to
Antarctica for special research, summer, 1982/83,
and 1983/84.
3) Data on NAA and MLK transmissions available after
late 1979.

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*****
ITEM: 2168
INUUVIK, CANADA DATE: 01/08/83
*****
DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 69.31
STATION LONGITUDE ----- E 226.50
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-0MS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS -----

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*****
ITEM: 2078
KEFLAVIK, ICELAND DATE: 01/08/83
*****
DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 63.96
STATION LONGITUDE ----- E 337.28
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 04/1979 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-0MS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C06 Sudden Ionospheric Disturbances (Cont.)

 KHARTOUM, SUDAN

ITEM: 2406
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 15.01
 STATION LONGITUDE ----- E 32.94
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1980 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette tapes hourly data
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSD/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KURE, JAPAN

ITEM: 2083
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 28.39
 STATION LONGITUDE ----- E 181.71
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 10/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSD/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KUHLENGSBORN, GDR

ITEM: 883
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 54.00
 STATION LONGITUDE ----- E 12.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1980 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Radiosets on various frequencies in the HF, MF,
 LF, and VLF range, phase-height measurements,
 continuous records
 RAW DATA ----- Paper records
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 GEPHYSIKALISCHE BEOBSACHTUNGS-
 ERGEBNISSE (Geophysical Data)
 monthly bulletin
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES: Tokyo
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. G. Entzian
 Observatorium fur Ionospharenforschung
 Mitschurin Str. 4-6
 Kuhlungsborn DDR 2565
 GDR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The monthly bulletin Geophysical Data is available
 from Akad. d. Wissenschaften der DDR, Zentralinsti-
 tut fur solar-terrestrische Physik (WNI), DDR 1199
 Berlin-Adlershof.

 LAJES, AZORES

ITEM: 2095
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 38.77
 STATION LONGITUDE ----- W 29.94
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 06/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONSD/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

C06 Sudden Ionospheric Disturbances (Cont.)

 LA MOURE, USA

ITEM: 1024
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 46.56
 STATION LONGITUDE ----- E 261.36
 ALTERNATE NAMES ----- North Dakota
 DATES OF OPERATION ----- 10/1972 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- OMEGA 1104 Receiver, phase differences between OMEGA signals at one or more of these frequencies: 10.2, 11.3, 13.6 kHz, hourly readings from strip charts (speed 1 inch/h), some coding forms (hourly data); cassette data tapes (hourly data)

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks; magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way phase. Some signal strength recording instruments used. Plans are for as many as 60 monitor stations.

 LATROBE, USA

ITEM: 334
 DATE: 21/12/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 40.28
 STATION LONGITUDE ----- E 280.11
 ALTERNATE NAMES ----- Indirect Solar Flare Patrol
 Network Station A-19
 SID-SVC-A-19

DATES OF OPERATION ----- 04/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- (a) Receiver model RBA-3, Type (ST-46)54,
 (b) SID-Integrated circuit receivers (own design). SES and SEA recorded. The receivers using integrated circuit RCA 3055 (CA) were developed during 1971 and proved to be the most sensitive to any SID. The following frequencies are commonly used: 17.8, 18.6, 21.4, 27, 37.2, 48.5, 51.5, 58, and 73.6 kHz. 4 signals are recorded 24 h/day. Recorders are Rustrak, chart style A.

RAW DATA ----- Strip chart (Rustrak, Style A)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- SOLAR BULLETIN of AAVSO Solar Division publishes SIDs monthly, also in SOLAR-GEOPHYSICAL DATA (NOAA, US Dept. of Commerce, Boulder, CO 80303 USA)

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Jaroslav J. Slezak
 Saint Vincent College
 Department of Physics
 Latrobe, PA 15650
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- I participate with the Solar Division of the American Association of Variable Star Observers (AAVSO) as a member of the Indirect Solar Flare Patrol Network, Station A-19.

 LA VEJUNION

ITEM: 2088
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 20.91
 STATION LONGITUDE ----- E 55.51
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 04/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- LITCOM

RAW DATA ----- Some strip charts (continuous), coding forms (hourly data)
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks, magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LEICESTER, UNITED KINGDOM

ITEM: 2177
 DATE: 09/01/84

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 52.62
 STATION LONGITUDE ----- E 358.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- VLF Receivers: TRACOR 599As, TRACOR 599Bs (since 1982), since 1978 two TRACOR 700 and one REDIFON 441. Transmitters monitored since 1978: OMEGA stations A, B, D, F at 10.2 kHz and 13.6 kHz.

RAW DATA ----- Pre-1978 chart records, since 1978 fully digitized
 DATA REDUCTION PRACTICE ----- Certain data reduced to lines of position and position fixes
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. T. B. Jones
 Univ. of Leicester, Physics Dept
 Leicester LE1 7RH
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Similar recordings available since January 1982 from Mick, Scotland, United Kingdom. Recording at 5 min intervals from 03/1975 to 06/1980 and 06/1982 to present.

C06 Sudden Ionospheric Disturbances (Cont.)

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*****
LEWIS, UNITED KINGDOM
*****
ITEM: 2408
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 58.51
STATION LONGITUDE ----- E 353.74
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1980 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA -----
DATA REDUCTION PRACTICE ----- Cassette tape (hourly data)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
    Commanding Officer
    OMEGA Nav. Sys. Oper. Det.
    US Coast Guard HQ (G-ONS00/TP43)
    2100 2nd St., S.W.
    Washington DC 20593
    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
MOMBASA, KENYA
*****
ITEM: 2414
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 4.06
STATION LONGITUDE ----- E 39.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1982 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA -----
DATA REDUCTION PRACTICE ----- Cassette tape (hourly data)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
    Chief Navigation Science Division
    OMEGA Nav. Sys. Oper. Det.
    US Coast Guard HQ (G-ONS00/TP43)
    2100 2nd St., S. W.
    Washington DC 20593
    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
MARSH ISLAND
*****
ITEM: 2098
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 24.29
STATION LONGITUDE ----- E 153.98
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 02/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA -----
DATA REDUCTION PRACTICE ----- Cassette tapes (hourly data)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
    magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
    Chief Navigation Science Division
    OMEGA Nav. Sys. Oper. Det.
    US Coast Guard HQ (G-ONS00/43)
    2100 2nd St., S. W.
    Washington DC 20593
    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C06 Sudden Ionospheric Disturbances (Cont.)

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*****
MONROVIA, LIBERIA
*****
ITEM: 2105
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 6.43
STATION LONGITUDE ----- E 349.19
ALTERNATE NAMES ----- Brew
DATES OF OPERATION ----- 02/1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- LITCOM
RAW DATA ----- Some strip charts (continuous),
coding forms (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
NEA MAKRI, GREECE
*****
ITEM: 2114
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 38.10
STATION LONGITUDE ----- E 23.18
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 06/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
NAVAL OCEAN SYSTEMS CENTER USA
*****
ITEM: 2112
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbance
STATION LATITUDE ----- N 32.70
STATION LONGITUDE ----- E 242.75
ALTERNATE NAMES ----- NEIC, NEL
DATES OF OPERATION ----- 09/1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1174
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cs - based data available.

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*****
NEW ZEALAND
*****
ITEM: 2415
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- S 41.23
STATION LONGITUDE ----- E 174.92
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1983 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly data)
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S.W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C06 Sudden Ionospheric Disturbances (Cont.)

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*****
NISHINOMIYA, JAPAN
*****
ITEM: 438
DATE: 11/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 34.72
STATION LONGITUDE ----- E 135.38
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1974 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Field intensity and relative phase of the VLF
wave, VLF/LF Tracking Receiver (Tracor model
599K), Custom Beam Frequency Standard (HP
model 5061A) reference. The field intensity
and relative phase lag between received VLF
wave and 100 kHz wave frequency standard are
recorded continuously on strip chart with
speed 2 cm/h.

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- SPECIAL NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Teruo Sato
Hyogo College of Medicine, Physics
Department
1-1, Mukogawa-cho
Nishinomiya, Hyogo 653
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Station operated with only one receiver when
started, then with two receivers after 07/1975.
Stations of received VLF waves: NLK, 18.6 kHz,
GBR, 16.0 kHz, MMC, 22.3 kHz and W/NO, 13.1 kHz,
exchanged several times.
Special purpose data usually available after one
month.
    
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*****
OSHIMA, JAPAN
*****
ITEM: 2121
DATE: 11/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 34.81
STATION LONGITUDE ----- E 139.37
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 06/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Fujitsu

RAW DATA ----- Coding forms (hourly data),
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSD/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
NINFIELD, USA
*****
ITEM: 1036
DATE: 01/09/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 36.80
STATION LONGITUDE ----- E 246.71
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1971 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- OMEGA 1104 Receiver, phase differences between
OMEGA signals at one or more of these frequencies:
10.2, 11.1, 13.6 kHz.

RAW DATA ----- Cassette data tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSD/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some system standard available for measuring one-way
phase. Some signal strength recording instruments
used. Plans are for as many as 60 monitor stations.
    
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*****
PANAMA
*****
ITEM: 2124
DATE: 01/09/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 9.41
STATION LONGITUDE ----- E 246.09
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 07/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- WJ1104

RAW DATA ----- Cassettes tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSD/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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C06 Sudden Ionospheric Disturbances (Cont.)

 PERTH, AUSTRALIA

 ITEM: 2412
 DATE: 01/06/84
 DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 31.94
 STATION LONGITUDE ----- E 115.98
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1979 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA ----- Cassette tape (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/TP43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 PRESTON, UNITED KINGDOM

 ITEM: 477
 DATE: 01/01/80
 DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 53.81
 STATION LONGITUDE ----- E 357.41
 ALTERNATE NAMES ----- Preston
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- SEA Recording, daily recording at 27 KHz,
 chart speed 1 inch/hour.
 RAW DATA ----- Servo chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Slough
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. V. Barocas
 Jeremiah Horrocks Observatory
 Moor Park
 Preston, Lancashire PR1 6AU
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

 PERU

 ITEM: 2128
 DATE: 01/08/84
 DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 16.47
 STATION LONGITUDE ----- E 142.81
 ALTERNATE NAMES ----- Arequipa
 DATES OF OPERATION ----- 06/1978 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks;
 magnetic tape blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 PRETORIA, REP. OF S. AFRICA

 ITEM: 2402
 DATE: 22/07/83
 DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 25.73
 STATION LONGITUDE ----- E 28.27
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1982 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA ----- Cassette tape (hourly)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/TP43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

C06 Sudden Ionospheric Disturbances (Cont.)

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*****
ITEM: 2134
RECIFE, BRAZIL DATE: 01/08/83
*****

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- S 8.11
STATION LONGITUDE ----- E 325.10
ALTERNATE NAMES -----
DATES OF OPERATION ----- 12/1976 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- TRACOR 599R
RAW DATA ----- Some strip charts (continuous);
                    some coding forms (hourly data);
                    REGULAR
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
                    magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                    OMEGA Nav. Sys. Oper. Det.
                    US Coast Guard HQ (G-ONS00/43)
                    2100 2nd St., S. W.
                    Washington DC 20593
                    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM: 1030
RIO DE JANEIRO, BRAZIL DATE: 01/08/83
*****

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- S 22.87
STATION LONGITUDE ----- E 316.87
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1973 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between OMEGA
                    signals at one or more of these frequencies:
                    10.2, 13.6 kHz, digitized hourly readings
                    from strip charts (speed 1 inch/h).
                    (2 Tracor 599R receivers).
RAW DATA ----- Some strip charts (continuous),
                    some coding forms (hourly data),
                    cassette tapes (hourly data)
                    REGULAR
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
                    magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                    OMEGA Nav. Sys. Oper. Det.
                    US Coast Guard HQ (G-ONS00/43)
                    2100 2nd St., S. W.
                    Washington DC 20593
                    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
                    phase. Some signal strength recording instruments
                    used.

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*****
ITEM: 2136
RESOLUTE BAY, CANADA DATE: 01/08/83
*****

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 74.71
STATION LONGITUDE ----- E 265.03
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1979 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Some strip charts (continuous);
                    coding forms (hourly data);
                    REGULAR
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
                    magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                    OMEGA Nav. Sys. Oper. Det.
                    US Coast Guard HQ (G-ONS00/43)
                    2100 2nd St., S. W.
                    Washington DC 20593
                    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM: 2138
SABANA SECA, PUERTO RICO, USA DATE: 01/08/83
*****

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 18.45
STATION LONGITUDE ----- E 293.78
ALTERNATE NAMES ----- SANJUS
                    San Juan
DATES OF OPERATION ----- 08/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
                    REGULAR
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
                    magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                    OMEGA Nav. Sys. Oper. Det.
                    US Coast Guard HQ (G-ONS00/43)
                    2100 2nd St., S. W.
                    Washington DC 20593
                    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C06 Sudden Ionospheric Disturbances (Cont.)

 ST. ANTHONY, CANADA

ITEM: 2163
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 51.36
 STATION LONGITUDE ----- E 304.37
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ST. HELENA ISLAND

ITEM: 2407
 DATE: 22/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 15.94
 STATION LONGITUDE ----- E 354.33
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1982 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA ----- Cassette tape (hourly)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/TP43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ST. CLOUD, USA

ITEM: 574
 DATE: 15/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 45.57
 STATION LONGITUDE ----- E 265.81
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1974 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- LF and VLF signal strength receivers used to
 monitor radio transmissions (17.8 kHz,
 18.6 kHz, etc.) throughout 24-hour period.
 RAW DATA ----- Strip chart recordings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tabular
 DATA ROUTINELY PUBLISHED ----- Informal publication for members of
 group giving tabular data and some
 reproductions of interesting
 events, 1-3 pages, monthly.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Alexander S. McWilliams
 813 North 24th Avenue
 St. Cloud, MN 56301
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Fluctuation activity in VLF signal strengths is
 also monitored using electronic filters and
 recorded on strip charts.

 SAMOA

ITEM: 2144
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- S 14.33
 STATION LONGITUDE ----- E 189.28
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1977 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA ----- Cassette data tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

C06 Sudden Ionospheric Disturbances (Cont.)

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*****
SARDINIA, GREECE
*****
ITEM: 1018
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 39.18
STATION LONGITUDE ----- E 9.16
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1969 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between
                                OMEGA signals at one or more of these
                                frequencies: 10.2, 11.3, 13.6 kHz, digitized
                                hourly readings from strip charts (speed one
                                inch/h). (2 Tracor 599R receivers 1969-1978),
                                07/1978 an MX-1104 was installed and the Tracor
                                599R receivers were subsequently removed.
RAW DATA ----- Casette data tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
                                magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONS00/43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
                                phase. Some signal strength recording instruments
                                used.
    
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*****
SINGAPORE, MALAYSIA
*****
ITEM: 2416
DATE: 22/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 1.46
STATION LONGITUDE ----- E 103.83
ALTERNATE NAMES -----
DATES OF OPERATION ----- 12/1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Casette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- YES
                                Commanding Officer
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONS00/TP43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
SEATTLE, USA
*****
ITEM: 2148
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 47.60
STATION LONGITUDE ----- E 237.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Casette data tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
                                magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONS00/43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
                                phase. Some signal strength recording instruments
                                used.
    
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*****
TSUSHIMA, JAPAN
*****
ITEM: 2174
DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
STATION LATITUDE ----- N 34.32
STATION LONGITUDE ----- E 129.21
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1975 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- LITCOM
RAW DATA ----- Some strip charts (continuous),
                                coding forms (hourly data)
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
                                magnetic data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONS00/43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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C06 Sudden Ionospheric Disturbances (Cont.)

 VALLEY COTTAGE, USA

ITEM: 1068
 DATE: 01/07/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 41.07
 STATION LONGITUDE ----- E 286.45
 ALTERNATE NAMES ----- AI AAVSO
 DATES OF OPERATION ----- 03/1955 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- 4 VLF Receivers and Recorder (graphical) for indirect detection of solar flares; designed and built most modern integrated circuit receivers (costing about \$35) for many of our 58 worldwide stations in our group network (AAVSO). Observing schedule 24 h continuous; chart speed 1 inch/h; reporting to NOAA Boulder (WDC-A).

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, paper tape
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- David Marshaw
 Solar Division, AAVSO
 141 Quaspeck Blvd.
 Valley Cottage, NY 10989
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- D. Marshaw created worldwide network of 58 observers American Association of Variable Star Observers (AAVSO). Continuously monitor by radio receivers in the VLF region and record sudden enhancements of atmospherics; sudden enhancement of signals and short wave fadeouts and records these on strip chart recorders moving at 1 inch/h on a 24 h basis.

 WASHINGTON, USA

ITEM: 2183
 DATE: 01/08/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 38.86
 STATION LONGITUDE ----- E 258.01
 ALTERNATE NAMES ----- None
 DATES OF OPERATION ----- 10/1977 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Gulon, MX1104

RAW DATA ----- Some strip charts (continuous), cassette tapes (hourly data)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks, magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
 OMEGA Nav. Sys. Oper., Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S.W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Cs standard, absolute 1-way phase.

 YUNNAN, CHINA

ITEM: 2299
 DATE: 25/11/83

DISCIPLINE ----- C06 Sudden Ionospheric Disturbances
 STATION LATITUDE ----- N 25.03
 STATION LONGITUDE ----- E 102.78
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1982 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Loran-C receiver, phase tracking of Loran-C one-hop sky wave signal, phase and amplitude are recorded.

RAW DATA ----- Some strip charts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Table of SPA
 DATA ROUTINELY PUBLISHED ----- MONTHLY SOLAR ACTIVITY OF YUNNAN OBSERVATORY

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Zhou Jiguang
 Astrometry Division
 Yunnan Observatory
 Kunming
 China

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. Chen Hong-Min
 Astrometry Division
 Yunnan Observatory
 Kunming
 China

ADDITIONAL COMMENTS -----

C07 Solar Protons and Electrons - Direct Measurement

 BOULDER, USA

ITEM: 924
 DATE: 10/05/84

DISCIPLINE ----- C07 Solar Protons and Electrons - Direct Measurement
 STATION LATITUDE ----- Geosynchronous Orbit
 STATION LONGITUDE ----- Geosynchronous Orbit
 ALTERNATE NAMES ----- Boulder Observatory
 SOLTERWARN
 DATES OF OPERATION ----- 1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Satellite X-ray, Particle and Magnetic Sensors, GOES-5, GOES-6; Geostationary satellites with X-ray, particle and magnetic sensors provide continuous data to SOLTERWARN.
 Strip charts, magnetic tape

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, microfilm
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Space Environment Services Center
 NOAA R/E/SE2
 325 Broadway
 Boulder, CO 80303
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Part of the USA Operational Flare Patrol Network.

 RAMEY, USA

ITEM: 1125
 DATE: 01/02/84

DISCIPLINE ----- C07 Solar Protons and Electrons - Direct Measurements
 STATION LATITUDE ----- N 18.52
 STATION LONGITUDE ----- E 292.90
 ALTERNATE NAMES ----- DET 3, 4 MW (MAC)
 DATES OF OPERATION ----- 06/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 18 cm white light sunspot drawings. AN/FMQ - 7 solar optical telescope; observatory operates daily from 1.2 h before sunrise to 1/2 h after sunset; 35 mm photo of sun, Yagi antenna for monitoring satellite beacon to determine total electron count.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- Film, drawings, logs
 REGULAR REDUCED DATA AVAILABLE AFTER ----- REGULAR
 FORM OF REDUCED DATA ----- 1/30 MONTHS
 DATA ROUTINELY PUBLISHED ----- Film, photographic prints, graphical plots, magnetic tape (histograms)
 DATA SENT TO WDC-A ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- DET 3, 3rd Weather Wing (MAC)
 c/o Postmaster
 FPO Miami, FL 34050
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MURMANSK, USSR

ITEM: 422
 DATE: 01/01/80

DISCIPLINE ----- C07 Solar Protons and Electrons - Direct Measurements
 STATION LATITUDE ----- N 68.95
 STATION LONGITUDE ----- E 33.05
 ALTERNATE NAMES ----- Olenja, Murmansk Region
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Balloon Cosmic Ray Intensity Measurement in Stratosphere. RRI radiosound consists of two G-M tubes arranged as telescope interlayered by a 7 mm thick aluminium plate. Wall thickness of G-M tube is 0.05 G/sq cm of steel. The counting rate of a single counter and two-counter coincidences are recorded. The balloons are launched every day at 0530 UT Monday through Saturday and at 1130 UT on Sunday.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- Tables, drawings
 REGULAR REDUCED DATA AVAILABLE AFTER ----- REGULAR
 FORM OF REDUCED DATA ----- 1.5-2 MONTHS
 DATA ROUTINELY PUBLISHED ----- Tables of cosmic ray flux dependence on stratospheric pressure
 Beginning from January 1972, data on Cosmic Ray Intensity at Transition Maximum in stratosphere are routinely published by Soviet Review of COSMIC DATA, Publishing House Nauka, Moscow.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Yu I. Stozhkov
 P. N. Lebedev Physical Institute
 Leninsky Prospekt, 53
 Moscow 117924
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. G. A. Bazilevskaya
 P. N. Lebedev Physical Institute
 Leninsky Prospekt, 53
 Moscow 117924
 USSR

ADDITIONAL COMMENTS ----- From 07/1957 to 04/1958 observations were occasional. Since 05/1958 observations have been regularly scheduled.

C08 Solar Protons Riometer

 HALLEY BAY, ANTARCTICA

ITEM: 943
 DATE: 12/08/83

DISCIPLINE ----- C08 Solar Protons - Riometer
 STATION LATITUDE ----- S 75.52
 STATION LONGITUDE ----- E 333.37
 ALTERNATE NAMES ----- Halley
 DATES OF OPERATION ----- 07/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION -----

07/1972 - 10/1980, David Andersen Type DA-87
 Riometer, continuous measure of cosmic noise at
 27.6 MHz. Instrument similar to IGY Riometer
 (Little and Leinbach, Proc. IRE 47, 2 (1959)),
 chart speed 1 inch/h, or 2 inch/h. Antenna 3
 element Yagi directed at South celestial pole.
 05/1981 to present, array of four La Jolla
 Sciences 30 MHz Riometers covering regions 300
 km across in the four cardinal directions. 3
 element Yagis at 45° to zenith. Chart speed 6
 cm/h. Cassette logging each channel every 5
 or 20 secs. System time constant 3 secs.

RAW DATA ----- Strip charts and digital cassettes

DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 10 MONTHS
 FORM OF REDUCED DATA ----- Computer printout
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Chilton
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

Dr. M. J. Jarvis
 British Antarctic Survey
 Madingley Road
 Cambridge, CB3 0ET
 United Kingdom
 World Data Centre C1
 Rutherford Appleton Laboratory
 Chilton
 Didcot
 Oxfordshire OX11 0QX
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS -----

 SIPLE, ANTARCTICA

ITEM: 2150
 DATE: 07/07/83

DISCIPLINE ----- C08 Solar Protons - Riometer
 STATION LATITUDE ----- S 76.00
 STATION LONGITUDE ----- E 276.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01 15/1979 to present
 OBSERVING SCHEDULE ----- Continuous
 INSTRUMENT DESCRIPTION ----- 30 MHz broadband riometer

RAW DATA ----- Digital magnetic tape
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Plots, digital tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

Dr. T. J. Rosenberg, IPST
 Univ. of Maryland
 College Park, MD 20742
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data will be reduced upon request.

 THULE AB, GREENLAND

ITEM: 2216
 DATE: 01/04/84

DISCIPLINE ----- C08 Solar Protons - Riometer
 STATION LATITUDE ----- N 76.5
 STATION LONGITUDE ----- E 291.3
 ALTERNATE NAMES ----- RADC
 DATES OF OPERATION ----- 1974 - present
 OBSERVING SCHEDULE ----- Continuous
 INSTRUMENT DESCRIPTION ----- Riometer - 30 MHz

RAW DATA ----- Digital tape recorder
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Computer plots
 DATA ROUTINELY PUBLISHED ----- RADC in house reports
 DATA SENT TO WDC-A ----- NU
 DATA SENT TO WDC-B ----- NU
 DATA SENT TO WDC-C ----- NU
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

John P. Turtle
 RADC/ELPL/Sb5
 Hanscom AFB, MA 01731
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TROMSO, NORWAY

ITEM: 2170
 DATE: 27/07/83

DISCIPLINE ----- C08 Solar Protons--Riometer
 STATION LATITUDE ----- N 69.70
 STATION LONGITUDE ----- E 19.20
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- Fall 1977 to present
 OBSERVING SCHEDULE ----- Continuous
 INSTRUMENT DESCRIPTION -----

The multi-narrow-beam riometer experiment is
 operated at 51.4 MHz. The antenna has 17
 narrow beams, each with a beam width of 8
 degrees. One beam is vertical. The rest are
 located symmetrically about zeniths in the
 geographic meridian plane. At present the
 latitudinal profile of ionospheric absorption
 between 70.5 degrees and 68.9 degrees N is
 measured using eight of these beams.

RAW DATA ----- Magnetic tape, paper recording of
 four beams

DATA REDUCTION PRACTICE ----- Event oriented
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Computer plots of absorption vs time
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

Nielsen
 Max-Planck-Institut fur Aeronomie
 Postfach 20
 D-3411 Katlenburg-Lindau 3
 FRG

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

C11 Solar Protons - Other Types of Measurements

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*****
ALEXANDRIA, EGYPT
*****
ITEM: 2418
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 31.20
STATION LONGITUDE ----- E 29.87
ALTERNATE NAMES -----
DATES OF OPERATION ----- Periodic
OBSERVING SCHEDULE ----- 05/1981 to present
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
ATTU, USA
*****
ITEM: 2422
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 52.83
STATION LONGITUDE ----- E 173.18
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
ASCENSION ISLAND
*****
ITEM: 2428
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- S 7.95
STATION LONGITUDE ----- E 14.33
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1980 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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```

*****
AUSTIN, USA
*****
ITEM: 2421
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 30.90
STATION LONGITUDE ----- E 262.34
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1983 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```


C11 Solar Protons - Other Types of Measurements (Cont.)

```

*****
BELEM, BRAZIL
*****
ITEM: 2012
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 1.39
STATION LONGITUDE ----- E 311.56
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 06/1974 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between
                                OMEGA signals at one or more of these
                                frequencies: 10.2, 13.6 kHz.
                                (2 Tracor 599R receivers).

RAW DATA ----- Some strip charts (continuous);
                  some coding forms (hourly data)

DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
                              magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONS00/43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
                              phase. Some signal strength recording instruments
                              used.
    
```

```

*****
HORIN, PUERTO RICO, USA
*****
ITEM: 2430
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 18.50
STATION LONGITUDE ----- E 72.87
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09, 1971 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONS00/43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```

```

*****
BERMUDA
*****
ITEM: 2014
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 32.26
STATION LONGITUDE ----- E 295.12
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 10/1968 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between
                                OMEGA signals at one or more of these
                                frequencies: 10.2, 13.6 kHz. Digitized hourly
                                readings from strip charts (speed 1 inch/h).
                                (2 Tracor 599R receivers 1968-1979).
                                07/1979 an MX-1104 was installed and the 2
                                Tracor 599R receivers were subsequently removed.

RAW DATA ----- Some strip charts (continuous);
                  some coding forms (hourly data);
                  cassette data tape (hourly data)

DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
                              magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONS00/43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
                              phase. Some signal strength recording instruments
                              used.
    
```

```

*****
BRISBANE, AUSTRALIA
*****
ITEM: 2427
DATE: 01/06/84

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- S 27.03
STATION LONGITUDE ----- E 153.17
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1980 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
                                OMEGA Nav. Sys. Oper. Det.
                                US Coast Guard HQ (G-ONS00/TP43)
                                2100 2nd St., S. W.
                                Washington DC 20593
                                USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```

C11 Solar Protons - Other Types of Measurements (Cont.)

 BUENOS AIRES, ARGENTINA

ITEM: 2022
 DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
 STATION LATITUDE ----- S 34.62
 STATION LONGITUDE ----- E 301.64
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 02/1978 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Cassette tapes (hourly data)
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 CARRA, AUSTRALIA

ITEM: 2420
 DATE: 01/06/84

DISCIPLINE ----- C11 Solar Protons
 STATION LATITUDE ----- S 38.47
 STATION LONGITUDE ----- E 146.93
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08 1982 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Cassette tape (hourly)
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/TP43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LAMBRIDGE, USA

ITEM: 2025
 DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
 STATION LATITUDE ----- N 42.39
 STATION LONGITUDE ----- E 288.86
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 06/1977 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MX1104
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Cassette tapes (hourly data)
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printout data blocks,
 magnetic tape data blocks
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- NO
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

Chief Navigation Science Division
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 COCOS, AUSTRALIA

ITEM: 2426
 DATE: 01/06/84

DISCIPLINE ----- C11 Solar Protons
 STATION LATITUDE ----- S 12.19
 STATION LONGITUDE ----- E 96.83
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1980 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MX-1104
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Cassette tape (hourly)
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape data blocks
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

Commanding Officer
 OMEGA Nav. Sys. Oper. Det.
 US Coast Guard HQ (G-ONS00/TP43)
 2100 2nd St., S. W.
 Washington DC 20593
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

C11 Solar Protons - Other Types of Measurements (Cont.)

```

*****
CUBI POINT, PHILIPPINES
*****
ITEM: 2434
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 18.78
STATION LONGITUDE ----- E 120.30
ALTERNATE NAMES ----- Subie Bay
DATES OF OPERATION ----- 12/1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ---
Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
DIEGO GARCIA
*****
ITEM: 2041
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- S 7.28
STATION LONGITUDE ----- E 72.36
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 07/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
magnetic tape data blocks.
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ---
Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- On-site Cs standard available.

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*****
DARWIN, AUSTRALIA
*****
ITEM: 2034
DATE: 01/06/84

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- S 12.38
STATION LONGITUDE ----- E 130.97
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 07/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks.
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ---
Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
FARNBOROUGH, UNITED KINGDOM
*****
ITEM: 2049
DATE: 01/06/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 51.23
STATION LONGITUDE ----- E 359.25
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 01/1979 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks.
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ---
Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C11 Solar Protons - Other Types of Measurements (Cont.)

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*****
FROBISHER BAY, CANADA
*****
ITEM: 2053
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 83.75
STATION LONGITUDE ----- E 291.46
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 11/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104

RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
Magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-0NS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
HESTMUNA, NORWAY
*****
ITEM: 2054
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 66.53
STATION LONGITUDE ----- E 12.85
ALTERNATE NAMES -----
DATES OF OPERATION ----- 05/1967 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- OMEGA Receiver, phase differences between OMEGA
signals at one or more of these frequencies:
10.2, 13.6 kHz.
(Litcom receiver.)

RAW DATA ----- Some strip charts (continuous),
Some coding forms (hourly data)

DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
Magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-0NS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium standard available for measuring one way
phase. Some signal strength recording instruments
used.

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*****
MOKKAIDU, JAPAN
*****
ITEM: 2070
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 45.52
STATION LONGITUDE ----- E 141.84
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104

RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
Magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-0NS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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```

*****
MOKKAIDU, JAPAN
*****
ITEM: 2070
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 45.52
STATION LONGITUDE ----- E 141.84
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX1104

RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks;
Magnetic tape data blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-0NS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C11 Solar Protons - Other Types of Measurements (Cont.)

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*****
ITEM 2072
IN VEG, C11/A DATE: 01/08/83
*****
DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 08.31
STATION LONGITUDE ----- E 226.50
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1979 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM 2423
KHARTOUM, SUDAN DATE: 01/08/83
*****
DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 15.61
STATION LONGITUDE ----- E 32.54
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1981 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape hourly
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM 2079
REKJAVIK, ICELAND DATE: 01/08/83
*****
DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 63.46
STATION LONGITUDE ----- E 337.28
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 04/1979 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM 2084
KURE, JAPAN DATE: 01/08/83
*****
DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 28.39
STATION LONGITUDE ----- E 181.71
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 10/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C11 Solar Protons - Other Types of Measurements (Cont.)

```

*****
LA MORE, USA
*****
DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 35.77
STATION LONGITUDE ----- E 103.64
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 06/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSD/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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ITEM: 2086
DATE: 01/08/83

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*****
LA REUNION
*****
DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- S 20.91
STATION LONGITUDE ----- E 55.51
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 04/1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- CITCOM
RAW DATA ----- Some strip charts (continuous),
coding forms (hourly data);
Regular
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSD/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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ITEM: 2089
DATE: 01/08/83

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*****
LA MORE, USA
*****
DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 46.56
STATION LONGITUDE ----- E 261.36
ALTERNATE NAMES ----- North Dakota
DATES OF OPERATION ----- 10/1972 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- OMEGA 1104 Receiver, phase differences between
OMEGA signals at one or more of these frequencies
10.2, 11.3, 13.6 kHz.
RAW DATA ----- Some strip charts (continuous),
some coding forms (hourly data),
cassette tape (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSD/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cesium Standard available for measuring one-way
phase. Some signal strength recording instruments
used. Plans are for as many as 60 monitor stations.

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ITEM: 2155
DATE: 01/01/80

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*****
LEWIS, UNITED KINGDOM
*****
DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 58.51
STATION LONGITUDE ----- E 353.74
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1980 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSD/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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ITEM: 2425
DATE: 01/08/83

C11 Solar Protons - Other Types of Measurements (Cont.)

```

*****
MARCUS ISLAND
*****
ITEM: 2099
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 24.29
STATION LONGITUDE ----- E 153.98
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 02/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
MONROVIA, LIBERIA
*****
ITEM: 2106
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 6.43
STATION LONGITUDE ----- E 349.19
ALTERNATE NAMES ----- Brewe
DATES OF OPERATION ----- 02/1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- LITCOM
RAW DATA ----- Some strip charts (continuous),
coding forms (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
MOMBASA, KENYA
*****
ITEM: 2431
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 4.06
STATION LONGITUDE ----- E 39.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S. W.
Washington DC 20953
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
NAVAL OCEAN SYSTEMS CENTER, USA
*****
ITEM: 2113
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 32.70
STATION LONGITUDE ----- E 242.75
ALTERNATE NAMES ----- NLC, NEL
DATES OF OPERATION ----- 09/1978 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some Cs - based data available.

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C11 Solar Protons - Other Types of Measurements (Cont.)

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*****
NEA MAKRI, GREECE
*****
ITEM: 2115
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE --- N 38.10
STATION LONGITUDE --- E 23.98
ALTERNATE NAMES --- NONE
DATES OF OPERATION --- 06/1977 to present
OBSERVING SCHEDULE --- REGULAR
INSTRUMENT DESCRIPTION --- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE --- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER --- 2 MONTHS
FORM OF REDUCED DATA --- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSOD/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
PANAMA
*****
ITEM: 2125
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE --- N 9.41
STATION LONGITUDE --- E 280.09
ALTERNATE NAMES --- NONE
DATES OF OPERATION --- 07/1977 to present
OBSERVING SCHEDULE --- REGULAR
INSTRUMENT DESCRIPTION --- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE --- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER --- 2 MONTHS
FORM OF REDUCED DATA --- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSOD/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
NEW ZEALAND
*****
ITEM: 2432
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE --- S 41.23
STATION LONGITUDE --- E 174.92
ALTERNATE NAMES --- NONE
DATES OF OPERATION --- 08/1983 to present
OBSERVING SCHEDULE --- Regular
INSTRUMENT DESCRIPTION --- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE --- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER --- 2 MONTHS
FORM OF REDUCED DATA --- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSOD/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
PERTH, AUSTRALIA
*****
ITEM: 2429
DATE: 01/06/84

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE --- S 31.94
STATION LONGITUDE --- E 115.98
ALTERNATE NAMES --- NONE
DATES OF OPERATION --- 08/1979 to present
OBSERVING SCHEDULE --- Regular
INSTRUMENT DESCRIPTION --- M7-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE --- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER --- 2 MONTHS
FORM OF REDUCED DATA --- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONSOD/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C11 Solar Protons - Other Types of Measurements (Cont.)

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*****
PERU
*****
ITEM: 2129
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- S 16.47
STATION LONGITUDE ----- E 342.81
ALTERNATE NAMES ----- Arquipa
DATES OF OPERATION ----- 06/1978 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MK1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape blocks

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ---
Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
RECIFE, BRAZIL
*****
ITEM: 2135
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- S 8.11
STATION LONGITUDE ----- E 325.10
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MK1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape blocks

DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ---
Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
PRETORIA, REP. OF S. AFRICA
*****
ITEM: 2419
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- S 25.73
STATION LONGITUDE ----- E 28.27
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ---
Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S. W.
Washington DC 20953
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
RESOLUTE BAY, CANADA
*****
ITEM: 2137
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 74.71
STATION LONGITUDE ----- E 265.03
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1979 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MK1104
RAW DATA ----- Some strip charts (continuous),
coding forms (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ---
Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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C11 Solar Protons - Other Types of Measurements (Cont.)

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*****
SABANA SECA, PUERTO RICO, USA
*****
ITEM: 2139
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 18.45
STATION LONGITUDE ----- E 293.78
ALTERNATE NAMES ----- SANJUS
DATES OF OPERATION ----- San Juan
OBSERVING SCHEDULE ----- 05/1977 to present
INSTRUMENT DESCRIPTION ----- REGULAR
RAW DATA ----- MX1104
DATA REDUCTION PRACTICE ----- Cassette tape (hourly data)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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```

*****
ST. HELENA ISLAND
*****
ITEM: 2424
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- S 15.94
STATION LONGITUDE ----- E 353.33
ALTERNATE NAMES -----
DATES OF OPERATION ----- 05/1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA -----
DATA REDUCTION PRACTICE ----- Cassette tape (hourly)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/1943)
2100 2nd St., S. W.
Washington DC 20953
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```

```

*****
ST. ANTHONY, CANADA
*****
ITEM: 2006
DATE: 21/12/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 51.34
STATION LONGITUDE ----- E 304.27
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
SAMOA
*****
ITEM: 2145
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- S 14.33
STATION LONGITUDE ----- E 189.28
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tape (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape blocks

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20953
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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C11 Solar Protons - Other Types of Measurements (Cont.)

```

*****
SEATTLE, USA
*****
ITEM: 2149
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 47.60
STATION LONGITUDE ----- E 127.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MX1104
RAW DATA ----- Cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
TSUSHIMA, JAPAN
*****
ITEM: 2145
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other Types of Measurements
STATION LATITUDE ----- N 34.32
STATION LONGITUDE ----- E 129.21
ALTERNATE NAMES ----- None
DATES OF OPERATION ----- 04/1975 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- LITCOM
RAW DATA ----- Some strip charts (continuous),
cassette tapes (hourly data)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks,
magnetic tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
SINGAPORE, MALAYSIA
*****
ITEM: 2433
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons
STATION LATITUDE ----- N 1.46
STATION LONGITUDE ----- E 103.83
ALTERNATE NAMES -----
DATES OF OPERATION ----- 12/1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- MX-1104
RAW DATA ----- Cassette tape (hourly)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape data blocks
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Commanding Officer
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/TP43)
2100 2nd St., S. W.
Washington DC 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
WASHINGTON, USA
*****
ITEM: 2184
DATE: 01/08/83

DISCIPLINE ----- C11 Solar Protons - Other types of Measurements
STATION LATITUDE ----- N 38.86
STATION LONGITUDE ----- E 258.01
ALTERNATE NAMES ----- None
DATES OF OPERATION ----- 10/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Gulton, MX1104
RAW DATA ----- Some strip charts (continuous), cassette
tapes (hourly data)
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout data blocks, magnetic
tape data blocks
DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief Navigation Science Division
OMEGA Nav. Sys. Oper. Det.
US Coast Guard HQ (G-ONS00/43)
2100 2nd St., S. W.
Washington, D.C. 20593
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Cs Standard. Absolute 1 way phase.

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C13 Cosmic Ray Ground Level Increases

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*****
SANAE, ANTARCTICA
*****
ITEM: 1047
DATE: 01/09/83

DISCIPLINE ----- C13 Cosmic Ray Ground Level Increases
STATION LATITUDE ----- S 70.31
STATION LONGITUDE ----- E 357.64
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1964 to present
                          Station moved
                          Intermittent operation
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 3-NM-64 Neutron monitor, standard super monitor,
                          10 min recording of counting rate and pressure
RAW DATA ----- Punch tape, digital printout,
                          magnetic tape, computer printout
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout, graphs, magne-
                          tic tape
DATA ROUTINELY PUBLISHED ----- COSMIC RAY NEUTRON MONITOR DATA,
                          SANAE
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Cosmic Ray Research Unit
                          Department of Physics
                          Potchefstroom University for CHE
                          Potchefstroom 2520
                          Rep. of S. Africa
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No data available from 4 February 1971 to 17 March
                          1971 when station was moved about 500m. Special
                          purpose data available after 1 month.

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*****
SANAE, ANTARCTICA
*****
ITEM: 1153
DATE: 01/09/83

DISCIPLINE ----- C13 Cosmic Ray Ground Level Increases
STATION LATITUDE ----- S 70.31
STATION LONGITUDE ----- E 357.64
ALTERNATE NAMES -----
DATES OF OPERATION ----- 05/1971 to present
                          Intermittent operation
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 4-NM2 Neutron Moderated Detector with 4 BP28
                          Chalk River neutron tubes surrounded by 7.5 cm
                          paraffin wax. 10 minute recording of counting
                          rate and pressure.
RAW DATA ----- Punch tapes, digital printout,
                          magnetic tape, computer printout
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printouts, graphs, mag-
                          netic tape
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Cosmic Ray Research Unit
                          Department of Physics
                          Potchefstroom University for CHE
                          Potchefstroom 2520
                          Rep. of S. Africa
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.
                          1-NM2 started 1 May 1971, stopped February 1974.
                          4-NM2 started 21 March 1974.

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C14 Other Optical Flare Observations

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*****
SACRAMENTO PEAK, USA
*****
ITEM: 2050
DATE: 01/01/84

DISCIPLINE ----- C14 Other Optical Flare Observations
STATION LATITUDE ----- N 32.78
STATION LONGITUDE ----- E 254.68
ALTERNATE NAMES ----- Sac Peak
DATES OF OPERATION ----- 1979 to present
OBSERVING SCHEDULE ----- As a function of solar activity and scientists'
                           demand.
INSTRUMENT DESCRIPTION ----- Multiple band polarimeter (MBP), a photographic
                           instrument capable of recording images in the
                           following sequence of wavelengths: 6200A, 4300A,
                           5650A, 4950A, 3610A, 5650A.

RAW DATA ----- 35 mm film
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
                                             Sacramento Peak Observatory
                                             Sunspot, New Mexico 88349
                                             USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
                                             Sacramento Peak Observatory
                                             Sunspot, New Mexico 88349
                                             USA
ADDITIONAL COMMENTS ----- The multiple band polarimeter is housed in the hilltop
                           dome. Solar image at the film plane is 12.7 cm. A
                           Wallston prism is inserted into the light path for
                           polarimetry.
    
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*****
SACRAMENTO PEAK, USA
*****
ITEM: 2076
DATE: 01/01/84

DISCIPLINE ----- C14 Other Optical Flare Observations
STATION LATITUDE ----- N 32.78
STATION LONGITUDE ----- E 254.68
ALTERNATE NAMES ----- Sac Peak
DATES OF OPERATION ----- 1966 to present
OBSERVING SCHEDULE ----- Occasional
INSTRUMENT DESCRIPTION ----- Universal Spectrograph, photographs of solar spectrum
                           - 3250 - 9000A on (3) 60 cm strips or 35 mm film 4"
                           solar image. Frequently used for solar corona.

RAW DATA ----- 35 mm negative film
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jack Zirker
                                             Sacramento Peak Observatory
                                             Sunspot, New Mexico 88349
                                             USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Lou B. Gilliam
                                             Sacramento Peak Observatory
                                             Sunspot, New Mexico 88349
                                             USA
ADDITIONAL COMMENTS ----- Universal spectrograph is coupled to 40 cm coronagraph
                           telescope.
    
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D. Geomagnetic Variations

D. Geomagnetic Variations

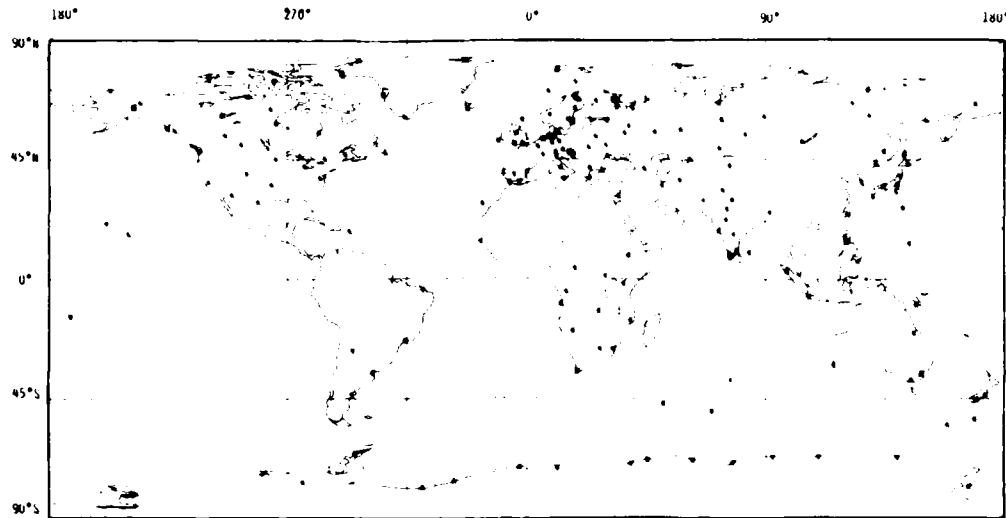
Below is a listing of the two maps contained for this discipline:

D01 Geomagnetic Standard and Rapid Run Measurements

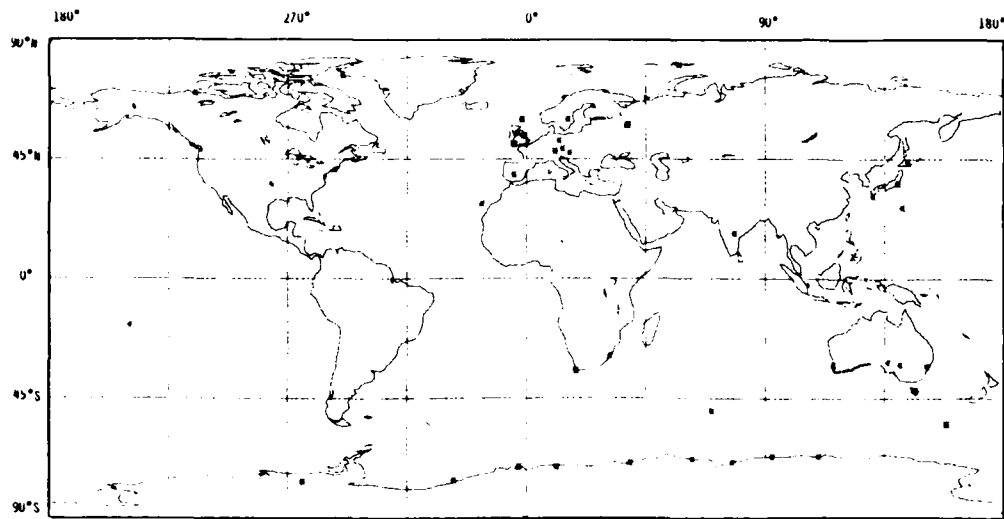
D02 Magnetospheric Micropulsation Phenomena

Both of the maps are clearly labelled.

D.1 Maps



D01 GEOMAGNETIC STANDARD AND RAPID RUN MEASUREMENTS



D02 MAGNETOSPHERIC MICROPULSATION PHENOMENA

D01 Geomagnetic Standard and Rapid Run Measurements

 ABISKO, SWEDEN

 ITEM: 2200
 DATE: 01/08/83

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 68.36
 STATION LONGITUDE ----- E 18.82
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1921 to present (with interruptions);
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- La Cour variometers, 20 mm/h, scale values 10 nT/mm.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfilm, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysical Survey of Sweden
 S-751 28 Uppsala
 Sweden
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ALERT, CANADA

 ITEM: 7
 DATE: 08/08/83

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 82.50
 STATION LONGITUDE ----- E 297.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1961 to present
 OBSERVING SCHEDULE ----- Intermittent operation (30/09/1972 to 01/04/1980)
 INSTRUMENT DESCRIPTION ----- REGULAR
 Recording fluxgate, continuous recording of earth's magnetic field. X(north), Y(east), Z(vertical) components of field recorded once per minute on digital cassette with analog output on strip chart at 20 mm/h. Absolute observations of D(declination), I(inclination) and of total intensity F are made once or twice a week.
 RAW DATA ----- Digital magnetic tape, strip charts, photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables, microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth Physics Branch contains instrument parameters, notes on data quality and instrument changes, annual means
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept. of Energy, Mines & Resources
 1 Observatory Cres.
 Ottawa, Ontario K1A 0T3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data is available from the Observatory at cost if not available from WDC-A.
 Standard Ruska magnetograph continuously records the variations of the earth's magnetic field on photographic paper. 3 variometers record the X(north), Y(east), and Z(vertical) components of the field with a paper speed of 20 mm/h. Portable fluxgate magnetometer for absolute D.I. observations, proton precession magnetometer for F observations. Digital recording commenced 03/1978. Special purpose data usually available after 2 months.

 ADDIS ABABA, ETHIOPIA

 ITEM: 2285
 DATE: 25/07/83

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 9.29
 STATION LONGITUDE ----- E 38.76
 ALTERNATE NAMES ----- AAE
 DATES OF OPERATION ----- 01/1958 to present
 INSTRUMENT DESCRIPTION ----- Absolute value and sensitivity measurements.
 Rusva Variographs: H-6093, D-6094 and Z-6277
 Photographic records of H, Z and D.
 Sensitivity values and absolute values.
 RAW DATA ----- REGULAR (both manually and mechanically)
 DATA REDUCTION PRACTICE ----- REGULAR (both manually and mechanically)
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
 FORM OF REDUCED DATA ----- Hourly values
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysical Observatory
 Addis Ababa University
 P.O. Box 1176
 Addis Ababa
 Ethiopia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ALIBAG, INDIA

 ITEM: 10
 DATE: 01/02/84

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 18.64
 STATION LONGITUDE ----- E 72.87
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1904 to present
 INSTRUMENT DESCRIPTION ----- A set of D, H and Z magnetographs by Bobrov (IZMIRAN).
 Variation of elements D, H, Z are continuously recorded, along with baselines. Recorded on photographic paper at 20 mm/h; charts shifted around 3 UT every other day. Time marks recorded every hour by automatic additional line at each UT hour. A set of LaCour D, H, Z variometers replaces old Watson and LaCour set-up in 1/1976; record on single photopaper at 20 mm/h.
 RAW DATA ----- Photographic paper, microfilm copies
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables in computer printout form
 DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA, published annually by the Director, Indian Institute of Geomagnetism, Colaba, Bombay 400 005, India
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. G. Rastool, Director
 Indian Institute of Geomagnetism
 Dr. Nanabhai Moos Marn
 Colaba, Bombay
 Maharashtra 400 005
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Alibag succeeds Colaba, Bombay Magnetic Observatory started in 1906 and closed in 1905. Alibag is 28 km (18 miles) SSE of Colaba. A vector proton precession magnetometer is used since 1977 for the determination of absolute values of H and Z, in addition to Kew pattern magnetometer, DFM and BM7.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
ALMA ATA, USSR                                ITEM: 832
*****                                         DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 43.25
STATION LONGITUDE ----- E 76.92
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1963 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard Magnetometer
RAW DATA ----- Magnetograms on photo paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Microfilm copies of mean hourly
                                values and magnetograms
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Ionospheric Section
                                Kazakh Academy of Sciences
                                Kapenskoye Plato
                                480088 Alma-Ata
                                USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
AMATSIA, ISRAEL                               ITEM: 2218
*****                                         DATE: 15/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 31.55
STATION LONGITUDE ----- E 34.91
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1976 to present
INSTRUMENT DESCRIPTION ----- For absolute measurements: 00-Declinometer, QHM,
                                BMZ, Askania Magnetic Variograph GV-3, normal
                                speed recording 20 mm/h, of magnetic declination,
                                horizontal and vertical components.
RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- Hourly mean values of D, H and Z
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, microfilm
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Survey of Israel
                                Research Division
                                P.O. Box 14171
                                Tel-Aviv 61 141
                                Israel
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- The instruments for absolute measurements (00-Declino-
                                meter, QHM, BMZ) are from the Danish Meteorological
                                Institute.
    
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*****
ALMERIA, SPAIN                                ITEM: 16
*****                                         DATE: 01/02/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 36.85
STATION LONGITUDE ----- E 357.54
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1955 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- La Cour magnetometer, absolute magnetometers,
                                D, H, Z variographs, QHM, BMZ, declinometer, D,
                                H, Z variograph speed 15 mm/h. Absolute measure-
                                ments weekly.
RAW DATA ----- Film, photographic paper, tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, microfilm
DATA ROUTINELY PUBLISHED ----- ANUARIOS DEL SERVICIO DE GEOMAGNE-
                                TISMO Y AERONOMIA, Instituto
                                Geografico y Catastral, Madrid,
                                available on exchange
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES: Lyngby
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- J. Merino del Rio
                                Instituto Geografico y Catastral
                                Graf Ibanez De Ibero, 3
                                Madrid
                                Spain
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Published tables of hourly and mean values, K-indices,
                                magnetic phenomena.
    
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*****
ANDØYA, NORWAY                                ITEM: 19
*****                                         DATE: 24/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 60.28
STATION LONGITUDE ----- E 16.02
ALTERNATE NAMES ----- Øksebasen
DATES OF OPERATION ----- 01/1972 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- EDA fluxgate magnetometer, FM 100 R, 3(x,y,z).
                                Sensitivity of 1 volt per 100 nT.
                                Paper chart (1972 to 1979)
                                Computer compatible tape (1979 to present)
RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- MTF
                                Andoya Rocket Range
                                P.O. Box 60
                                8480 Andenes
                                Norway
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 ANNAPOORNA, INDIA

ITEM: 20
 DATE: 02/02/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 20.33
 STATION LONGITUDE ----- E 75.48
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 1. H and Z Askania variometers, V. Escherich variations of the 3 geomagnetic elements H, H and Z are continuously recorded along with baselines whose values are determined separately. H and Z variometers are compensated for temperature variations. All 3 elements are recorded on a single individual paper at a chart speed of 20 mm/h.
 RAW DATA ----- Photographic paper, microfilm
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables of computer printout
 DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA, annual, Director, Indian Institute of Geomagnetism, Colaba, Bombay 400 005, India
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. K. S. Rastogi, Director
 Indian Institute of Geomagnetism
 Dr. Nanabhai Moos Mero
 Colaba, Bombay
 Maharashtra, 400 005
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Daily observations of absolute H and Z with OHM and RMZ, Wednesday noon absolute H observations with OHM. Observed absolute values are periodically standardized by intercomparison with those observed at Alibab, using a set of OHM and RMZ as touring standards. A vector proton magnetometer is used since 01/1979 for determination of absolute H and Z.

 APALITY, USSR

ITEM: 786
 DATE: 01/06/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 67.50
 STATION LONGITUDE ----- E 33.33
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer
 RAW DATA ----- Photorecorded graphics
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- V. P. Kozelov
 Polar Geophysical Institute
 Academy of Sciences of the USSR
 Apality, Murmansk Region 184200
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 APIA, WESTERN SAMOA

ITEM: 23
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 13.80
 STATION LONGITUDE ----- E 188.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1902 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour Magnetometer recording H, D, Z at 20 mm/h. Normal recording at 20 mm/hour, rapid run at 180 mm/hour. Baseline absolute observations weekly using declinometer, protonmagnetometer and earth inductor.
 RAW DATA ----- Photographic Paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, punched paper-tape, computer printout, microfiche tabulations
 DATA ROUTINELY PUBLISHED ----- APIA OBSERVATORY, APIA, W SAMOA
 MAGNETIC RESULTS. Yearly exchange basis; hourly values D, H, Z. Annual tabulations distributed to mailing list.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Officer in Charge
 Geophysical Observatory
 P.O. Box 2111
 Christchurch
 New Zealand
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month. All data available from Magnetic Section, Geophysical Obs., P.O. Box 2111, Christchurch, New Zealand.

 ARGENTINE ISLANDS

ITEM: 28
 DATE: 20/12/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 65.25
 STATION LONGITUDE ----- E 295.73
 ALTERNATE NAMES ----- Faraday
 DATES OF OPERATION ----- 03/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour and Fluxgate magnetometers, continuous recording of the three components of the field. Two La Cour sets, sensitivities about 4 nT/mm and 12 nT/mm, chart speed 15 mm/h. From 03/1974, EDA Fluxgate magnetometer recording H, D & Z, sensitivity reduced in storms, chart speed 20 mm/h.
 RAW DATA ----- Photographic paper, strip chart and magnetic data cassette.
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 15 MONTHS
 FORM OF REDUCED DATA ----- Computer printout, microfilm, magnetic tape
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- D. A. Simmons
 Geomagnetic Section
 Atmospheric Sciences Division
 British Antarctic Survey
 High Cross, Madingley Road
 Cambridge, CB3 0ET
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Control by OHM, PPM, and Quartz declinometer. Reduced data, mean hourly values, microfilm of original record, K indices. Provisional K indices available after one month.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 ARKHANGELSK, USSR

ITEM: 2339
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 64.60
 STATION LONGITUDE ----- E 40.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer
 RAW DATA ----- Photopaper recordings
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Complex Magneto-Ionospheric Observatory
 Voznesenye
 Primorski District
 164420 Arkhangelsk Region
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- 12MIRAM
 p/O Akademgorodok
 142092 Troitsk, Moscow Region
 USSR
 ADDITIONAL COMMENTS -----

 BAGUIO, PHILIPPINES

ITEM: 45
 DATE: 15/07/80

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 16.41
 STATION LONGITUDE ----- E 120.58
 ALTERNATE NAMES ----- Manila
 DATES OF OPERATION ----- 05/1960 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Askania geomagnetic variograph with QHM. Routine continuous 24-hour observations. Photographic recording, range once a day at 0800 LT, 0.44 min/mm.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- The Director
 Manila Observatory
 P.O. Box 1231
 Manila
 Philippines
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ASHKHABAD, USSR

ITEM: 848
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 37.95
 STATION LONGITUDE ----- E 54.10
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1959 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Observatory
 Yanyovskii
 Frayuzs
 744901 Ashkhabad
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Institute of Seismology of the
 Turkmen Academy of Sciences
 ul. Gogol, 16
 744000 Ashkhabad GSP-19
 USSR
 ADDITIONAL COMMENTS -----

 BAKER LAKE, CANADA

ITEM: 46
 DATE: 08/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 64.33
 STATION LONGITUDE ----- E 263.97
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1951 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- AMOS(Automatic Magnetic Observatory System), continuous recording of earth's magnetic field. X (north), Y(east), Z(vertical), F(total intensity) of field recorded once/min on digital magnetic tape, with an analog output on strip chart at 20 mm/h. Absolute observation of D(declination) and I(inclination) and of total intensity F are made once or twice a week.
 RAW DATA ----- Digital magnetic tape, strip charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables, microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth Physics Branch contains instrument parameters, notes on data quality and instrument changes, annual means
 YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept. of Energy, Mines & Resources
 1 Observatory Cres.
 Ottawa, Ontario K1A 0Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 3 component fluxgate with digital output serves as standby recorder. Portable fluxgate magnetometer for absolute D, I, observations, proton precession magnetometer for F observations. Photographic recording by standard Ruska magnetograph was discontinued in 6/1977. Digital recording commenced 11/1971. Special purpose data available after 2 months.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

BANGUI, CENTRAL AFRICAN REPUBLIC

ITEM: 48
DATE: 05/06/79

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run Measurements
STATION LATITUDE ----- N 4.44
STATION LONGITUDE ----- E 18.56
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1952 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- La Cour Magnetometer, standard measurements of daily geomagnetic variations, three components, two entire La Cour magnetometers, speed run 15 mm/hour, scale values
H = 2.2 gamma/mm, D = 0.60 gamma/mm,
Z = 2.2 gamma/mm, and H = 3.8 gamma/mm,
D = 0.40 gamma/mm, Z = 2.6 gamma/mm. Weekly absolute measurements with vector magnetometer for H (Nelson) and Z (Serson); channeltron for D component. Weekly scale value determination.
RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Microfilm, monthly tables (hourly values), K character
DATA ROUTINELY PUBLISHED ----- Bulletin Magnetique de l'observatoire de Bangui, available on request
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Observatoire Geophysique
Centre O.R.S.T.O.M. de Bangui
B.P. 893
Bangui
Central African Rep
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No information received to inquiry for updating material in 1983.

BEAR ISLAND, NORWAY

ITEM: 50
DATE: 04/01/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 74.51
STATION LONGITUDE ----- E 19.02
ALTERNATE NAMES ----- Bjornoya
DATES OF OPERATION ----- 07/1948 to present
INSTRUMENT DESCRIPTION ----- La Cour magnetometer, 15 mm/h, medium sensitivity
10 gamma/mm, absolute measurements once/year.
RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Annual quiet means
DATA ROUTINELY PUBLISHED ----- Microfilm of records
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES: Copenhagen
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Steinar Berger
The Auroral Observatory
Univ. of Tromso
P.O. Box 953
Tromso N 9001
Norway
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- 8/1968 station moved 50 m
6/1968-9/1968 no operation

BARROW, USA

ITEM: 49
DATE: 12/01/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 71.32
STATION LONGITUDE ----- E 203.38
ALTERNATE NAMES ----- NONE
DATES OF OPERATION ----- 10/1949 to present
Station moved 4/75 (old coordinates
71.30 N, 203.25 E)
OBSERVING SCHEDULE ----- Period absolutes at 5-7 week intervals
INSTRUMENT DESCRIPTION ----- Absolutes with Ruska Magnetometer (D),
QHM (H), proton magnetometer (F).
Recording instrument is 3 component
fluxgate (D,H,Z) and proton magnetometer(F)
RAW DATA ----- Digital magnetic tape, 20 second sampling
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
DATA REDUCTION PRACTICE ----- Computer compile one minute and hourly mean values
FORM OF REDUCED DATA ----- Magnetic tapes and printouts
DATA ROUTINELY PUBLISHED ----- Presently sent directly to WDC-A, will be put in USGS OPEN FILE REPORTS in late FY 1981.
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- By WDC-A
DATA SENT TO WDC-C ----- By WDC-A
DATA AVAILABLE ON REQUEST ----- After office analysis - several months after recording
ADDRESS FOR INFORMATION ABOUT STATION ----- John D. Wood
USGS, MS 964
Denver Federal Center
Denver, CO 80225
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- L.R. Wilson
USGS, MS 964
Denver Federal Center
Denver, CO 80225
USA
ADDITIONAL COMMENTS ----- Photo Records prior to 4/75, and digital data after 4/75, available from WDC-A.
For technical details: Ron Rutman
USGS, MS 964
Denver Federal Center
Denver, CO 80225
USA

BINZA, ZAIRE

ITEM: 61
DATE: 12/05/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 4.37
STATION LONGITUDE ----- E 15.25
ALTERNATE NAMES ----- Kinshasa
DATES OF OPERATION ----- 07/1952 to present
OBSERVING SCHEDULE ----- 1-2/1967 operation intermittent
REGULAR
INSTRUMENT DESCRIPTION ----- La Cour Magnetometer, 3x3 BMZ and 3x3 QHM
regularly per week. 2xH (Ruska magnetometer) per month, 2xI (Askania magnetometer) per month, 2xD (Schmidt Theodolite) per month. Chart speed 15mm/h.
RAW DATA ----- Photographic paper, tables
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, films (on request)
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Binza Geophysical Observatory
Service Meteorologique du Zaïre
Binza, Kinshasa
Zaïre
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Reductions of observations for special purpose are usually available after 3 months.
No response to inquiry for updating material in 1980 or 1983. Data have been received by the World Data Centers through 1977.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 BURON, USSR

ITEM: 456
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 58.02
 STATION LONGITUDE ----- E 38.97
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of the tables and magnetograms

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Geophysical Observatory
 p/o Borok
 Nekouzskii r-n
 152742 Yaroslavl'skaya Oblast
 USSR

ADDRESS FOR INFORMATION ABOUT DATA -----
 IZMIRAN
 120 Akademgorodok
 142042 Troitsk, Moscow Region
 USSR

ADDITIONAL COMMENTS -----

 BRORFELDE (BFE), DENMARK

ITEM: 783
 DATE: 04/01/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 55.63
 STATION LONGITUDE ----- E 11.67
 ALTERNATE NAMES ----- Copenhagen
 Rude Skov
 DATES OF OPERATION ----- 01/1978 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer and AMOS Mk. II
 Digital recording (AMOS) of D, H, Z and F every half minute on magnetic tape and also analog output on strip chart.

RAW DATA ----- Photorecorded graphics, magnetic tape, strip chart
 DATA REDUCTION PRACTICE ----- On the basis of absolute measurement
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 15 MONTHS
 FORM OF REDUCED DATA ----- Photorecorded graphics and computer plots
 Yearbooks

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Danish Meteorological Institute
 Division of Geophysics
 Lyngbyvej 100
 DK-2100 Copenhagen
 Denmark

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- This station is the successor to Rude Skov (Copenhagen).
 The form of the data available from the station are:
 photorecorded graphics, computer plots and magnetic tape.

 BUDKOV, CZECHOSLOVAKIA

ITEM: 68
 DATE: 12/01/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 49.07
 STATION LONGITUDE ----- E 14.02
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1963 to present
 INSTRUMENT DESCRIPTION ----- Ruska magnetometer for D, H and proton (F) measurements
 RAW DATA ----- Computer compiled one minute and hourly mean values
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- WDC-A furnishes hourly value tables, hourly values and some 2.5 minute values on magnetic tape and copies of magnetograms. USGS Open File Reports expected in late 1983.
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 John D. Wood
 USGS 45 467
 Branch of Global Seismology & Geomagnetism
 Denver Federal Center
 Denver, CO 80225
 USA

ADDRESS FOR INFORMATION ABOUT DATA -----
 Ron Ruhmann
 WDC-A for Solar Terrestrial Physics
 c/o NOAA FDIS
 325 Broadway
 Boulder, CO 80225
 USA

ADDITIONAL COMMENTS ----- for technical details about digital data contact
 L. P. Wilson at the same address as John D. Wood.

 BUDKOV, CZECHOSLOVAKIA

ITEM: 819
 DATE: 00/00/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 49.07
 STATION LONGITUDE ----- E 14.02
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer, Earth currents
 Strip charts
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Microfilm
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. K. Dobeš
 Geophysical Inst, Czechoslovak Acad Sci
 Bocni II
 Prague 141 31
 Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 BUNIA - RUAMPARA, ZAIRE

ITEM: 77
 DATE: 12/05/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 1.53
 STATION LONGITUDE ----- E 30.02
 ALTERNATE NAMES ----- Bunia
 DATES OF OPERATION ----- 08/1958 to present
 Intermittent operation
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- La Cour Magnetometer. Standard measurements.
 3x8 BMZ 3x1 OHM/week. 2x1 (Askania)/month.
 RAW DATA ----- Photographic paper, tables
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Bunia Ruampara Observatory
 Service Météo Du Zaïre
 Binza, Kinshasa
 Zaïre
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 3 months.
 No response received to inquiry for updating material
 in 1980 or 1983.

 CAMBRIDGE BAY, CANADA

ITEM: 78
 DATE: 08/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 69.10
 STATION LONGITUDE ----- E 255.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1972 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System).
 Digital recording of earth's magnetic field.
 X(north), Y(east), Z(Vertical), F(total intensity)
 of field recorded once/min on digital magnetic
 tape with analog output on strip chart at 20 mm/h.
 Absolute observations of D(declination) and
 I(inclination) and of total intensity F are made
 once a week.
 RAW DATA ----- Digital magnetic tape, strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables,
 microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth
 Physics Branch contains instrument
 parameters, mean hourly value
 summary.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept. of Energy, Mines & Resources
 1 Observatory Cres.
 Ottawa, Ontario K1A 0Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 3 component recording fluxgate with digital output
 serves as standby recorder. Portable fluxgate magnet-
 ometer for absolute D.I. observations, proton pre-
 cession magnetometer for F observations. Special
 purpose data usually available after 2 months.

 CACHOEIRA PAULISTA, BRAZIL

ITEM: 535
 DATE: 01/02/84

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run
 Measurements
 STATION LATITUDE ----- S 22.88
 STATION LONGITUDE ----- E 314.61
 ALTERNATE NAMES ----- San Jose
 DATES OF OPERATION ----- 08/1975 to present
 Station moved
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Automatic Standard Magnetic Observatory (ASMO).
 S, H, Z, I and D. A cesium vapor magnetometer
 (ASMO system of Varian) recording F, I, and D.
 A fluxgate magnetometer reading H, D and Z
 components from 1978. The analog record is
 on a chart paper run at 2 inch/hour and digital
 recording is done on a 7-track magnetic tape.
 The system is set to record continuously six
 data cycles per minute.
 RAW DATA ----- Strip chart, tables, digital mag-
 netic tape, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts, graph-
 ical plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Instituto Nacional de Pesquisas
 Espaciais
 Av. dos Astronautas, 1758
 Sao Jose, Sao Paulo 12.200
 Brasil
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The instrument was operated in Sao Jose dos Campos,
 Sao Paulo, Brasil (S 23.22 W 45.85) from January to
 December 1970. However, the data presents many
 gaps due to troubles in the electronics. Special
 purpose data usually available after three months.

 CAMPBELL ISLAND

ITEM: 2286
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 52.50
 STATION LONGITUDE ----- E 169.20
 ALTERNATE NAMES ----- Same as above
 DATES OF OPERATION ----- 1978 to present
 INSTRUMENT DESCRIPTION ----- Askania Variograph recording D, H, and Z
 Photographic paper
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Officer in Charge
 Geophysical Observatory
 P.O. Box 2111
 Christchurch
 New Zealand
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 CANARIAS, CANARY ISLANDS

ITEM: 599
 DATE: 10/06/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 28.48
 STATION LONGITUDE ----- E 343.74
 ALTERNATE NAMES ----- Tenerife
 Centro Geofisico de Canarias TEN
 DATES OF OPERATION ----- 01/1961 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Absolute measurements: Proton vector magnetometer;
 declinometer Askania; QD declinometer; Askania
 Teodolite magnetometer (Gauss method); terrestrial
 inductor; two QM1, BM2.
 Records: D, H, Z La Cour variographs, 20 mm/h
 (scale values, 2.2 nT/mm H, 2.1 nT/mm Z,
 0.75 nT/mm D); Measurements: D, H, Z weekly.
 Film, photographic paper, tables

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfilm
 DATA ROUTINELY PUBLISHED ----- ANUARIOS DE GEOMAGNETISMO Y AERONOMIA,
 Instituto Geografico, Madrid, Spain.
 Data is available upon an exchange
 basis. Tables of hourly and mean
 values-K indices- magnetic phenomena

DATA SENT TO WDC-A ----- No
 DATA SENT TO WDC-B ----- No
 DATA SENT TO WDC-C ----- Yes: Lyngby
 Instituto Geografico Nacional - Madrid;
 mean values, K indices, magnetic phenomena.
 ADDRESS FOR INFORMATION ABOUT STATION -----
 A. Garcia Cogollor
 Centro Geofisico de Canarias
 Calle de la Marina
 Edificio Multiple Planta 11
 Santa Cruz de Tenerife
 Canary Islands
 Spain
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Name was changed from Tenerife to Canarias about
 1978.
 No response received to inquiry for updating material
 in 1980 or 1983.

 CANBERRA, AUSTRALIA

ITEM: 86
 DATE: 01/06/84

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run
 Measurements
 STATION LATITUDE ----- S 35.32
 STATION LONGITUDE ----- E 149.36
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1979 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- ELSEC Automatic Digital Magnetograph
 RAW DATA ----- One minute values of D, F, I
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- One minute values on magnetic tape,
 mean hourly values taken, also.

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Section
 Bureau of Mineral Resources
 G.P.O. Box 374
 Canberra 2601
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Replaces Tsilingi as basic observatory.

 CANBERRA, AUSTRALIA

ITEM: 85
 DATE: 01/06/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 35.31
 STATION LONGITUDE ----- E 149.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Askania H-magnetograph (IGY type). H-magneto-
 grams. Askania visual H-magnetograph.
 (Reference: Healok, F. DER H-MAGNETOGRAPH ALS
 ALARMEINRICHTUNG FUR MAGNETISCHE STURME.)
 Chart speed 20 mm/h, continuous recording.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Officer in Charge
 Canberra Ionospheric Station
 Mount Stromlo
 Wodan, A.C.T. 2606
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Disturbance Warning Section
 Ionospheric Prediction Serv, Dept Sci
 P.O. Box 702
 Darlinghurst, N.S.W. 2010
 Australia
 ADDITIONAL COMMENTS ----- Used only as geomagnetic field monitor for dis-
 turbance warning purposes.

 CASEY, ANTARCTICA

ITEM: 91
 DATE: 01/06/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 66.54
 STATION LONGITUDE ----- E 110.36
 ALTERNATE NAMES ----- REPSTAT
 DATES OF OPERATION ----- 05/1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Three component fluxgate magnetometer. Output is
 inspected daily but scaling is only done upon
 return to Australia.

RAW DATA ----- Paper chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Director, Antarctic Division
 Department of Science & Technology
 Channel Highway
 Kingston, 7150, Tasmania
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
ITEM: 2260
DATE: 01/08/83
*****
CASTEL TESINO, ITALY
*****
DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 46.05
STATION LONGITUDE ----- E 11.65
ALTERNATE NAMES -----
DATES OF OPERATION ----- 05/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 1964 - 1981: Ruska Magnetograph
1981 to present: EDA AMOS (Fluxgate magnetometers
and proton magnetometer) H, Z, D, F recorded once
per minute on digital magnetic tape. Absolute
observations once per month, ELSEC proton vector
magnetometer and Ruska suspension magnetometer
for D.

RAW DATA ----- Magnetic tape
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Reparto Geomagnetismo
Instituto Nazionale di Geofisica
Via Ruggero Bonghi 11/B
00184 Roma
Italy

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM: 108
DATE: 07/07/83
*****
CHICHIJIMA, JAPAN
*****
DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 27.09
STATION LONGITUDE ----- E 142.18
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1973 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer: 3 component (D, H, Z)
continuous observation, 2.5 gamma/mm, 15 mm/h
Strip chart, scratch film

RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- Report of the Kakioka Magnetic Obs.
(triennial)

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Director
Kakioka Magnetic Observatory
Kakioka 595
Yasato-machi, Ibaraki-ken 315-01
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM: 2169
DATE: 01/02/84
*****
CHARTERS TOWERS, AUSTRALIA
*****
DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 20.10
STATION LONGITUDE ----- E 146.30
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1983 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Fluxgate X, Y, Z and proton precession magnetometer,
F. Digital recording.

RAW DATA -----
DATA REDUCTION PRACTICE ----- 1 minute values of X, Y, Z, and F
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape (one minute values and mean
hourly values)

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Section
Bureau of Mineral Resources
G.P.O. Box 378
Canberra 2601
Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
ITEM: 2201
DATE: 15/07/83
*****
COIMBRA, PORTUGAL
*****
DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 40.22
STATION LONGITUDE ----- E 351.75
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1951 to present
INSTRUMENT DESCRIPTION ----- "Askania-Werke A.G." Magnetometers, normal
speed recording, magnetic elements H, Z, D,
continuous recording of magnetic declination
horizontal and vertical component, chart
speed 20 mm/h. To absolute observations:
Magnetometer La Cour omh 307, La Cour DMZ
130, Askania-Werke A.G. to declination.
Magnetometer "ELSEC" (gives F).

RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- Yearbook Geomagnetic 19 - 1976 Witteveen
hourly mean values, etc., for H, Z, D.

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio Magnetico do
Instituto Geo Fisico da
Universidade de Coimbra
Rua Anibal Decima
Atto da Baleia
3000 Coimbra
Portugal

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 COLLEGE, USA

 ITEM: 118
 DATE: 12/01/83
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 64.87
 STATION LONGITUDE ----- E 212.17
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1941 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Absolute weekly with proton vector magnetometer and Huska suspension magnetometer for D
 RAW DATA ----- Photographic paper recordings, tabular mm scalings, magnetic tape
 DATA REDUCTION PRACTICE ----- REG-CAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables, photo paper, magnetic tapes, microfilm
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 John D. Wood
 1515 S. MS 967
 Branch of Global Seismology and Geomagnetism
 Denver Federal Center
 Denver, CO 80225
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Ron W. Ruhnann
 WDC-A for Solar-Terrestrial Physics
 c/o NOAA/EDIS
 325 Broadway
 Boulder, CO 80303
 USA
 ADDITIONAL COMMENTS ----- Special purpose data usually available after four to six weeks. Preliminary Data Report published monthly at observatory. For technical details about the data write to L. R. Wilson at the same address as John D. Wood.

 DAVAO, PHILIPPINES

 ITEM: 134
 DATE: 15/07/83
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 7.08
 STATION LONGITUDE ----- E 125.58
 ALTERNATE NAMES ----- Manila Observatory
 DATES OF OPERATION ----- 02/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Askania Geomagnetic Variograph with QMM and magnetic inductor. Routine station type observations. Photographic recording, change at 0800 LT, continuous 24 h run, 0.44 mm/mm.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 The Director
 Manila Observatory
 P. O. Box 1231
 Manila
 Philippines
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 COLLEGE, USA

 ITEM: 119
 DATE: 22/07/83
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 64.86
 STATION LONGITUDE ----- E 212.14
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1971 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Earth currents, electric potential between 2 buried lead plates approximately 100 meters apart is measured continuously and recorded on strip chart at 1 inch/h. 2 pairs of electrodes are oriented in magnetic N-S and E-W. Also recorded on direct tape at 1 inch/h and 24 inch/h.
 RAW DATA ----- Strip chart, analog magnetic tape
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Archives
 Geophysical Institute
 University of Alaska
 Fairbanks, AK 99701
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 DAVIS, ANTARCTICA

ITEM: 2440
 DATE: 01/06/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 68.58
 STATION LONGITUDE ----- E 77.97
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1973 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Three component fluxgate magnetometer. Output inspected daily.

RAW DATA ----- Chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 Dept. of Science and Technology
 Channel Highway
 Kingston, Tasmania 7150
 Australia
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 DIRMNAS, NORWAY

ITEM: 151
 DATE: 11/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 62.07
 STATION LONGITUDE ----- E 9.17
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1916 to present
 OBSERVING SCHEDULE ----- US/1951 station moved
 REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour Magnetometer, H, J, & Z La Cour Magnetometers, La Cour registrator, 24 h magnetograms, short speed 15 mm/h. Absolute observations: DMM and USDB Proton mag. and Askania Inclinator, regularly 1 month. Scale value measurements a few times a year.

RAW DATA ----- Photographic paper, microfilm
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED ----- The magnetic station at Tromsø, observations, on exchange basis; absolute hourly mean values.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysical Inst., Dept. of Geomagnetism
 University of Bergen
 Allég. 70
 Bergen - Univ. N-5014
 Norway
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Absolute values available after 2 years, relative values after 1 year. Old coordinates of station: 462.08 E09.10.

 DEL RIO OBSERVATORY, USA

ITEM: 2002
 DATE: 12/01/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 29.49
 STATION LONGITUDE ----- E 259.08
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1982 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Three component fluxgate (D,H,Z) and Proton(F) recording digitally on magnetic tape and in analog form on pen and ink recorder.

RAW DATA ----- 1 minute means of D,H,Z, & F
 DATA REDUCTION PRACTICE ----- Hourly mean values
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Hourly means on magnetic tape and in tabular printouts, magnetograms plotted from 1 minute means.

DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- John T. Wood
 USGS MS 967
 Branch of Global Seismology & Geomagnetism
 Denver Federal Center
 Denver, CO 80225
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- L. R. Wilson
 USGS MS 967
 Branch of Global Seismology & Geomagnetism
 Denver Federal Center
 Denver, CO 80225
 USA

ADDITIONAL COMMENTS ----- Some data available within a few days on special request. Data expected to be available in USGS Open File Reports in late 1983.

 DOORBES, BELGIUM

ITEM: 824
 DATE: 10/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 50.10
 STATION LONGITUDE ----- E 4.60
 ALTERNATE NAMES ----- Uccle
 DATES OF OPERATION ----- 01/1952 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Magnetic Field Measurements

RAW DATA ----- Magnetic tape, magnetograms
 DATA REDUCTION PRACTICE ----- Digitizer - Computer
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, tables
 DATA ROUTINELY PUBLISHED ----- Monthly reports, Yearbooks
 DATA SENT TO WDC-A ----- YES (K-indices)
 DATA SENT TO WDC-B ----- YES (K-indices)
 DATA SENT TO WDC-C ----- YES: WDC-B2 (K-indices)
 DATA AVAILABLE ON REQUEST ----- YES: WDC-C1 and WDC-C2 (K-indices)
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. Mus
 Centre de Physique du Globe
 Doorbes 6381
 Belgium

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

..... ITEM: 626
 EBRU, SPAIN DATE: 15/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 40.82
 STATION LONGITUDE ----- E .49
 ALTERNATE NAMES ----- Tortosa
 DATES OF OPERATION ----- 01/1905 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- La Cour, normal and rapid run measurements
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, not published since 1943
 DATA ROUTINELY PUBLISHED ----- Boletin del Observatorio del Ebro
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Copenhagen, Tortosa
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio del Ebro
 Roquetes
 Tarragona
 Spain
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Gap 1936-1942, 1905-1936 Mascart H, Z, D; 1942-
 1958 Mascart H, Z, D; 1953-present La Cour H, Z, D;
 2nd Polar year and 1942-present La Cour rapid run.

..... ITEM: 2046
 ETAIYAPURAM, INDIA DATE: 20/07/79

DISCIPLINE ----- D01 Geomag. Standard and normal measurements
 STATION LATITUDE ----- N 9.20
 STATION LONGITUDE ----- E 78.00
 ALTERNATE NAMES ----- Equatorial Observatory of NGRI
 DATES OF OPERATION ----- 01/1976 to present (see ADDITIONAL COMMENTS)
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- LaCour variometers D,H,Z continuously recorded
 at 15 mm/h along with baseline whose values are
 determined separately.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- OBSERVATORIES DATA VOLUME OF NGRI
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 National Geophysical Research Institute
 Uppal Road
 Hyderabad, Andhra Pradesh 500007
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The observatory is right at the dip equator and under
 the equatorial electrojet, about 40 km from the nearest
 sea coast.
 Regular calibration is carried out for the pulsation
 recording systems and a check on the frequency response
 of the system is done every six months.
 The LaCour recording was discontinued temporarily
 since January, 1978 and is expected to be restarted
 in September 1979.
 No response received to inquiry for updating material
 in 1983.

..... ITEM: 165
 ESKDALEUIR, UNITED KINGDOM DATE: 20/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 55.32
 STATION LONGITUDE ----- E 356.80
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1908 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour magnetometer, D,H,Z continuous recording
 15 mm/h. EDA Fluxgate magnetometer D,H,Z
 recording 30 sec. intervals on cassette tape.
 RAW DATA ----- Photographic paper, magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, microfilm
 GEOMAGNETIC BULLETIN, annual
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES: Copenhagen, Tokyo
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Unit, IGS
 Murchison House
 West Mains Road
 Edinburgh EH9 3LA
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

..... ITEM: 171
 EUSEBIO, BRAZIL DATE: 30/01/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 3.88
 STATION LONGITUDE ----- E 321.27
 DATES OF OPERATION ----- 04/1975 to 09/1977
 05/1978 to present (IMS Station)
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 1975 to 09/1977, varian rubidium vapor magnetometer
 recording total field F.
 From 05/1978 to 12/1981, three component fluxgate.
 From 1/1982 to present, total field recorded
 on strip chart. Digital and Analog Recordings.
 IMS Station operation till 12/1981.
 RAW DATA ----- Strip chart, tables
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Inst Nacional de Pesquisas Espaciais - INPE
 Av. dos Astronautas, 1758
 Sao Jose dos Campos
 Sao Paulo 12200
 Brazil
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Another address for information about the station is:
 Inst of Geophysics and Planetary Physics, Univ. of
 California at Los Angeles, Los Angeles, CA 90024 USA

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 EYREWELL, NEW ZEALAND

ITEM: 2047
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 43.42
 STATION LONGITUDE ----- E 172.35
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1978 to present.
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- LaCour magnetometers, continuous recording
 D,H,Z. Standard LaCour recording at 20 mm/hr.
 Absolute observations weekly using proton
 magnetometer and D.I.M.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- Photographic paper
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Tables, punched paper tape, computer
 printout, microfiche tabulations

DATA ROUTINELY PUBLISHED -----
 Magnetic Results Eyrewell, yearly
 exchange basis; hourly values H,D,Z
 means; K indices.
 Annual tabulations distributed to
 mailing list.

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysical Observatory
 PO Box 2111
 Christchurch
 New Zealand

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- Eyrewell is south and west of Amberley, established
 on Greywacke alluvial plain.
 Station moved from Amberley 1978.
 Amberley had replaced Christchurch in 1928.

 FURT YUKON, USA

ITEM: 177
 DATE: 22/7/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 66.56
 STATION LONGITUDE ----- E 214.78
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1941 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Magnetometer, Schonstedt. Continuous recording
 at 3 inch/hr. of 3 components H, D, and Z.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- strip charts
 REGULAR REDUCED DATA AVAILABLE AFTER ----- NONE MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Archives
 Geophysical Institute
 University of Alaska
 Fairbanks, AK 99711
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS -----

 FORT CHURCHILL, CANADA

ITEM: 115
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 58.80
 STATION LONGITUDE ----- E 265.90
 ALTERNATE NAMES ----- Churchill
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System).
 Continuous recording of earth's magnetic field.
 X(North), Y(east), Z(vertical) F(total intensity)
 of field recorded once/min on digital
 magnetic tape, with an analogue output on
 strip chart at 20 mm/h. Absolute observa-
 tion of D(declination) and I(inclination)
 and of total intensity F are made once or
 twice a week.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- Digital magnetic tape, strip chart
 REGULAR REDUCED DATA AVAILABLE AFTER ----- REGULAR SPECIAL
 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables,
 microfilm

DATA ROUTINELY PUBLISHED -----
 Annual report available from Earth
 Physics Branch contains instrument
 parameters, notes on data quality and
 instrument changes, annual means
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept. of Energy, Mines & Resources
 1 Observatory Cres.
 Ottawa, Ontario K1A0Y3
 Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- 3 component fluxgate with digital output serves
 as standby recorder. Portable fluxgate magnet-
 ometer for absolute D, I, observations, digital
 recording commenced 09/1971. Photographic recording
 by a standard 3 component Ruska magnetograph was
 discontinued in 04/1971. Special purpose data
 usually available after 2 months.

 FREDERICKSBURG, USA

ITEM: 180
 DATE: 12/01/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 38.20
 STATION LONGITUDE ----- E 282.63
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1956 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Normal Ruska Magnetograph. Continuous recording,
 records changed daily. Photo paper recording at
 20 mm/h on 19 cm X 53 cm record. Variometers are
 Ruska suspensions for D & H, modified La Cour for
 Z. Absolutes taken weekly and semi-weekly with
 Sine Galvanometer, Proton Vector Magnetometer and
 Ruska suspension magnetometer for D. Ruska hous-
 ing modified to utilize La Cour magnet. Digital
 fluxgate and proton magnetometers installed November
 1982.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- Photo paper records and copies,
 mm scalings in tabular form
 REGULAR REDUCED DATA AVAILABLE AFTER ----- REGULAR SPECIAL
 2 MONTHS
 FORM OF REDUCED DATA ----- Photo copies, magnetic tape, tabular form,
 microfilm

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- John D. Wood
 USGS, Branch of Electromag & Geomag.
 MS 54 Denver Federal Center
 Denver, CO 80225
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Ron W. Buhmann
 WDC-A for Solar-Terrestrial Physics
 NOAA/EDIS
 325 Broadway
 Boulder, CO 80303
 USA

ADDITIONAL COMMENTS ----- In 1956, Fredericksburg replaced the Cheltenham
 Observatory which was located 75 km NE of the present
 site. Cheltenham coordinates N38.73 E283.16. Special
 purpose data usually available after 1 month. Regular
 data are photo copies of records, hourly values on magnetic
 tape and in tabular form. 2.5 minute digitized values
 for some intervals on magnetic tape. All data are at
 WDC-A; USGS Open File Reports are expected in late 1983.
 For technical details about the digital data contact L.
 R. Wilson at the same address as John Wood.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
FRESNO OBSERVATORY, USA
*****
ITEM: 2003
DATE: 12/31/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 37.09
STATION LONGITUDE ----- E 240.28
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1980 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Three component fluxgate (D,H,Z) and Proton (F)
recording digitally on magnetic tape and in
analog form on pen and ink recorder.

RAW DATA ----- 1 minute means of D,H,Z & F
DATA REDUCTION PRACTICE ----- Hourly mean values
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Hourly means on magnetic tape and in
tabular printouts, magnetograms
plotted from 1 minute means.

DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
John D. Wood
USGS MS 367
Branch of Global Seismology & Geomagnetism
Denver Federal Center
Denver, CO 80225
USA

ADDRESS FOR INFORMATION ABOUT DATA -----
L. R. Wilson
USGS MS 967
Branch of Global Seismology & Geomagnetism
Denver Federal Center
Denver, CO 80225
USA

ADDITIONAL COMMENTS ----- Digital data available from 11/1982. Analog records
are available from 06/1980. Not all records prior to
11/1982 are scaled. Some data available within a few
days upon special request. Data expected to be
available in USGS Open File Reports in late 1983.
    
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*****
GENERAL BELGRANO, ANTARCTICA
*****
ITEM: 2111
DATE: 11/06/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 77.97
STATION LONGITUDE ----- E 321.20
ALTERNATE NAMES ----- Belgrano
Gral Belgrano
DATES OF OPERATION ----- 06/1972 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- La Cour magnetometer, Fluxgate variometer
RAW DATA ----- Magnetic tape
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Horacio A. Lazearne
Instituto Antartico Argentino
Cerrito 1248
Buenos Aires
Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 4 months.
Data are published by Instituto Antartico Argentino
as scientific contributions.
    
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*****
FUERSTENFELDBRUCK, FRG
*****
ITEM: 182
DATE: 04/01/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 48.17
STATION LONGITUDE ----- E 11.28
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1841 to present
Station moved
Intermittent operation
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Schulze-Variometer (normal-run, 20 mm/h).
Classical photo-recording, one paper per day.

RAW DATA ----- Photorecorded graphics
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Year-book listing of hourly values
monthly averages, base-line values
DATA ROUTINELY PUBLISHED ----- Veröffentlichungen des Geophysikalischen
Obs Furstenfeldbruck der Ludwig Maximilians Univ. München.
Ergebnisse der Beobachtungen am Erdmagnetischen Obs Furstenfeldbruck,
Serie A, Nr...

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysikalisches Observatorium
Ludwigshöhe 8
Fuerstenfeldbr D 8080
FRG

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Station moves since 1841 took place from Munich (Mun-
chen) to Maisach, and finally to Fuerstenfeldbruck,
uninterruptedly since 1938. Gaps in conservation of
normal-run data were from 1872-1882 and from 1914-1926.
    
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*****
GIBILMINNA, ITALY
*****
ITEM: 2261
DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 38.00
STATION LONGITUDE ----- E 14.02
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1951 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ruska magnetograph for H and D measurements;
proton magnetometer data on punched tape.
Absolute observations once per week, HTM
Askania for H and Ruska suspension magneto-
meter for D.

RAW DATA ----- Photo paper of H and D; tabular
form of F
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Reparto Geomagnetismo
Istituto Nazionale di Geofisica
Via Ruggero Bonghi 11/R
00188 Roma
Italy

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 GLENLEA, CANADA

 ITEM: 2288
 DATE: 01/08/83
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 49.60
 STATION LONGITUDE ----- E 262.90
 ALTERNATE NAMES ----- Winnipeg
 DATES OF OPERATION ----- 01/1981 to Present
 Intermittent
 OBSERVING SCHEDULE ----- Limited absolute control
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System), continuous recordings of earth's magnetic field. X(north), Y (east), Z(vertical), F(total intensity) of field recorded once per minute on digital magnetic tape with analogue output on strip chart at 20 mm/hr. Absolute observations of D(declination), I three times a month on the average.
 RAW DATA ----- Digital magnetic tape, strip charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables, microfilm
 DATA ROUTINELY PUBLISHED ----- Annual Report available from Earth Physics Branch contains instrument parameters, notes on data quality and instrument changes, annual means
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Earth Physics Branch, EMR
 1 Observatory Crescent
 Ottawa, Ontario K1A 0Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 3 component fluxgate with digital output serves as a standby recorder. Portable fluxgate magnetometer for absolute D.I. observations, proton precession magnetometer for F observations. Magnetic variation data only available for the period 10/1980 to 01/1981. Special purpose data usually available after 2 months.

 GUDHAYN, GREENLAND

 ITEM: 2279
 DATE: 12/04/83
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 64.25
 STATION LONGITUDE ----- E 6.47
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1926 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour and EMA Fluxgate magnetographs, 3 components (H,D,Z), calibrated by means of regular absolute measurements.
 RAW DATA ----- Photographic paper, digital magnetic tape, strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Yearbooks (tables of hourly mean values and ranges)
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES: C1
 DATA SENT TO WDC-C ----- YES: From WDC-C1
 DATA AVAILABLE ON REQUEST ----- Division of Geophysics
 ADDRESS FOR INFORMATION ABOUT STATION ----- Danish Meteorological Institute
 Lyngbyvej 100
 Copenhagen DK-2100
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The form of the data sent to WDC-C1 is yearbooks and 35 mm microfilm of the photographic magnetograms.

 MUNDARRA, AUSTRALIA

 ITEM: 202
 DATE: 01/02/84
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 31.78
 STATION LONGITUDE ----- E 115.95
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 Station moved from Watheroo
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Eschenhagen Magnetograph, Three components H,D,Z. Continuous recording at 20 mm/h, weekly control observations, chart speed 20 mm/h, H = 2.7 nT/mm, D = 1.07 nT/mm, Z = 5.8 nT/mm.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values on magnetic tape and computer printouts
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Section
 Bureau of Mineral Resources,
 Geology & Geophysics
 G.P.O. Box 378
 Canberra 2600
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Additional information about station: P. J. Gregson, Observer-in-Charge, Mundarra Geophysical Obs., Mundarra, N.S.W., Australia 6073. Former location of station was Watheroo.

 GÖTTINGEN, FRG

 ITEM: 2224
 DATE: 15/07/83
 DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 51.55
 STATION LONGITUDE ----- E 9.96
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Optical recording of the magnetic elements H (horizontal), D (declination), Z (vertical) chart speed 20 mm/h. Scale values: 3 nT/mm (normal); 30 nT/mm (storm).
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- No reduction
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- Only raw data
 DATA AVAILABLE ON REQUEST ----- Institut für Geophysik
 Postfach 2341
 D-3400 Göttingen
 FRG
 ADDRESS FOR INFORMATION ABOUT STATION ----- Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 GREAT WHALE RIVER, CANADA

ITEM: 217
 DATE: 08/09/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 55.30
 STATION LONGITUDE ----- E 282.25
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System), continuous recording of earths magnetic field, X (North), Y(East), Z(vertical), F[total intensity] of field recorded once/min on digital magnetic tape with an analog output on strip chart at 20 mm/hr. Absolute observation of D[declination] and I[inclination] and of total intensity F are made once or twice a week.

RAW DATA ----- Digital magnetic tape, strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables, microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth Physics Branch contains instrument parameters, notes on data quality and instrument changes, annual means
 YES

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept. of Energy, Mines and Resources
 1 Observatory Cres.
 Ottawa, Ontario K1A 0Y3
 Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 3 component Fluxgate with digital output serves as standby magnetometer. Portable Fluxgate magnetometer for absolute D.I. observations, proton precession magnetometer for observation. Photographic recording by a standard Ruska magnetograph was discontinued in 06/1977. Photographic recording by a rapid-run Ruska magnetograph was discontinued in 06/1972. Special purpose data usually available after 2 months.

 GUAM

ITEM: 219
 DATE: 12/01/83

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 13.59
 STATION LONGITUDE ----- E 144.87
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- Station moved
 INSTRUMENT DESCRIPTION ----- Intermittent operation
 Regular
 Ruska suspension variometers for D, H, modified La Cour for Z. Photo paper recording on 19 cm x 53 cm Record at 20 mm/hour.
 Absolute observations for baseline control made weekly with QMs, proton vector magnetometer and Ruska suspension magnetometer for D. Modified La Cour has a Ruska housing modified for La Cour magnet.

RAW DATA ----- Photo paper records, mm scalings
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Photo paper, computer printout, magnetic tape, microfilm

DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- John D. Wood
 ISUS MS 967
 Branch of Seismology and Geomagnetism
 Denver Federal Center
 Denver, CO 80225
 USA
 Don W. Buhmann
 WDC-A for Solar-Terrestrial Physics
 NOAA/ESIS 063
 325 Broadway
 Boulder, CO 80303
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Absolute pierce have not been moved. In 1968 the variations recording equipment was moved a short distance on the same site. The magnetograph will be supplemented in the near future with a proton Fluxgate system recording variations in D, H, Z and F. Special purpose data usually available after one month. Recording Fluxgate and proton installed in December 1982. For technical details about the digital data contact I. M. Wilson at the same address as John D. Wood. ISUS Open File Reports for the reduced data will be available in late 1985.

 GULMARG, INDIA

ITEM: 2061
 DATE: 01/02/84

DISCIPLINE ----- D01 Geomag standard and Rapid Run Measurements.
 STATION LATITUDE ----- N 34.08
 STATION LONGITUDE ----- E 74.24
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- A set of D, H and Z magnetographs by LaCour; variations of the 3 geomagnetic elements, D, H and Z are continuously recorded on single photographic paper at a speed of 20 mm/hr.

RAW DATA ----- Photopaper and microfilm
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables in computer printouts
 DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA, to be published annually by the Director, Indian Institute of Geomagnetism, Colaba, Bombay 400 005. Monthly tables - mean hourly inequalities and magnetic storm statistics.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. G. Rastogi, Director
 Indian Institute of Geomagnetism
 Dr Nanabhai Moos Marg
 Colaba, Bombay
 Maharashtra 400 005
 India

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The baseline determinations for H and Z are done using the absolute values of the field (F and H) obtained by observations with a vector proton precession magnetometer and for D by observations with QM once a week on Wednesdays. A vector proton magnetometer has been in use since 1981 for H and Z.

 HALLEY BAY, ANTARCTICA

ITEM: 232
 DATE: 07/07/88

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 75.52
 STATION LONGITUDE ----- E 333.05
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- EDA Fluxgate magnetometer, continuous recording of three components of magnetic field, H, D, Z; sensitivity about 20 gamma/mm switching automatically to lower sensitivity in large storms, chart speed 20 mm/hour.

RAW DATA ----- Strip chart, digital magnetic cassette logging
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Microfilm

DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES - Denmark
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Atmospheric Sciences Division
 British Antarctic Survey
 High Cross, Madingley Road
 Cambridge CB3 0ET
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Regularly scheduled data normally available after 4-24 months, microfilm of original records, K indices. Control by QM and PPM. Station on moving ice shelf rebuilt twice since 1956 with resetting of instruments within two 2 miles of old location. Occasional gaps in records from one or more instruments. The La Cour recording was stopped at the end of December 1979. The Fluxgate data from 1980 onwards are available on request. Equipment to be moved again in 02/1984.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 HARTBEESTHOK, REP. OF S. AFRICA

ITEM: 238
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 25.88
 STATION LONGITUDE ----- E 27.71
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 12/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Digital magnetometer (MOCSIR type designed and constructed at Hermanus Magnetic Observatory). Elements D,H,Z,F recorded at 1 min intervals. ID,H,Z by recording feedback current; required to keep magnets accurately oriented, F from proton precession magnetometer).

RAW DATA ----- Digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables of hourly values, magnetic tape
 DATA ROUTINELY PUBLISHED ----- MAGNETIC OBSERVATIONS AT HARTBEESTHOK annual pub. distributed on exchange basis

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Kyoto, Hallsham, Lyngby
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic Observatory
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 3 months. Part of organized Rep. of S. African network of Hermanus, Tsumeb, and Hartbeesthoek. Auxiliary equipment - PPM for F, OHM for H, Field declinometer for D.

 HATIZYO, JAPAN

ITEM: 2219
 DATE: 07/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 33.07
 STATION LONGITUDE ----- E 139.83
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1978 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Proton magnetometer /251-1 magnetometer theodolite, Variometers 2.5 nT/mm, 20 mm/h

RAW DATA ----- Photographic paper, digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, microfilm
 DATA ROUTINELY PUBLISHED ----- Data Report of Hydrographic Observations, a series of Geomagnetism

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director, Geodesy and Geophysics Division
 Hydrographic Department
 Maritime Safety Agency No. 3-1
 Tsukagi 5-Chome, Chuo-ku
 Tokyo 104
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 HARTLAND, UNITED KINGDOM

ITEM: 239
 DATE: 22/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 50.99
 STATION LONGITUDE ----- E 355.52
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour magnetometer, D, H, Z, continuous recording 15 mm/h. E.D.A. Fluxgate magnetometer D,H,Z recording 30 s intervals on cassette tape.

RAW DATA ----- Photographic paper, magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, microfilm
 DATA ROUTINELY PUBLISHED ----- Geomagnetic Bulletin, annual

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Copenhagen, Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Unit, IGS
 Murchison House
 West Mains Road
 Edinburgh EH9 3JA
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 HEISS ISLAND, USSR

ITEM: 2340
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 80.62
 STATION LONGITUDE ----- E 58.05
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers

RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- IRREGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Arctic and Antarctic Research Institute
 Fontanka 14
 Leningrad 19104
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 HERMANUS, REP. OF S. AFRICA

 ITEM: 249
 DATE: 01/05/84

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 34.42
 STATION LONGITUDE ----- E 19.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Digital magnetometer, geomagnetic variations, digital recording magnetometer (MOCSIR-type) designed and constructed at Hermanus Magnetic Observatory. Elements D, H, Z, F recorded at 1 minute intervals. D, H, Z by recording feedback currents required to keep magnets accurately oriented. F from proton magnetometer).
 RAW DATA ----- Digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables of hourly values, magnetic tape
 DATA ROUTINELY PUBLISHED ----- MAGNETIC OBSERVATIONS AT HERMANUS tabulated hourly values, distributed on exchange basis
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Kyoto, Hallsham, Lyngby
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic Observatory (CSIR)
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- The Magnetic Observatory was moved from Cape Town S33.95 E18.47 to Hermanus on 1/1/1941. Prior to commissioning digital magnetometer, recording instruments used were a La Cour magnetometer (Cape Town R/1932-12/1940) and an Askania magnetometer (Hermanus 1/1941-12/1973). Part of organized network Hermanus, Tsumeb, and Hartebeesthoek. Auxiliary equipment: Cesium magnetometer for F, Schuster-Smith magnetometer for H, Askania standard magnetometer for D. Special purpose data after 3 months.

 HERMANUS, REP. OF S. AFRICA

 ITEM: 249
 DATE: 01/05/84

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 34.42
 STATION LONGITUDE ----- E 19.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1941 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Askania magnetometer, continuous photographic recording, 20 mm/h, with full baseline control. Scale values: H, 2.3 nT/mm; Z, 4.6 nT/mm; D, 0.55 nT/mm. From 1/74 hourly values are obtained directly from digital magnetometer installed in 1973. Proton precession and Cesium magnetometers for F, Schuster-Smith magnetometer for H, Askania standard magnetometer for D.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables (magnetic activity, SSCs, etc.) monthly, magnetic tape
 DATA ROUTINELY PUBLISHED ----- MAGNETIC BULLETIN (monthly), MAGNETIC OBSERVATIONS AT HERMANUS (annual)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Kyoto, Hallsham, Lyngby
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic Observatory (CSIR)
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Data available include tables of magnetic activity, SSCs, 44c on a monthly basis, and tables and magnetic tape of hourly values 1/1941-12/1973 on a yearly basis. Monthly data in MAGNETIC BULLETIN, hourly values in MAGNETIC OBSERVATIONS AT HERMANUS. The Magnetic Observatory moved from Cape Town (S33.95 E18.47) to Hermanus on 1/1/41. Period of operation of Cape Town R/1932-12/1940, recording instruments La Cour normal run and rapid run magnetographs.

 HONOLULU, USA

 ITEM: 270
 DATE: 09/07/83

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 21.32
 STATION LONGITUDE ----- E 201.99
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1902 to present
 OBSERVING SCHEDULE ----- Station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 Proton Vector Magnetometer, Ruska Magnetometer, Ruska Variometers-Ruska magnetometer used for absolute control; absolute observations made at least once a week. Magnetic variations are recorded by Ruska Variometers whose output is photographic paper. A proton-fluxgate system recording variations in D, H, Z and F digitally on magnetic tape was installed in 1985.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, photographic paper
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Pacific Tsunami Warning Center
 NOAA/NWS
 91-270 Ft. Weaver Road
 Ewa Beach, HI 96706
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- From 1947 to 1960 the Observatory was located 10 km west of the present site. Prior to 1947 the Observatory was located approximately midway between the last two sites. Data available as tables of mean hourly scalings, photographic paper, X figures, baseline results, rapid variations.

 HRBANOV, CZECHOSLOVAKIA

 ITEM: 807
 DATE: 00/00/75

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 47.87
 STATION LONGITUDE ----- E 18.18
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1890 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Magnetic Field Measurements
 RAW DATA ----- Photorecorded graphics, digital magnetic tape
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Photorecorded graphics
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Stephen Pinter
 Geophysical Inst, Slovak Acad of Science
 Geomagnetic Observatory
 Hrbanov 94701
 Czechoslovakia
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1980 or 1983. K-indices have been received by the World Data Centers through 1981.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 HYDERABAD, INDIA

 ITEM: 274
 DATE: 01/01/80

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 17.42
 STATION LONGITUDE ----- E 78.55
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 12/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour Variometers, D,H,Z, continuously recorded along with baseline whose values are determined separately. All 3 elements recorded on the same photographic paper with chart speed 15 mm/h.
 RAW DATA ----- Photographic paper, microfilm
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1.25 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA, (annual), OBSERVATORIES DATA VOLUME of NGRI (quarterly)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 National Geophysical Research Institute
 Uppal Road
 Hyderabad, Andhra Pradesh 500 007
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The Observatory is at an inland location just outside the influence of the equatorial electrojet and Deccan traps and oceanic induced currents. Baseline determinations for the variation records are done by observations with Proton Vector Magnetometer, QM and BMZ.
 No response received to inquiry for updating material in 1983.

 ISTANBUL-KANDILLI, TURKEY

 ITEM: 294
 DATE: 18/01/84

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 41.04
 STATION LONGITUDE ----- E 29.04
 ALTERNATE NAMES ----- Istanbul
 DATES OF OPERATION ----- 01/1947 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Askania Magnetometer, Geomagnetic Variations
 RAW DATA ----- Photographic paper, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Tables, microfilm, computer printouts
 DATA ROUTINELY PUBLISHED ----- GEOMAGNETIC RESULTS, Kandilli Obs
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Istanbul - Kandilli Observatory
 Magnetic Service
 Genelkoy
 Istanbul
 Turkey
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.

 IRKUTSK, USSR

 ITEM: 865
 DATE: 01/05/84

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 52.27
 STATION LONGITUDE ----- E 104.27
 ALTERNATE NAMES ----- Patrony
 DATES OF OPERATION ----- 1886 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of mean hourly values and magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- SIBIZMIR
 P.O.B. 4
 664697 Irkutsk 33
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 JAIPUR, INDIA

 ITEM: 285
 DATE: 01/02/84

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 26.92
 STATION LONGITUDE ----- E 75.79
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IZMIRAN (Bobrov) Quartz Variometers for D, H, Z. Variations of the 3 geomagnetic elements D, H, Z are continuously recorded along with baselines whose values are determined separately. All 3 elements are recorded on a single photographic paper at a chart speed of 20 mm/h.
 RAW DATA ----- Photographic paper, microfilm
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printout
 DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA, annual
 Indian Inst of Geomagnetism, Bombay
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. G. Rastogi, Director
 Indian Institute of Geomagnetism
 Dr. Nanabhai Moos Marg
 Colaba, Bombay
 Maharashtra 400 005
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Observatory started as part of Indian participation in Geomagnetic Meridian Project (GMP), and continuing. Baseline determinations for H and Z are done by daily observations of absolute H, Z with QM and BMZ respectively and for D by observations of absolute D with QM once a week, on Wednesday at about local noon. Observed absolute values periodically standardized by inter-comparison with those observed at Alibag using a set of QM, BMZ as touring standards. Proton Precession Magnetometer is used for determination of F and for checking consistency of H and Z baselines.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 JAN MAYEN, NORWAY

ITEM: 2120
 DATE: 04/01/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 70.93
 STATION LONGITUDE ----- E 14.74
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1977 to 10/1978 and
 10/1978 to present

OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- EDA Fluxgate
 RAW DATA ----- Strip chart, ink pen

DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Steinar Berger
 The Auroral Observatory
 University of Tromsø
 P.O. Box 953
 N-9001 Tromsø
 Norway

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KANUKA, JAPAN

ITEM: 295
 DATE: 07/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 31.42
 STATION LONGITUDE ----- E 130.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Proton magnetometer, MU-J magnetometer theodolite
 KM(H,D) and KZ(Z) variometers suspended bar-
 magnet type, continuous observations, 2.5
 gamma/mm, 20 mm/h.

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, microfilm
 computer printouts
 DATA ROUTINELY PUBLISHED ----- Report of the Kakioka Magnetic
 Observatory, annual report

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Kyoto
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 Kakioka Magnetic Observatory
 Kakioka 595
 Yasato-machi
 Ibaraki-ken 315-01
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Auxiliary equipment: GS1-1 magnetometer theodolite,
 Fluxgate magnetometer.

 KAKIOKA, JAPAN

ITEM: 291
 DATE: 07/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run
 Measurements
 STATION LATITUDE ----- N 36.23
 STATION LONGITUDE ----- E 140.19
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1913 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- KASMER Standard Magnetometer, KM(H, D) and
 KZ(Z) Variometers: KASMER (Kakioka automatic
 standard magnetometer) Proton magnetometer,
 DI-72 magnetometer theodolite, and four
 optical-pumping magnetometers (F, H, D, Z
 continuous). Data acquisition and storage by
 computer. Variometers are suspended bar-magnet
 type, continuous observations, 2.5 gamma/mm,
 20 mm/hour.

RAW DATA ----- Photographic paper, strip chart,
 tables, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, microfilm
 computer printouts
 DATA ROUTINELY PUBLISHED ----- Report of the Kakioka Magnetic
 Observatory (annual); Report of the
 Geomagnetic and Geoelectric Observa-
 tions (rapid variations)(annual)

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Kyoto
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kakioka Magnetic Observatory
 Kakioka 595
 Yasato-machi
 Ibaraki-ken 315-01
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Auxiliary equipment: MOP Vector Proton Magnetometer.
 Special purpose data available after one month.

 KANOZAN, JAPAN

ITEM: 2203
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 35.25
 STATION LONGITUDE ----- E 139.96
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1962 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Proton precession magnetometer for F and H
 observation, Geomagnetic variograph for H, Z
 and D observation (chart speed 20 mm/h, scale
 values roughly 3 nT/mm), GS1 precise
 magnetometer for D and I observation.

RAW DATA ----- Photographic paper, digital printout
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Bulletin of the Geographical
 Survey Institute

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Kanozan Geodetic Observatory
 Kimitsu-shi
 Chiba-ken 292-11
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Geodetic Department
 Geographical Survey Institute
 Kitasato-1, Yatabe-machi
 Tsukuba-gun, Ibaraki-ken 305
 Japan

ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 KARAGANDA, USSR

ITEM: 836
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 49.82
 STATION LONGITUDE ----- E 73.08
 ALTERNATE NAMES ----- Bereznyaki
 DATES OF OPERATION ----- 01/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer
 RAW DATA ----- Magnetograms
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values and magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Complex Magneto-Ionospheric Station
 p/o Bereznyaki
 Temir-Tau
 472388 Karagandinskaya Oblast
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KAZAN, USSR

ITEM: 2341
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 55.83
 STATION LONGITUDE ----- E 48.85
 ALTERNATE NAMES ----- Raifa
 DATES OF OPERATION ----- 1832 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Geomagnetic Observatory of the
 Kazan State University
 der. Beloe-Bezvodnoe
 p/o Raifa 1
 422523 Zelenodolskiy District
 Tatar ASSR
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KARAVIA, ZAIRE

ITEM: 163
 DATE: 01/01/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 11.65
 STATION LONGITUDE ----- E 27.47
 ALTERNATE NAMES ----- Lubumbashi
 Elizabethville
 DATES OF OPERATION ----- 1956 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 OCCASIONAL
 INSTRUMENT DESCRIPTION ----- La Cour magnetometer, Standard measurements,
 3x3 BM2 - 3x2 QM/week, H (CIW), and I (ASKANIA)
 are out of use. D (QIM); chart speed 15mm/h.
 RAW DATA ----- Photographic papers, tables
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, films (on request)
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION --- Geophysical Observatory Karavia
 Service Météo Du Zaïre
 Binza, Kinshasa
 Zaïre

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Operation intermittent 10/1962 to 08/1965. Special
 purpose data available after 12 months.
 No response to inquiry for updating material in 1980
 or 1983. Data received by the World Data Centers
 through 1977.

 KEM, USSR

ITEM: 785
 DATE: 00/00/75

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run
 Measurements
 STATION LATITUDE ----- N 65.00
 STATION LONGITUDE ----- E 34.40
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1973 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer
 RAW DATA ----- Photorecorded graphics
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Microfilm, tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Michail I. Pudovkin
 Department of Terrestrial Physics,
 Physics Institute
 Leningrad State University
 Leningrad 199 164
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1980.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 KHABAROVSK, USSR

ITEM: 2342
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 48.48
 STATION LONGITUDE ----- E 135.07
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1973 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of tables and magnetograms
 DATA ROUTINELY PUBLISHED ----- "Cosmic Data" Bulletin (Monthly Review)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Observatory
 Zabajkalskoe
 Vyazemskii District
 682949 Khabarovskii Krai
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- North-Eastern Complex Research Institute
 of the Academy of Sciences of the USSR
 Portovaya ul. 16
 685000 Magadan
 USSR

ADDITIONAL COMMENTS -----

 KIRUNA, SWEDEN

ITEM: 315
 DATE: 01/01/80

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 67.83
 STATION LONGITUDE ----- E 20.42
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1950 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour and Fluxgate Magnetometers
 RAW DATA ----- Photographic paper, magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, tape of 1 min values
 DATA ROUTINELY PUBLISHED ----- KIRUNA GEOPHYSICAL DATA
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES; Copenhagen
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Library
 Kiruna Geophysical Institute
 Kiruna S-98101
 Sweden

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

 KIEV, USSR

ITEM: 849
 DATE: 19/06/79

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 50.72
 STATION LONGITUDE ----- E 30.30
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Magnetic station, +2000 to -2000 gamma
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. K. Yukhimuk
 Inst of Geophysics, Ukrainian Acad of Sci
 32, Palladin Avenue
 Kiev 68
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Telephone 44-23-13

 KODAIKANAL, INDIA

ITEM: 323
 DATE: 11/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 10.23
 STATION LONGITUDE ----- E 76.95
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1949 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- A set of D₁H₂Z La Cour variometers; variations
 of D₁H₂Z continuously recorded, along with base-
 lines whose values are determined separately. All
 3 elements are recorded on a single photographic
 paper at a chart speed of 15 mm/h.

RAW DATA ----- Photographic paper, microfilm
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables on computer print-
 out
 DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA (annual) with
 mean hourly values of D₁H₂Z and
 magnetic storm statistics
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. H. Sastri, Director
 Indian Institute of Astrophysics
 Kodaikanal, Tamil Nadu 624 103
 India

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- INDIAN MAGNETIC DATA is published annually by the
 Director, Indian Institute of Geomagnetism, Colaba,
 Bombay 400 005, India. A magnetic observatory was
 operated by the Survey of India from early 1906 to
 about 1923 when it was closed down. Baseline deter-
 minations are made by observations with UMM and BMZ.
 The observed absolute values are periodically stand-
 arized by intercomparison with those at Alibon,
 using a set of UMM and RMZ as touring standards.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 L'AQUILA, ITALY

ITEM: 332
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 42.38
 STATION LONGITUDE ----- E 13.31
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Normal Huska magnetographs with continuous photo paper records; automatic Proton Vector Magnetometer with digital recording, designed and partly constructed at L'Aquila Observatory. Absolute observations twice per week on EISEC proton vector magnetometer and Huska suspension magnetometer for D.

RAW DATA ----- Photo paper, digital data in tabular form
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Photo copies, magnetic tape, tabular form, microfilm
 DATA ROUTINELY PUBLISHED ----- Yearbooks--hourly values for H, D, Z, daily, monthly, annual mean values. K indices monthly bulletin.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: K indices
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Reparto Geomagnetismo
 Istituto Nazionale di Geofisica
 Via Muggero Bonghi 11/B
 Roma 00184
 Italy
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LAUDER, NEW ZEALAND

ITEM: 2091
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 45.04
 STATION LONGITUDE ----- E 169.69
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Askania variograph, continuous recording, H, D, Z, at 20 mm/h on photographic paper. Amus 3 cpt digital recording system; D, H, Z values recorded each 10 seconds. Weekly absolute observations made with declinometer, proton magnetometer and QM.

RAW DATA ----- Photographic paper and magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Microfiche tabulations
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysical Observatory
 P O Box 2111
 Christchurch
 New Zealand
 or
 PEL Atmospheric Station, DSIR
 Lauder, Central Otago
 New Zealand
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Preliminary magnetic measurements prior to installation of A.M.O.S. in 1979.

 LAS ACACIAS, ARGENTINA

ITEM: 753
 DATE: 00/00/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 35.00
 STATION LONGITUDE ----- E 302.32
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Normal speed (15 mm/h) standard magnetographs

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Microfilm
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Otto Schneider
 Observatorio Astronomico
 Paseo del Bosque
 La Plata
 Argentina
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1980 or 1983. K-indices received by the World Data Centers through 1981.

 LEIRVUGUR, ICELAND

ITEM: 341
 DATE: 13/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 64.18
 STATION LONGITUDE ----- E 338.30
 ALTERNATE NAMES ----- Reykjavik
 DATES OF OPERATION ----- 08/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour magnetometers, magnetic field recordings of the vertical component, horizontal component and declination. Normal-run records, recording speed 15 mm/h. Scale value approximately 15 g/mm for H and Z and 2.3 g/mm for D. Quick-run records - Recording speed 180 mm/h. Scale value approximately 7 g/mm for H, 6 g/mm for Z and 1.4 g/mm for D.

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, punched cards
 DATA ROUTINELY PUBLISHED ----- LEIRVUGUR MAGNETIC RESULTS, published yearly.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES: Lyngby
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Th. Saemundsson
 Rauvísindastofnun Háskolans
 Dunhaga 3
 Reykjavik
 Iceland
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Preliminary data are available after 1 month.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
LEIRVOGUR, ICELAND
*****
ITEM: 342
DATE: 13/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 64.18
STATION LONGITUDE ----- E 334.30
ALTERNATE NAMES ----- Reykjavik
DATES OF OPERATION ----- 01/1966 to present
OBSERVING SCHEDULE ----- intermittent
INSTRUMENT DESCRIPTION ----- REGULAR
Sigrurðsson continuous proton magnetometer,
continuous recording of the total magnetic
field strength and recording of hourly averages.
Instrument produces an uninterrupted record of
the total field. Recording speed generally
maintained at 15 mm/h with scale values of about
12 g/cm. Hourly totals stored in memory chips.
RAW DATA ----- Chart recordings, floppy discs
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, magnetic tape
DATA ROUTINELY PUBLISHED ----- LEIRVOGUR MAGNETIC RESULTS,
published annually.
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: Lyngby
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Th. Saemundsson
Haukvísindastofnun Háskolans
Dunhaga 3
Reykjavik
Iceland
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Up to 1971, there were fairly frequent gaps in op-
eration, but these were generally of short dura-
tion. A conventional proton magnetometer record-
ing once every 10 min was used to fill the gaps
as far as hourly averages were concerned. Prelimin-
ary data are available after 1 month.

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*****
LEWICK, UNITED KINGDOM
*****
ITEM: 343
DATE: 22/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 60.13
STATION LONGITUDE ----- E 358.82
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1923 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- La Cour magnetometer, D.H.Z continuous record-
ing 20 mm/h. E.D.A. Fluxgate magnetometer D.H.Z,
recording 30 s. intervals on cassette tape.
RAW DATA ----- Photographic paper, magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables, magnetic tape, microfilm
DATA ROUTINELY PUBLISHED ----- GEOMAGNETIC BULLETIN, annual
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: Copenhagen, Tokyo
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Unit, IGS
Murchison House
West Mains Road
Edinburgh EH9 3LA
United Kingdom
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
LENINGRAD, USSR
*****
ITEM: 857
DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 59.95
STATION LONGITUDE ----- E 30.70
ALTERNATE NAMES ----- Voyekovo
DATES OF OPERATION ----- 1947 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard magnetometers
RAW DATA ----- Magnetograms on photo paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Microfilm copies of mean hourly values
and magnetograms
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Magneto-Ionospheric Complex Observatory
of LO IZMIRAN
p/o Koltushi, Voyekovo
Vsevolozskii r-n
188685 Leningradskaya Oblast
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- LO IZMIRAN
2 Lina Vasiljevskogo Ostrova, 23
199053 Leningrad B-53
USSR
ADDITIONAL COMMENTS -----

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*****
LORING AFB, USA
*****
ITEM: 358
DATE: 31/05/82

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 46.95
STATION LONGITUDE ----- E 292.12
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1966 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Magnetic field measurements
RAW DATA ----- Photorecorded graphics
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Col Dale J. Flinders
Det 4, 26 WS
Loring AFB, MA 04751
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 LOVO, SWEDEN

ITEM: 2199
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 59.35
 STATION LONGITUDE ----- E 17.83
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1928 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- La Cour variometers, 20 mm/h, scale values 4 nT/mm
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, microfilm
 DATA ROUTINELY PUBLISHED ----- Yearbook
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geological Survey of Sweden
 S-751 28
 Uppsala
 Sweden

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LUANDA, ANGOLA

ITEM: 2157
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 8.92
 STATION LONGITUDE ----- E 13.17
 ALTERNATE NAMES ----- Belas
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Variograph, Askania model GV3 (D, H and Z)
 Proton magnetometer, Geometric model (F)
 Absolute instruments

RAW DATA ----- Geomagnetic measurements of
 D, H and Z

DATA REDUCTION PRACTICE ----- Mathematical calculation
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/3 MONTHS
 FORM OF REDUCED DATA ----- Geomagnetic bulletin
 DATA ROUTINELY PUBLISHED ----- Monthly geomagnetic bulletin (D,H,Z
 and F)

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Instituto Nacional de Hidrometeorologia
 E Geofisica (Departamento de Geofisica)
 C.P. 1228-C Luanda
 Angola

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The monthly geomagnetic bulletin is sent to
 WDC-A, WDC-B, and WDC-C. The D, H and Z
 values from 1957 and the F values from 1982
 are available from the station itself.

 LOVOZERO, USSR

ITEM: 2343
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 67.97
 STATION LONGITUDE ----- E 35.02
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Standard magnetometer
 RAW DATA ----- Magnetometers on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED ----- "Avtoralnye Yavleniya" series
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysical Observatory of the
 Polar Geophysical Institute
 Lovozero
 184290 Murmansk Region
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Polar Geophysical Institute
 Vladimirskaia 17
 183010 Murmansk
 USSR

ADDITIONAL COMMENTS -----

 LUCKY LAKE, CANADA

ITEM: 363
 DATE: 22/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 51.15
 STATION LONGITUDE ----- E 252.74
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1969 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer - Serson-type IGY flux-
 gate magnetometer modified for greatly in-
 creased stability. Continuous observation on
 strip chart; digital recording available when
 requested.

RAW DATA ----- Strip chart, digital 7-track tape
 (if requested prior to recording)

DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. K. V. Paulson
 Cybernetics Laboratory
 Department of Physics
 University of Saskatchewan
 Saskatoon, Saskatchewan S7N 0W0
 Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Operation in conjunction with three-component in-
 duction coil magnetometer and earth current sys-
 tem (two components).

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 LUNPING, TAIWAN, CHINA

ITEM: 366
 DATE: 18/05/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 25.00
 STATION LONGITUDE ----- E 121.17
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ruska normal magnetograph, Geometrics G 805,
 G. S. I. precise magnetometer, normal recording.
 Normal magnetograph with recording speed of
 20 mm/h. The absolute observation is made twice
 a week.

RAW DATA ----- Photographic paper of magnetograms
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED ----- Report of Lunping Observatory,
 Geomagnetism, published by
 Telecommunication Laboratories, M.O.C.,
 Taiwan, China

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Yinn-Nien Huang, Deputy Director
 Telecommunication Laboratories, M.O.C.,
 P.O. Box 71
 Chung-Li, Taiwan 320
 China

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose observations are usually avail-
 able after 1 month.

 LYCKSELE, SWEDEN

ITEM: 370
 DATE: 01/06/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 64.62
 STATION LONGITUDE ----- E 18.67
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 6/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour and standard magnetometers
 RAW DATA ----- Photographic paper, strip charts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- 0-indices are included in the
 LYCKSELE IONOSPHERIC DATA pub-
 lications.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Ove Klang
 Ionospheric Observatory
 Box 100
 Lycksele, S-92100
 Sweden

ADDRESS FOR INFORMATION ABOUT DATA -----
 Library
 Kiruna Geophysical Institute
 Kiruna, S-98101
 Sweden

ADDITIONAL COMMENTS -----

 LVDP, USSR

ITEM: 830
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 49.90
 STATION LONGITUDE ----- E 23.75
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1952 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometer
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 8 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of mean hourly
 values and magnetograms

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Geomagnetic Observatory
 p/o Ivano-Franko
 Yavorovskii r-n
 292193 Lvovskaya Oblast
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MACQUARIE ISLAND

ITEM: 376
 DATE: 01/06/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 54.50
 STATION LONGITUDE ----- E 158.95
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1952 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour magnetograph normal run, 3 components H,
 D,Z continuous recording 20 mm/h, twice weekly
 control observations.
 H = 19 nT/mm, D = 2.4 mV/mm, Z = 21 nT/mm

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values on magnetic
 tape, computer printouts

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Geology & Geophysics
 Bureau of Mineral Resources
 Geomagnetism Section
 G.P.O. Box 378
 Canberra 2601
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Upgrading to digital data recording 1985.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 MAGADAN, USSR

ITEM: 868
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 60.12
 STATION LONGITUDE ----- E 151.02
 ALTERNATE NAMES ----- Srednekan (1932-1966)
 DATES OF OPERATION ----- 11/1932 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of mean hourly values and magnetograms

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Division of Radio & Cosmophysical
 Research
 North-Western Complex Research Inst.
 Academy of Sciences of the USSR
 Stekolnii
 686134 Magadanskaya Oblast
 USSR
 North-Eastern Complex Research Inst.
 Academy of Sciences of the USSR
 Portovaya 16
 685000 Magadan
 USSR

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 MAPUTO, MOZAMBIQUE

ITEM: 2244
 DATE: 22/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 25.92
 STATION LONGITUDE ----- E 32.58
 ALTERNATE NAMES ----- Maputo Magnetic Observatory
 DATES OF OPERATION ----- 06/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Normal speed recording Askania magnetograph and D_HZ, T - variographs Bobrov type, 20 mm/h, 2-3 nT/mm.
 T - Elsec 282, Elsec 595, Scintex MBS-Z
 H_Z - Helmholtz Coils
 D - Askania Declinometer and Schmidt
 H - OIM 679
 Z - BMZ

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Tables, digital data
 DATA ROUTINELY PUBLISHED ----- Preliminary bulletins are available
 Tables of monthly hour medians

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Director
 Servicos Meteorologicos
 Caixa Postal 256
 Maputo
 Mocambique
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Bobrov variographs were installed in 1980 and the data were compared with the Askania Variograph. From 1981 the data published are from the Bobrov variometers. Missing data are obtained from the Askania. In July 1981 the H component was compared with the IAGA standard: OMT/IAGA with OMT/Maputo. The total force T. In October 1980 the crystal frequency was measured at Hermanus and also the T measurements of the field at Hermanus; these were compared with the Elsec 282 measurements.

 MANILA, PHILIPPINES

ITEM: 390
 DATE: 15/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 14.64
 STATION LONGITUDE ----- E 121.08
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Heliflux station magnetometer, model MSM-1, 24
 hour run, 1.5 inch/h, routine observations.
 Strip chart

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
 FORM OF REDUCED DATA ----- Tables

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 The Director
 Manila Observatory
 P.O. Box 1231
 Manila
 Philippines
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 MARTIN DE VIVIES, AMSTERDAM I.

ITEM: 2248
 DATE: 01/02/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 37.50
 STATION LONGITUDE ----- E 77.34
 ALTERNATE NAMES ----- Amsterdam Island
 DATES OF OPERATION ----- 04/1981 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer (H_DZ) and proton magnetometer (F). Magnetic variations (dc to 0.1 Hz) and absolute measurements. The system includes a 3 axis fluxgate magnetometer to which a proton magnetometer is associated. The recording is done continuously.

RAW DATA ----- Strip chart, digital magnetic tape
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, computer printout, microfilm of magnetograms

DATA ROUTINELY PUBLISHED ----- Fascicule de l'Institut de Physique du Globe de Strasbourg (yearly issue)
 du Globe de Strasbourg (yearly issue)
 YES: Boulder
 YES: Moscow
 YES: Copenhagen and Edinburgh
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Institut de Physique du Globe
 Service des Observatoires Magnetiques
 5 rue Rene Descartes
 67084 Strasbourg Cedex
 France
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Reduced data are available as: tables of hourly mean values (send request to Institut de Physique du Globe), magnetic tape of hourly mean values and one minute values (send request to WDC-A), microfilm of magnetograms (send request to WDC-C).

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 MAWSON, ANTARCTICA

 ITEM: 691
 DATE: 01/06/84
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 67.60
 STATION LONGITUDE ----- E 62.86
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1955 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour magnetograph (normal), three components
 H, D, & Z, continuous recording 20 mm/h, twice
 weekly control observations. H = 21 nT/mm,
 D = 2.4 min/mm Z = 23 nT/mm.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values on magnetic tape
 and computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- NO
 DATA SENT TO WDC-C ----- NO
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Section
 Bureau of Mineral Resources
 Geology & Geophysics
 G.P.O. Box 378
 Canberra 2601
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Sensitive instrument in use as normal 1955 to 1968.

 MCMATH-HULBERT, USA

 ITEM: 1101
 DATE: 01/08/83
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 42.66
 STATION LONGITUDE ----- E 276.74
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1953 to present
 INSTRUMENT DESCRIPTION ----- Magnetic field measurements
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE ----- 2 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Orren C. Mohler
 McMath-Hulbert Observatory
 895 Lake Angelus Road North
 Pontiac, MI 48055
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MBOUR, SENEGAL

 ITEM: 1103
 DATE: 01/01/80
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 14.39
 STATION LONGITUDE ----- E 343.04
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1950 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour Magnetometer (2) with weekly absolute
 measurements (use of Elsec proton magnetometer
 for H and Z), standard.
 RAW DATA ----- Photographic paper records, tables
 digitized data from 1971
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, tape (1971 data onwards)
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Hans G. Barszczus
 ORSTOM
 B.P. 50
 Mbour
 Senegal
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 1965-'90 data will be published this year hopefully
 Main office is in France where digitized data are.
 No response received to inquiry for updating material
 in 1983.

 MEANDOK, CANADA

 ITEM: 1104
 DATE: 08/08/83
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 54.62
 STATION LONGITUDE ----- E 246.67
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1931 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System),
 continuous recording of earth's magnetic field; X
 (north), Y (east), Z (vertical), F (total intensity)
 of field recorded once per min on digital mag-
 netic tape with an analog output on strip chart
 at 20 mm/h. Absolute observation of D (declina-
 tion) and I (inclination) and of total intensity F
 are made once or twice a week.
 RAW DATA ----- Digital magnetic tape, strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables,
 microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth
 Physics Branch contains instrument
 parameters, mean hourly value sum-
 mary, instrument changes
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept Energy, Mines and Resources
 Observatory Cres.
 Ottawa, Ontario K1A 0Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 3 component fluxgate with digital output serves as
 standby recorder. Portable fluxgate magnetometer
 for absolute D.I. observations, proton recession
 magnetometer for F observation. Digital recording
 commenced 11/1970. Photographic recording by a
 standard 3 component Ruska magnetograph was dis-
 continued 07/1981. Special purpose data available
 after 2 months.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
MUMPHUSTON, JAPAN
*****
ITEM: 395
DATE: 07/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 43.91
STATION LONGITUDE ----- E 144.19
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1952 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- MDP-75 (vector) proton magnetometer, DI-75
magnetometer theodolite, KM (H,D) and KZ (Z)
variometers. Variometers: suspended bar-
magnet type, continuous observation, 2.5 gamma/mm
20 mm/h.

RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- SIMILAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables, magnetic tape, micro-
film, computer printouts
DATA ROUTINELY PUBLISHED ----- REPORT OF THE KANOKA MAGNETIC
OBSERVATORY, annual report
YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Institute
Kanoka Magnetic Observatory
Kanoka 549
Yasato-Machi
Inaraki-ken 315-11
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Auxiliary equipment: MO 11 and MO-1 Magnetometer
theodolite, Fluxgate magnetometer
    
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*****
MIRNY, ANTARCTICA
*****
ITEM: 2344
DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 66.52
STATION LONGITUDE ----- E 93.02
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1956 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard magnetometer
RAW DATA ----- Magnetograms on photo paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA ----- Mean hourly values and magnetograms
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Arctic and Antarctic Research Institute
Fontanka 34
192104 Leningrad L-104
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
MINSK, USSR
*****
ITEM: 875
DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 54.10
STATION LONGITUDE ----- E 26.52
ALTERNATE NAMES ----- Pleschenski
DATES OF OPERATION ----- 1959 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard Magnetometer
RAW DATA ----- Magnetograms on photo paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Microfilm copies of tables and magne-
tograms
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysical Observatory
Pleschenski
223130 Minsk Region
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
MIYAZU, JAPAN
*****
ITEM: 406
DATE: 01/08/80

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 35.32
STATION LONGITUDE ----- E 135.11
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1973 to present
OBSERVING SCHEDULE ----- OCCASIONAL
INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer, analog data on chart,
speed 25 mm/h.
RAW DATA ----- Strip charts
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Microfilm or photographic paper
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- J. Araki
WDC-C2 for Geomagnetism
Kyoto University, Faculty of Science
Kyoto 606
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data usually available after six
months.
No response received to inquiry for updating material
in 1981.
    
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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 MIZUSAWA, JAPAN

ITEM: 2202
 DATE: 08/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 39.11
 STATION LONGITUDE ----- E 141.21
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1969 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Proton precession magnetometer for F and H observation. Geomagnetic variograph for H, Z and D observation (chart speed 25 mm/hr, scale values roughly 1.2 nT/mm). GSI precise magnetometer for D and I observation.
 RAW DATA ----- Digital print, strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Bulletin of the Geographical Survey Institute
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Mizusawa Geodetic Observatory
 42 Kunagasawa, Kuroishi-cho
 Mizusawa-shi, Iwate-ken 023-02
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Geodetic Department
 Geographical Survey Institute
 Kitasato-1, Yatabe-machi
 Tsukuba-gun, Ibaraki-ken 305
 Japan
 ADDITIONAL COMMENTS -----

 MOSCOW, USSR

ITEM: 855
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 55.48
 STATION LONGITUDE ----- E 37.32
 ALTERNATE NAMES ----- Krasnaya Pakhra
 DATES OF OPERATION ----- 07/1919 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2-3 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED ----- "Cosmic Data" Bulletin (Monthly Review)
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Observatory
 IZMIRAN
 P/O Akademgorodok
 142092 Troitsk, Moscow Region
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MOSCOW, ANTARCTICA

ITEM: 2345
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 67.67
 STATION LONGITUDE ----- E 45.85
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1965 to present
 OBSERVING SCHEDULE ----- Irregular
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer
 RAW DATA ----- Magnetograms
 DATA REDUCTION PRACTICE ----- IRREGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Arctic and Antarctic Research Institute
 Fontanka 34
 192104 Leningrad D-104
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MOULD BAY, CANADA

ITEM: 412
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 76.20
 STATION LONGITUDE ----- E 240.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Recording fluxgate, continuous recording of earth's magnetic field. X(north), Y(east), Z(vertical), of field recorded once per minute on digital cassette with analogue output on strip chart at 20 mm/hr. Absolute observations of D(declination), I(inclination) and of total intensity F are made once or twice a week.
 RAW DATA ----- Digital magnetic tape, strip charts, photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables, microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth Physics Branch, contains instrument parameters, mean hourly value summary, data quality, instrument changes
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept. Energy, Mines & Resources
 1 Observatory Cres.
 Ottawa, Ontario K1A 0Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Standard Ruska magnetograph continuously records the variations of the earth's magnetic field on photographic paper with a paper speed of 20 mm/hr. 3 variometers record the X(north), Y(east), Z(vertical) components of the field. Portable fluxgate magnetometer for absolute D, I observations, proton precession magnetometer for F observations. Digital recording commenced 07/1980. Special purpose data usually available after 2 months.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 MUNTINLUPA, PHILIPPINES

ITEM: 421
 DATE: 20/01/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 14.38
 STATION LONGITUDE ----- E 121.02
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1950 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- A set of Eschenhagen type variometers by RUSKA Instrument Corp. Magnetic hourly values of D,H, Z elements from magnetograms. Conventional normal run magnetograph 20 mm/h. Absolute observations done by using magnetometer (RUSKA) for D & H elements while earth inductor M-9(RUSKA Instrument for I, QHM & BMZ instruments are also being used almost simultaneously for baseline observations for comparison. Absolute observations are made twice a week usually after 1700 LT.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- Photographic paper
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES (K indices only)
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES (K indices only)
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- The Director
 Bureau of Coast and Geodetic Survey
 421 Barraca St., San Nicolas
 Manila
 Philippines

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Auxiliary equipment: 6 QHM La Cour, 2 BMZ La Cour, one Earth inductor (CIW), one magnetometer (RUSKA Instr. Corp.), IBM clock for time flashes. Data gap from June 1953 to December 1954 for Z and I because of lightning damage. Special purpose data usually available 1 month after observation.

 MURMANSK, USSR

ITEM: 2346
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 68.25
 STATION LONGITUDE ----- E 33.08
 ALTERNATE NAMES ----- Loparskaya
 DATES OF OPERATION ----- 1953 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers

RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of mean hourly values and magnetograms

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Department
 Polar Geophysical Institute
 Vladimirskaaya 17
 183010 Murmansk
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 NAGYCEKN, HUNGARY

ITEM: 425
 DATE: 22/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 47.63
 STATION LONGITUDE ----- E 16.72
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Earth currents recorder (made in Hungary), chart speed 2 cm/h; La Cour magnetometer operating since 1960 measures geomagnetic field components with chart speed 1.5 cm/h.

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables of hourly mean values, 3-hour indices of activity, etc.
 DATA ROUTINELY PUBLISHED ----- Geophysical Observatory Reports, Observatory of Nagycekn MTA GGI, H-5401 - Sopron, Pf. 5 Hungary

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. Adam
 MTA GGI
 Muzeum - u. 6-8, P.O.B. 5
 Sopron H-5401
 Hungary

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. J. Vero
 MTA GGI
 Muzeum - u. 6-8, P.O.B. 5
 Sopron H-5401
 Hungary

ADDITIONAL COMMENTS ----- Also recorded: ionospheric absorption, atmospheric electric potential gradient Pcl pulsation (from 15/01/1976)

 NAIROBI, KENYA

ITEM: 428
 DATE: 15/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 1.33
 STATION LONGITUDE ----- E 36.81
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour magnetometers H,D,Z geomagnetic variations, continuous, chart speed 15 mm/h. Photographic paper

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Tables of hourly values of H,D,Z
 DATA ROUTINELY PUBLISHED ----- Magnetic yearbook (monthly tables) 1967-1979 available on exchange basis

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Copenhagen, Kyoto
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Department of Physics
 Univ. of Nairobi
 P.O. Box 30197
 Nairobi
 Kenya

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- QHM 398, BMZ 170, Elsec proton precession magnetometer, Geometrics proton precession magnetometer.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 NAMPUULA, MOCAMBIQUE

ITEM: 2245
 DATE: 22/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 15.09
 STATION LONGITUDE ----- E 39.25
 ALTERNATE NAMES ----- Nampula Magnetic Observatory
 DATES OF OPERATION ----- 06/1982 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Normal speed recording Askania magnetograph and D.M.Z. 20 mm/h, 2-3 nT/mm.
 T - Scintex MBS-2
 H - OHM 679
 D - Askania Declinometer
 Z - (T² - H²)^{1/2}

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS (mailed to Maputo)
 FORM OF REDUCED DATA ----- Tables, digital data
 DATA ROUTINELY PUBLISHED ----- Preliminary bulletins are available
 Tables of monthly hour medians
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 Servicos Meteorologicos
 Caixa Postal 256
 Maputo
 Mocambique

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The instruments mentioned are controlled by the Magnetic Observatory of Maputo. The standard levels are carefully checked with the aid of the OHM 679 and Scintex from Maputo. Until December 1982 the station was being carried on an experimental basis. In January 1983 the data became available for general use via the World Data Centers.

 NEUCHÂTEL, SWITZERLAND

ITEM: 2220
 DATE: 07/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 47.00
 STATION LONGITUDE ----- E 6.57
 ALTERNATE NAMES ----- Observatoire de Neuchatel
 DATES OF OPERATION ----- 01/01/78 to present
 OBSERVING SCHEDULE ----- Sampling X, Y, Z, F once a minute at full UTC minute
 EDA AMOS Mk II, improved microprocessor controlled.

INSTRUMENT DESCRIPTION -----
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetograms or tapes can be provided
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Gaston Fischer
 Observatoire Cantonal
 CH-2000 Neuchatel
 Switzerland
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- We do not guarantee baseline values for X, Y, Z.

 NARSARSUAQ, GREENLAND

ITEM: 2280
 DATE: 12/04/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 61.18
 STATION LONGITUDE ----- E 314.57
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour and EDA fluxgate magnetographs, 3 components (H,D,Z), calibrated by means of regular absolute measurements.

RAW DATA ----- Photographic paper, digital magnetic tape, strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES: WDC-C1
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Division of Geophysics
 Danish Meteorological Institute
 Lyngbyvej 100
 Copenhagen DK-2100
 Denmark

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data sent to WDC-C1 is in the form of 35 mm microfilm copies of photographic magnetograms. Digital data starting from July 1, 1980 will be sent to both WDC-A and WDC-C2 (AE derivation).

 NIEMEGK, GDR

ITEM: 1009
 DATE: 01/08/82

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 52.07
 STATION LONGITUDE ----- E 12.68
 ALTERNATE NAMES ----- Potsdam
 Seddin
 DATES OF OPERATION ----- 01/1890 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Proton magnetometer, rapid run magnetometer, normal magnetometer: 3 systems; 1 storm system; 20 mm/h or 60 mm/h, 2 nT/mm or 0.31 mm, Earth current (geom. E-W and N-S) 3 systems with 200 m 1000 m and 30 km or 40 km; 20 mm/h about 0.2 - 0.5 mV/km/mm; X,Y,Z 6 mm/min or 20 mm/min 0.02; 0.002 nT/s/mm, Earth current (1000 m) 80 mm/hour about 0.1-0.2 mV/km/mm; proton magnetometer, F,X,Y, Monthly Review and yearbook.

RAW DATA ----- Photographic paper, strip chart, digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- List, microfilm, magnetic and paper tape, computer printouts
 DATA ROUTINELY PUBLISHED ----- Monthly Review and Magnetic Yearbook of the Adolf-Schmidt-Observatory
 YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Copenhagen
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Klaus Lengling
 Adolf-Schmidt-Obs Erdmagnetismus Niemegek
 Lindenstr. 7
 Niemegek, Kreis Belzig 1824
 GDR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Station moved: 1/1890 Potsdam (N52.38 E13.07), 01/1908 Seddin (N52.28 E13.02), 01/1932 Niemegek. Normal reg. and Earth currents are on photographic paper, Proton magnetometer data on digital (1 date/ 60 s) strip chart, induction magnetometer and Earth current on digital magnetic tape (14 dates/s) on the 3 world days, after 1/1/1984 at all days. Special purpose data available after 1 month.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 NOVOKAZALINSK, USSR

ITEM: 834
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 45.77
 STATION LONGITUDE ----- E 62.12
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1973 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometer
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Ionospheric Section
 U.I. Kalinina, 3-km
 468210 Novokalinsk
 Kzyl-Ordynskaya Oblast
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Ionospheric Section
 Kazakh Academy of Sciences
 Kamenskoye Plato
 480068 Alma-Ata
 USSR

ADDITIONAL COMMENTS -----

 NOVOSIBIRSK, USSR

ITEM: 2348
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 55.03
 STATION LONGITUDE ----- E 82.90
 ALTERNATE NAMES ----- Klyuchi
 DATES OF OPERATION ----- 1967 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer
 RAW DATA ----- Magnetograms of speed 20 mm/h
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, photopaper recordings
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Geology & Geophysics
 Siberian Branch of Academy of Sciences
 Akademgorodok
 630090 Novosibirsk - 90
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS -----

 NOVUZAREVSKAYA, ANTARCTICA

ITEM: 2347
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 70.77
 STATION LONGITUDE ----- E 11.82
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1961 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- IRREGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1R MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Arctic and Antarctic Research Institute
 Fontanka 34
 192104 Leningrad U-104
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS -----

 NURMIJARVI, FINLAND

ITEM: 2265
 DATE: 05/05/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 60.51
 STATION LONGITUDE ----- E 24.65
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1961 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Le Four normal, Production of one-minute mean values using another classical magnetograph with electric compensation.
 RAW DATA ----- Magnetograms, digital data on magnetic tape
 DATA REDUCTION PRACTICE ----- Hand-scaled hourly means, control using digital data
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Microfilm and yearbooks
 DATA ROUTINELY PUBLISHED ----- Yearbook
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dept. of Geomagnetism
 Finnish Meteorological Institute
 Box 605
 SF-00101 Helsinki
 Finland

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 NYAALE SUND, NORWAY

 ITEM: 445
 DATE: 04/01/84
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 78.92
 STATION LONGITUDE ----- E 11.93
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1966 to present
 INSTRUMENT DESCRIPTION ----- La Cour Magnetometer, Medium sensitivity 10 g/mm,
 15 mm/h. Absolute measurement once a year.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Only annual quiet means
 DATA ROUTINELY PUBLISHED ----- Microfilm of records
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Copenhagen
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Steinar Berger
 The Auroral Observatory
 University of Trondheim
 P.O. Box 953
 Trondheim N9001
 Norway
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 NYDA, USSR

 ITEM: 2387
 DATE:
 DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 66.6
 STATION LONGITUDE ----- E 73.0
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1974 to present
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Magnetometer with H,D and Z components.
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and IUGG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

 NYAALE SUND, NORWAY

 ITEM: 2221
 DATE: 01/01/80
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 78.92
 STATION LONGITUDE ----- E 11.93
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1966 to date
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- La Cour magnetometer, normal speed
 recording, H, D and Z continuous
 15 mm/h.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6-12 MONTHS
 FORM OF REDUCED DATA ----- Paper copies
 DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A ----- YES (Copenhagen)
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- The Auroral Observatory
 P.O. Box 953
 Trondheim 9001
 Norway
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

 OBSERVATORIO DE MARINA, SPAIN

 ITEM: 532
 DATE: 10/01/84
 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 36.47
 STATION LONGITUDE ----- E 353.80
 ALTERNATE NAMES ----- San Fernando
 DATES OF OPERATION ----- 1880 to present
 INSTRUMENT DESCRIPTION ----- La Cour Magnetometer, H, D, F varlographs,
 controlling baseline with absolute. La Cour
 magnetometer has following scale values:
 H 4.4 gamma/mm, D 0.9 min/mm, speed 15 mm/h,
 continuous recording.
 RAW DATA ----- Photographic paper (La Cour).
 Strip charts (Proton and fluxgate
 magnetometer).
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables with mean hourly values for
 D, H, and F
 DATA ROUTINELY PUBLISHED ----- Results of Geomagnetic Data are
 published yearly in ANALES DE LAS
 OBSERVACIONES METEOROLOGICAS,
 SEISMICAS Y MAGNETICAS, available
 on scientific exchange basis or at
 a price of 400 pts/year.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Lyngby
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- The Director
 Instituto y Observatorio de Marina
 San Fernando, Cadiz
 Spain
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Until 1967 the Observatory recorded only D,H, from
 1967: H,D,Z, from 1975: H,D,F. Auxiliary equipment
 absolute measures with proton magnetometer and coil
 system. Declinometer type F1W. From 1978 there
 is artificial disturbances in San Fernando. In a
 new site, about 15 km, is recording F,D,I from June
 1980. A proton magnetometer Geometrics G-826A and
 two fluxgate RFL101, with analog recorder.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
ODESSA, USSR                               ITEM: 829
*****                                     DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 46.78
STATION LONGITUDE ----- E 30.88
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1896 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard magnetometer
RAW DATA ----- Magnetograms on photo paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
FORM OF REDUCED DATA ----- Hourly values, magnetograms
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Observatory
p/o Pervomajskoye
Kominternovskii r-n
s. Stepanovka
272 Odesskaya Oblast
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Institute of Geophysics
Ukrainian Academy of Sciences
Palladin Prosp., 32
252142 Kiev
USSR

ADDITIONAL COMMENTS -----
    
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*****
PANAGJURISTE, BULGARIA                     ITEM: 2110
*****                                     DATE: 01/10/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 42.31
STATION LONGITUDE ----- E 24.11
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1934 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Magnetic theodolite "Mating und Wiesenberg", earth
inductor "Askania", Proton Magnetometer "Lisif",
Two sets of variometers type "Bobruv" for
registration of magnetometer variation.
Analog photo-registrations

RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Magnetic yearbook of absolute values
of H, D, and Z
DATA ROUTINELY PUBLISHED ----- Magnetic yearbook
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic observatory
Panagjuriste 4500
Bulgaria

ADDRESS FOR INFORMATION ABOUT DATA ----- Geophysical Institute
Section of Geomagnetism
Acad. G. Bonchev Str., 41, 3
Sofia 1113
Bulgaria

ADDITIONAL COMMENTS -----
    
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*****
TITAMA, CANADA                             ITEM: 450
*****                                     DATE: 08/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 45.40
STATION LONGITUDE ----- E 284.45
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1968 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System)
continuous recording of Earth's magnetic field,
X(North), Y(East), Z(vertical), F(total
intensity) of field recorded once per minute on
digital magnetic tape with analogue output on
strip chart at 20 mm/h. Absolute observation of
D (declination), I (inclination) and of total
intensity F are made once or twice a week.

RAW DATA ----- Digital magnetic tape, strip
charts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
FORM OF REDUCED DATA ----- Digital magnetic tape, tables,
microfilm
DATA ROUTINELY PUBLISHED ----- Annual Report available from Earth
Physics Branch contains instrument
parameters, mean hourly value sum-
mary.
YES
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
Div. of Seismology and Geomagnetism
Dept. Energy, Mines, & Resources
1 Observatory Crescent
Ottawa, Ontario K1A 0Y3
Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- 3 component fluxgate with digital output serves
as standby recorder. Portable fluxgate magnetometer
for absolute D.I. observations, proton precession
magnetometer for F observations. Digital recording
commenced 08/1970. Special purpose data usually
available after 2 months.
    
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*****
PAPEETE (PAPATAI), FR. POLYNESIA          ITEM: 456
*****                                     DATE: 05/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 17.34
STATION LONGITUDE ----- E 210.25
ALTERNATE NAMES ----- Obs Geophysique de Tahiti
Tahiti
DATES OF OPERATION ----- 02/1966 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Normal La Cour magnetometer. Control of baseline
with Askania D meter, Askania J meter, Elsec proton
magnetometer, Helmholtz coils system (Nelson and
Searson method).

RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Magnetic tape (24 data per hour)
DATA ROUTINELY PUBLISHED ----- Mean hourly values
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. Jean Aubrat
Bureau Geophysique de ORSTROM
24 rue Bayard
Paris 75008
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data are reduced and made available as soon as
possible.
    
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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
PENDELL, GREECE
*****
ITEM: 35
DATE: 01/02/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 38.05
STATION LONGITUDE ----- E 23.86
ALTERNATE NAMES ----- Athens
DATES OF OPERATION ----- 01/1958 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Since April 1983 the old instruments of the Pendell
Observatory (one declinometer and two field magnetic
balances) have been replaced by a set of normal
La Cour variometers (for D, H, and Z). Recording
is being done by means of LTR (long time recorder).
Photographic paper

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 - 4 MONTHS
FORM OF REDUCED DATA ----- Microfilm (not regularly scheduled)
DATA ROUTINELY PUBLISHED ----- Monthly bulletins for 3 h range geomagnetic
Indices and rapid phenomena

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic Observatory of Pendell
Institute of Geology & Mining Exploration
Messogeionstr. 70
Athens, 11527
Greece

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
PODKAMENNAYA TUNGUSKA, USSR
*****
ITEM: 2360
DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 61.60
STATION LONGITUDE ----- E 90.00
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1966 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard magnetometer
RAW DATA ----- Magnetograms on photo paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Microfilm copies of mean hourly values and
magnetograms

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Research Institute of Applied Geophysics
Glebovskaya ul. 20-b
107258 Moscow B-258
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
PETROPVLOVSK-KAMCHATSKII, USSR
*****
ITEM: 2349
DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 53.10
STATION LONGITUDE ----- E 158.63
ALTERNATE NAMES ----- Paratunka
DATES OF OPERATION ----- 09/1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard magnetometer
RAW DATA ----- Photo paper recordings
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1.5 MONTHS
FORM OF REDUCED DATA ----- Mean hourly values, magnetograms (micro-
film copies)

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Div. Earth's Electromagnetic Field
ul. Mirnaya 3
Paratunka, Elizovskii District
684034 Kamchatka Region
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- North-Eastern Complex Research Institute
Academy of Sciences of the USSR
Portovaya ul. 16
685000 Magadan
USSR

ADDITIONAL COMMENTS -----
    
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*****
POKER FLAT, USA
*****
ITEM: 468
DATE: 22/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 65.13
STATION LONGITUDE ----- E 212.52
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Schonstedt magnetometer, 3 components H,D,Z,
measured continuously, recorded at 3 inch/hour on
strip chart.

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Archives
Geophysical Institute
University of Alaska
Fairbanks, AK 99701
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Station is part of University of Alaska N-S meridian
chain thru Fairbanks.
    
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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 PORT ALFRED, CROZET ISLANDS

ITEM: 127
 DATE: 01/02/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 46.43
 STATION LONGITUDE ----- E 51.87
 ALTERNATE NAMES ----- Crozet
 DATES OF OPERATION ----- 01/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer (H, D, Z) and proton magnetometer (F). Magnetic variations and absolute measurements. The system includes a 3 axis fluxgate magnetometer to which a proton magnetometer is associated. The recording is done continuously on 2 strip chart recorders (5 gamma/mm, 20 mm/h; 4 gamma/mm, 40 mm/h) and on digital magnetic tape at a scanning rate of one reading (H, D, Z, F) every minute.
 Strip chart, digital magnetic tape

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, computer printout, microfilm
 DATA ROUTINELY PUBLISHED ----- Fascicule de L Institut de Physique du Globe de Paris (yearly issue)
 YES: Boulder
 DATA SENT TO WDC-A ----- YES: Moscow
 DATA SENT TO WDC-B ----- YES: Copenhagen, Edinburgh
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institut de Physique du Globe
 Service des Observatoire Magnetiques
 5 rue Rene Descartes
 67084 Strasbourg Cedex
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Reduced data are available as: tables of hourly mean values (send request to Institut de Physique du Globe), magnetic tape of hourly mean values and one minute values (send request to WDC-A at Boulder or WDC-C at Edinburgh), microfilm of magnetograms (send request to WDC-C1 at Copenhagen).

 PORT MORESBY, PAPUA

ITEM: 472
 DATE: 22/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 9.42
 STATION LONGITUDE ----- E 147.15
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour Magnetograph, 3 components H,D,Z. Continuous recording 20 mm/hour, weekly control observations.

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values on magnetic tape and computer printouts
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Observer in- Charge
 Port Moresby Geophysical Observatory
 P.O. Box 323
 Port Moresby, Papua
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Reduced data is available by writing to the following address: The Director
 Bureau of Mineral Resources
 P.O. Box 378
 Canberra City 2601 ACT
 Australia

 PORT AUX FRANCAIS, KERQUELEN

ITEM: 305
 DATE: 01/02/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 49.35
 STATION LONGITUDE ----- E 70.21
 ALTERNATE NAMES ----- Kerquelen
 DATES OF OPERATION ----- 09/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour and Fluxgate Magnetometer (H,D,Z) and proton magnetometer (F), magnetic variations (dc to 0.1 Hz) and absolute measurements. The system includes a 3 axis fluxgate magnetometer to which a proton magnetometer is associated. The recording is done continuously.

RAW DATA ----- Photographic paper, strip charts, digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, computer printout, microfilm (La Cour magnetometer)
 DATA ROUTINELY PUBLISHED ----- Fascicule de INSTITUT DE PHYSIQUE DU GLOBE DE PARIS (annual)
 DATA SENT TO WDC-A ----- YES: Boulder
 DATA SENT TO WDC-B ----- YES: Moscow
 DATA SENT TO WDC-C ----- YES: Copenhagen and Edinburgh
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institut de Physique du Globe
 Services des Observatoire Magnetiques
 5 rue Rene Descartes
 67084 Strasbourg Cedex
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Reduced data are available as: tables of hourly mean values (send request to Institut de Physique du Globe), magnetic tape of hourly mean values and one minute values (send request to WDC-A at Boulder or WDC-C at Edinburgh), microfilm of magnetograms (send request to WDC-C1 at Copenhagen).

 QUILTA, PAKISTAN

ITEM: 2242
 DATE: 27/01/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 30.18
 STATION LONGITUDE ----- E 66.95
 ALTERNATE NAMES ----- Geophysics Quetta
 DATES OF OPERATION ----- 1953 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Huska Variograph (chart speed 20 mm/hour), QHM (Quartz Horizontal Magnetometer), BMZ (Balance Zero Magnetometer), G.S.I. (Geophysical Survey Instrument), H.T.M. (Horizontal Torsion Magnetometer) and Portable Proton Magnetometer.

RAW DATA ----- Magnetograms (charts)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Quarterly Geomagnetic Bulletin (QGB), and Annual Geomagnetic Bulletin (AGB) of Pakistan
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 Geophysical Centre
 Post Box No. 2
 Quetta
 Pakistan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Continuous photographic registration of variations in H, Z, & D by Huska Variograph. Absolute observations for H, Z, D, & F are taken once a week. X-indices and special phenomena are available after every month and are published in the Q.G.B. of Pakistan as hourly, daily, monthly, and yearly mean values of H, Z, and D and yearly mean values of H, F, X, and Y, derived from mean values of H, Z, and D, are published in the A.G.B. of Pakistan.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 RAF UPPER HEYFORD, UNITED KINGDOM

ITEM: 2179
 DATE: 11/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 51.56
 STATION LONGITUDE ----- E 358.85
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1979 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- MSM - 1-3A
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Det 17, 31 WS
 APO New York
 09194
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Raw data sent to each month.

 RUDE SKOV (HSV), DENMARK

ITEM: 2222
 DATE: 01/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 55.84
 STATION LONGITUDE ----- E 12.46
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1907 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Continuous recording of D, H and Z by
 Le Cour equipment.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- On the basis of absolute measurements
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 15 MONTHS
 FORM OF REDUCED DATA ----- Tables of hourly means, extreme
 values and diurnal inequalities.
 DATA ROUTINELY PUBLISHED ----- Rude Skov yearbooks
 DATA SENT TO WDC-A ----- WDC-B2 (Moscow)
 DATA SENT TO WDC-B ----- WDC-C1 (Edinburgh)
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Danish Meteorological Inst.
 Lyngbyvej 100
 DK-2100 Copenhagen
 Denmark
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- This observatory will gradually be closed down in
 favor of Brorfele.

 RESOLUTE BAY, CANADA

ITEM: 487
 DATE: 08/08/83

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run
 Measurements
 STATION LATITUDE ----- N 74.60
 STATION LONGITUDE ----- E 265.10
 ALTERNATE NAMES ----- Resolute
 DATES OF OPERATION ----- 11/1953 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System),
 continuous recording of earth's magnetic field,
 X (north), Y (east), Z (vertical), F (total
 intensity) of field recorded once per minute
 on digital magnetic tape, with an analog
 output on strip chart at 20 mm/hour. Absolute
 observation of D (declination), I (inclination)
 and F, total intensity, are made once or
 twice a week.
 RAW DATA ----- Digital magnetic tape, strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables,
 microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth
 Physics Branch contains instrument
 parameters, mean hourly value sum-
 mary, annual means
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Division of Seismology and
 Geomagnetism
 Department Energy, Mines and
 Resources
 1 Observatory Crescent
 Ottawa, Ontario K1A 0Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Three-component fluxgate with digital output serves
 as standby recorder. Portable fluxgate magnetometer
 for absolute D and I observations, proton precession
 magnetometer for F observations. Photographs
 recording by a standard Ruska magnetograph was dis-
 continued in 04/1982. Digital recording commenced
 09/1973. Special purpose data usually available
 after two months.

 SABHANALA, INDIA

ITEM: 493
 DATE: 05/06/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 30.37
 STATION LONGITUDE ----- E 77.80
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- D, H, and Z Askania valometers. Variations of
 the 3 geomagnetic elements: D, H, and Z, are
 continuously recorded, along with baselines.
 The baseline values are determined separately.
 All 3 elements are recorded on a single photo-
 graphic paper at a chart speed of 20 mm/h.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA, published
 annually by the Director, Indian
 Inst. of Geomag., Colaba, Bombay
 400 005, India and in the year-
 ly Bulletins by the Survey of
 India, Dehra Dun 1, P.
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. R. S. Chugh, Director
 Geodetic & Research Br., Survey of India
 Post Box No. 77
 Dehra Dun, Uttar Pradesh
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- An underground Magnetic Observatory in the Survey of
 India compound at Dehra Dun had functioned from 1902
 and was put out of action in 1943 because instruments
 were damaged due to flooding of its underground
 chambers. Baseline control for the variation records
 is provided by the observations with QM, BMZ and
 Survey of India Pattern Magnetometer. Published data
 are monthly tables of mean hourly values of the 3
 elements D, H, Z, and magnetic storm statistics.
 No response to inquiry for updating material in 1980
 or 1983. Data received by the World Data Centers
 through 1978.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 ST. CLOUD, USA

ITEM: 2166
 DATE: 15/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 45.57
 STATION LONGITUDE ----- E 265.81
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1976 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Fluxgate Magnetometer, X (North) component of
 Horizontal field recorded throughout 24-hour
 period. Chart speed 6.4 mm/hr. Sensitivity
 8 gamma/cm.

RAW DATA ----- Strip chart recording
 DATA REDUCTION PRACTICE ----- None
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Alexander S. McWilliams
 813 North 24th Avenue
 St. Cloud, MN 56301
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Y and Z components are not regularly monitored.

 SANAE, ANTARCTICA

ITEM: 530
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 70.32
 STATION LONGITUDE ----- E 357.66
 ALTERNATE NAMES ----- Norway Station
 DATES OF OPERATION ----- 01/1960 to present
 Station moved
 INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer
 RAW DATA ----- Digital data cartridge
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts, tape
 DATA ROUTINELY PUBLISHED ----- MAGNETIC OBSERVATIONS AT SANAE,
 Distributed on exchange basis.

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Hermanus Magnetic Observatory
 P.O. Box 32
 Hermanus
 Rep. of S. Africa

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Norway Station (-70.50, 357.47), 01/1960-02/1962.
 Sanae (old site) (-70.30, 357.63), 06/1962-02/1971.
 Sanae (new site) (-70.32, 357.66), 06/1971 to 03/1979,
 Sanae (-70.31, 357.59), 03/1979 to 1983.

 ST. JOHNS, CANADA

ITEM: 576
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 47.60
 STATION LONGITUDE ----- E 307.32
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1968 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System).
 Digital recording of earth's magnetic field. X
 (north), Y(east), Z(vertical), F(total intensity)
 of field recorded once per minute on digital mag-
 netic tape with analog output on strip chart at
 20 mm/h. Absolute observations of D(declination)
 and I(inclination) and of total intensity F are
 made once a week.

RAW DATA ----- Digital magnetic tape, strip charts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables,
 microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth
 Physics Branch contains instrument
 parameters, mean hourly value sum-
 mary
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept of Energy, Mines & Resources
 1 Observatory Cres.
 Ottawa, Ontario K1A 0Y3
 Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 3 component recording fluxgate serves as stand-by
 recorder. Portable fluxgate magnetometer for absolute
 D.I. observations, proton precession magnetometer
 for F observations. Digital recording commenced
 12/1969. Photographic recording was discontinued
 08/1972. Special purpose data usually available
 after 2 months.

 SAN JUAN, PUERTO RICO, USA

ITEM: 538
 DATE: 12/01/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 18.12
 STATION LONGITUDE ----- E 293.85
 ALTERNATE NAMES ----- Puerto Rico
 DATES OF OPERATION ----- 1903 to present
 Station moved
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Absolutes weekly or twice weekly with Proton
 Vector magnetometer and Ruska suspension
 magnetometer for D.

RAW DATA ----- Photo paper recordings, mm scal-
 ings in tabular form, magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Printouts of hourly values, micro-
 film, digital printouts, magnetic
 tape, minute and hourly values

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 John D. Wood
 USGS, Theoretical & Applied Geophysics
 Denver Federal Center, Bldg. 25
 Denver, CO 80225
 USA

ADDRESS FOR INFORMATION ABOUT DATA -----
 Rm. Ruhman
 WDC-A for Solar-Terrestrial Physics
 c/o NIAA-EDS
 Boulder, CO 80303
 USA

ADDITIONAL COMMENTS ----- Old San Juan station (N18.38 E293.88) operated 1926-64.
 Old San Juan replaced Vieques, Puerto Rico, (N18.15
 E294.55) operating from 1903-1974. USGS Open File
 Reports expected for reduced data in late 1983.
 Digital Fluxgate and Proton installed in January 1983.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 SAN PABLO-TOLEDO, SPAIN

 ITEM: 2276
 DATE: 01/02/84

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 39.55
 STATION LONGITUDE ----- E 355.65
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1982 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour variometers (20 mm/h and 180 mm/h), analogic fluxgate, vector magnetometer, proton magnetometer (model G-826 A) QM's, BMZ, terrestrial inductor, Schmidt and DD magnetometers.
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Data is reduced by a desk computer
 DATA ROUTINELY PUBLISHED ----- Magnetic Observation Yearbook (monthly)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES: records and instant values
 ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio Geofisico Central
 Apartado 46
 Toledo
 Spain
 ADDRESS FOR INFORMATION ABOUT DATA ----- Seccion de Geomagnetismo
 Instituto Geografico Nacional
 Apartado 3007
 Madrid 3
 Spain
 ADDITIONAL COMMENTS -----

 SEOUL, REPUBLIC OF KOREA

 ITEM: 550
 DATE: 07/04/75

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 37.23
 STATION LONGITUDE ----- E 126.57
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- V-4939 Cesium digital station magnetometer. Standard and Rapid Run Measurements. This instrument measures variation of the earth's total magnetic field intensity. The magnetic field data are displayed directly in gammas in a 5-digit display window. The least significant digits are converted to an analog voltage for recording on a potentiometric strip chart recorder. Observing schedule: 24 hours continuously.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- The Director
 Radio Research Laboratory
 Ministry of Telecommunications
 Seoul (Anyang) 171
 Republic of Korea
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1980 or 1983.

 SCOTT BASE, ANTARCTICA

 ITEM: 544
 DATE: 01/08/83

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 77.81
 STATION LONGITUDE ----- E 166.76
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour Magnetograph. Hourly values: X, Y, Z. 2 sets recording at 20 mm/hour on photographic paper. Weekly absolute observations using proton magnetometer and QM.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Microfiche tabulations
 DATA ROUTINELY PUBLISHED ----- Magnetic Results Scott Base Observatory, yearly from 1964, exchange basis, hourly values X, Y and Z means, K indices. Annual tabulations distributed to mailing list.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysical Observatory
 P.O. Box 2111
 Christchurch
 New Zealand
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SHILLONG, INDIA

 ITEM: 552
 DATE: 01/02/84

 DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 25.57
 STATION LONGITUDE ----- E 91.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- A set of D, H, and Z magnetographs by La Cour. Variations of the 3 geomagnetic elements; D, H, and Z are continuously recorded, along with baselines whose values are determined separately. All 3 elements are recorded on a single photographic paper at a chart speed of 20 mm/hour.
 RAW DATA ----- Photographic paper, microfilm
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables in computer printouts
 DATA ROUTINELY PUBLISHED ----- Indian Magnetic Data, to be published annually by the Director, Indian Institute of Geomagnetism, Colaba, Bombay 400 005, India. Monthly tables-mean hourly values, and magnetic storm statistics.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. G. Rastogi, Director
 Indian Institute of Geomagnetism
 Dr. Nanabhai Moos Marg
 Colaba, Bombay Maharashtra 400 005
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The baseline determinations for H, Z are done by daily observations of absolute H, Z with QM, BMZ respectively; for D, by observation of absolute D with QM once a week on Wednesday at about local noon. The observed absolute values are periodically standardized by inter-comparison with those at Alibag, using a set of QM and BMZ as touring standards. A Vector Proton Magnetometer for H and Z has been in use since 1979.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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SITE: ANTARCTICA
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DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 76.00
STATION LONGITUDE ----- E 276.00
ALTERNATE NAMES -----
DATES OF OPERATION ----- 12/1940 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- Fluxgate Magnetometer, 2 second samples of data
RAW DATA ----- on digital tape; also performance parameters.
                        Digital magnetic tape, 2 s
                        PES, 7 tracks, 506 bpi
                        SPECIAL
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Same as raw data
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. L. J. Lanzerotti
                        Bell Laboratories
                        Murray Hill, NJ
                        USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Station is conjugate to Northern Hemisphere. Special
                        purpose data usually available after 12 months.
                        Conjugate data often available from one or more stations
                        from L 3.2 to L 4.4.
    
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SITE: SUOMENKYLA, FINLAND
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DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 67.37
STATION LONGITUDE ----- E 26.63
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1914 to 1944 and 1946 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- LA Four normal, one-minute mean values in
                        30 initial form using a curve integrator.
RAW DATA ----- Magnetograms
DATA REDUCTION PRACTICE ----- Values scaled hourly means, 15-minute
                        values using a curve integrator.
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Magnetic field yearbooks
DATA ROUTINELY PUBLISHED ----- Yearbook
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Suomalais Geophysical Observatory
                        Helsinki, Suomalais
                        Finland
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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SITE: SITKA, USA
*****
DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 57.06
STATION LONGITUDE ----- E 224.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1902 to present
OBSERVING SCHEDULE ----- Station moved
                        REGULAR
INSTRUMENT DESCRIPTION ----- Standard magnetometer
RAW DATA ----- Photorecorded graphics, digital magnetic
                        tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, magnetic tape, photorecorded
                        graphics
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- John D. Wood
                        Branch of Seismology and Geomagnetism
                        USGS MS 967
                        Denver Federal Center
                        Denver, CO 80225
                        USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Ron Buhman
                        WDC-A for Terrestrial Physics
                        c/o NOAA/EDS
                        325 Broadway
                        Boulder, CO 80303
                        USA
ADDITIONAL COMMENTS ----- Prior to 1940, Sitka absolute piers were located at
                        N57.06 and E224.33. WDC-A furnishes Sitka data in
                        hourly value tables, hourly values on magnetic tape
                        and copies of magnetograms. For technical details
                        about the data see L. R. Wilson at the same address as
                        John Wood.
    
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*****
SITE: SOUTH POLE, ANTARCTICA
*****
DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 90.00
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1982 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer, 1 second samples of data
RAW DATA ----- on digital tape; also performance parameters.
                        Digital magnetic tape, 1 second points,
                        9 track
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Same as raw data
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. L. J. Lanzerotti
                        Bell Laboratories
                        Murray Hill, NJ 07974
                        USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 SVERDLOVSK, USSR

ITEM: 186
 DATE: 01/05/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 56.43
 STATION LONGITUDE ----- E 58.57
 ALTERNATE NAMES ----- Ar11
 DATES OF OPERATION ----- 1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms of photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1-1.5 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Observatory
 Experimental Geophysical Base
 Ar11-1
 623350 Sverdlovskaya Oblast
 USSR
 Institute of Geophysics
 Pervomajskaya 91
 620144 Sverdlovsk GSP-169
 USSR

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 TANGERANG, INDONESIA

ITEM: 2223
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 6.17
 STATION LONGITUDE ----- E 106.65
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ruska magnetograph, normal speed recording,
 magnetic elements H, Z, D, continuous recording
 of magnetic declination, horizontal and vertical
 component, chart speed 20 mm/h. Scale value H
 & Z roughly: 4-5 nT/mm; Scale value D roughly:
 10 nT/mm.

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Table
 DATA ROUTINELY PUBLISHED ----- Yearbook Geomagnetic 1963 to
 present Tangerang hourly mean
 value, etc for D, H, Z.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief of Geophysical Sect.
 Meteorological & Geophysical Inst.
 Jl. Arif Rakhman Hakim no. 3
 Jakarta
 Indonesia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SYDRA, ANTARCTICA

ITEM: 2210
 DATE: 07/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 69.00
 STATION LONGITUDE ----- E 39.58
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1966 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Fluxgate Magnetometer and proton magnetometer.
 Absolute measurements weekly.

RAW DATA ----- Charts, tables and digital tapes
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Table, microfilm
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- National Institute
 Kaga 1-9-10
 Itabashi-ku, Tokyo 173
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TBILISI, USSR

ITEM: 2435
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 42.08
 STATION LONGITUDE ----- E 44.70
 ALTERNATE NAMES ----- Dusheti
 DATES OF OPERATION ----- 1844 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Standard magnetometers

RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of mean hourly values
 and magnetograms

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Observatory
 Institute of Geophysics
 Georgian Academy of Sciences
 383060 Dusheti
 USSR
 Institute of Geophysics
 Georgian Academy of Sciences
 ul. Z. Rukhadze, 1
 380093 Tbilisi-93
 USSR

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
TEHRAN, IRAN
*****
ITEM: 756
DATE: 27/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 35.70
STATION LONGITUDE ----- E 51.40
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Magnetic Field measurements
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Reports
DATA ROUTINELY PUBLISHED ----- JOURNAL OF EARTH AND SPACE PHYSICS
(Tehran Univ.), also monthly and
yearly reports

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Geophysics
Tehran University
Ave. Kargar
Tehran - 14374
Iran

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
THULE, GREENLAND
*****
ITEM: 608
DATE: 14/01/76

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 76.55
STATION LONGITUDE ----- E 291.17
ALTERNATE NAMES ----- Camp Tuto
Thule AB
DATES OF OPERATION ----- 07/1968 to present
Station moved
INSTRUMENT DESCRIPTION ----- Magnetic Field Measurements
RAW DATA ----- Photorecorded graphics
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Danish Meteorological Institute
Geof. avd. 2, Lyngbyvej 100
Copenhagen 2100
Denmark

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Station moved from Thule AFB to Thule GEOPOL
Station in summer of 1972. Old coordinates N76.50
E291.25. Station moved again in 1976.
No response received to inquiry for updating material
in 1980 or 1983.

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*****
TERRE ADELIE, ANTARCTICA
*****
ITEM: 603
DATE: 01/02/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 66.67
STATION LONGITUDE ----- E 140.00
ALTERNATE NAMES ----- Dumont d'Urville
DATES OF OPERATION ----- 05/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- La Cour and Fluxgate magnetometer (X,Y,Z) and
proton magnetometer (F). Magnetic variations and
(dc to 0.1 Hz) absolute measurements. The
system includes a three axis Fluxgate magnetometer
to which a proton magnetometer is associated.
The recording is done continuously.
RAW DATA ----- Photographic paper, strip chart, digital
magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, magnetic tape, computer printout,
microfilm
DATA ROUTINELY PUBLISHED ----- Fascicule de Institut de Physique du
Globe de Paris (yearly issue)
YES: Boulder
DATA SENT TO WDC-A ----- YES: Moscow
DATA SENT TO WDC-B ----- YES: Copenhagen, Edinburgh
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Institut de Physique du Globe
Services des Observatoires Magnetiques
5, rue Rene Descartes
67004 Strasbourg Cedex
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Reduced data are available as: tables of hourly mean
values (send request to Institut de Physique du
Globe), magnetic tape of hourly mean values and one
minute values (send request to WDC-A at Boulder or
WDC-C at Edinburgh), microfilm of magnetograms (send
request to WDC-C1 at Copenhagen).

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*****
THULE, GREENLAND
*****
ITEM: 2281
DATE: 12/04/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 77.48
STATION LONGITUDE ----- E 290.83
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1955 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- La Cour and EDA fluxgate magnetographs, 3
components (X,Y,Z), calibrated by means of
regular absolute measurements.
RAW DATA ----- Photographic paper, digital magnetic
tape, strip chart
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- Yearbooks (tables of hourly mean
values and ranges)
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES: from WDC-C1
ADDRESS FOR INFORMATION ABOUT STATION ----- Division of Geophysics
Danish Meteorological Institute
Lyngbyvej 100
DK-2100 Copenhagen
Denmark

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- The data sent to WDC-C is in the form of yearbooks
and 35 mm microfilm of the photographic magnetograms.
This observatory replaces a former observatory at
76.5N, 290.9E, operated by the Danish Meteorological
Institute.

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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
Tihany, Hungary
*****
ITEM: 1059
DATE: 01/09/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 46.90
STATION LONGITUDE ----- E 17.89
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1954 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- La Cour and Habrov magnetometers, MTV-2 magnetometer with electrical output, Proton magnetometer, continuous recordings on photographic paper, chart speed 20 mm/h, magnetic cassette 1 sample/min.

RAW DATA ----- Photographic paper, perforated paper tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- F-12 MONTHS
FORM OF REDUCED DATA ----- Tables, graphical plots, computer printout
DATA ROUTINELY PUBLISHED ----- Publication of the Hungarian Geophysical Institute Roland Eotvos ANNUAL REPORT TIHANY GEOPHYSICAL OBSERVATORY
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Mr. Laszlo Hegymegi
Hungarian Geophysical Institute
Columbus u. 17-23
Budapest H-1140
Hungary
ADDRESS FOR INFORMATION ABOUT DATA ----- Mr. Alpar Kornendi
Hungarian Geophysical Institute
Kossuth L. u. 81.
Tihany H - 8237
Hungary
ADDITIONAL COMMENTS -----
    
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*****
Tixie Bay, USSR
*****
ITEM: H71
DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 71.5R
STATION LONGITUDE ----- E 129.00
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1944 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard magnetometers
RAW DATA ----- Magnetograms on photo paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- Geomagnetic Observatory
Bukhta Tixie
679400 Yakutskaya ASSR
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Arctic and Antarctic Research Institute
Fontanka 34
192104 Leningrad U-104
USSR
ADDITIONAL COMMENTS -----
    
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*****
TILARAM, COSTA RICA
*****
ITEM: 2278
DATE: 05/04/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 10.44
STATION LONGITUDE ----- E 84.32
ALTERNATE NAMES ----- CHIRIPA
DATES OF OPERATION ----- 11/1982 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- The instruments include Ruska Instrument Company's declination and horizontal intensity variometers, and a modified Ruska vertical intensity variometer with a La Cour magnet. The recorder is a Ruska.

RAW DATA ----- D, H, and Z values
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Values every hour and mean daily and monthly data. The data will soon be published in a tabulated form.
DATA ROUTINELY PUBLISHED ----- Bulletins
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Mr. German Leandro
Centro de Investigaciones Geofisicas
Universidad de Costa Rica
San Jose
Costa Rica
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- The correct name of the geomagnetic observatory is CHIRIPA.
    
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*****
TOOLANGI, AUSTRALIA
*****
ITEM: 615
DATE: 01/06/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 37.53
STATION LONGITUDE ----- E 145.47
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1919 to present
OBSERVING SCHEDULE ----- IRREGULAR from 1979
REGULAR (1919-1979)
INSTRUMENT DESCRIPTION ----- La Cour magnetograph, three components H,D,Z, continuous recording 20 mm/h (H=4.4 nT/mm, D=1.2 mT/mm, Z= 5.2 nT/mm.
RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- As Required
REGULAR (1919-1979)
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Mean hourly values on magnetic tape, computer printouts
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES to 1979
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Geomagnetism Section
Bureau of Mineral Resources
Geology & Geophysics
G.P.O. Box 378
Canberra 2600
Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Weekly control observations ceased 1979
Replaced by Canberra.
Variation measurements now made irregularly.
    
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D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 TRENLEW, ARGENTINA

ITEM: 754
 DATE: 09/00/75

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 43.25
 STATION LONGITUDE ----- E 794.68
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Normal speed (20 mm/h) standard magnetographs
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Microfilm
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Otto Schneider
 Observatorio Astronomico
 Paseo del Bosque
 La Plata
 Argentina
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1940 or 1948. Data have been received by the
 World Data Centers through 1981.

 TROMSO, NORWAY

ITEM: 638
 DATE: 04/01/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 69.66
 STATION LONGITUDE ----- E 18.94
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1930 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour & Askania-Hanberg Magnetometers normal
 set 20 mm/h, storm set 15 mm/h, stream pulsation
 6 mm/min.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED ----- Magnetic observations (year book)
 Print of records (monthly report)
 Microfilm of records
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Copenhagen
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Steinar Berger
 Auroral Obs of Tromso
 P.O. Box 953
 Tromso N-9001
 Norway
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TRIVANDRUM, INDIA

ITEM: 637
 DATE: 01/02/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 8.48
 STATION LONGITUDE ----- E 76.95
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- C.M. Z Bobrov (IZMIRAN) variometers, continuous,
 along with baselines whose values are determined
 separately. All 3 elements recorded on single
 photographic paper, chart speed 20 mm/h, time
 marks. Quick-run gears for IZMIRAN since 1975.
 Farlier Askania variometers
 RAW DATA ----- Photographic paper, microfilm
 copies
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables in computer printouts
 DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA published annually by
 the Director, Indian Institute of Geo-
 magnetism, Colaba, Bombay 400 005, India.
 Monthly tables of mean hourly values
 of D, H, Z, magnetic storm statistics.
 YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. G. Rastogi, Director
 Indian Institute of Geomagnetism
 Dr. Nanabhai Mees Marg
 Colaba, Bombay
 Maharashtra 400 005
 India
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Baselines for H, Z done daily with OHM, PMZ respectively;
 absolute D with OHM once a week on Wednesday about local
 noon. Observed absolute values periodically standardized
 by intercomparison with those observed at Allibag, using
 a set of OHM and BMZ as touring standards. A vector
 proton magnetometer is used since 1977 for determination
 of absolute H and Z.

 TSUMEB, NAMIBIA

ITEM: 639
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- S 19.20
 STATION LONGITUDE ----- E 17.58
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour magnetometer, geomagnetic variations,
 Modified La Cour normal run magnetograph,
 recording speed 20 mm/h. Continuous recording
 of D, H, Z with full baseline control.
 Scale values: D, 0.41 mV/mm; H, 4.0 nT/mm; Z,
 3.6 nT/mm.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape (hourly
 values)
 DATA ROUTINELY PUBLISHED ----- MAGNETIC OBSERVATIONS AT TSUMEB
 distributed on exchange basis
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Kyoto, Hallsham, Lyngby
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic Observatory (CSIR)
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Part of organized Rep. of S. African network: Hermanus,
 Tsumeb, and Hartbeesthoek. Auxiliary equipment:
 PPM for I, OHM for H, Field declinometer for D.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

ITEM: 641
DATE: 12/01/83

TUCUMAN, ARGENTINA

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 32.25
STATION LONGITUDE ----- E 249.17
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1910 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ruska H and D suspension variometer. Absolutes weekly or semi-weekly with Proton Vector Magnetometer and Ruska suspension magnetometer for D.

RAW DATA ----- Photo paper, mm scalings in tabular form, magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, computer printouts, photos, microfilm copies
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- John D. Wood
USGS Theoretical & Applied Geophysics
Denver Federal Center, Bldg. 25
Denver, CO 80225
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Ron Buhman
WDC-A For Solar Terrestrial Physics
WDC-A for STP, NOAA
Boulder, CO 80303
USA

ADDITIONAL COMMENTS ----- Station started 1909, variations building moved in 1941. Proton vector measurements began in 1962 30 meters from old absolutes pier. Special purpose data available after 1 month. Hourly values on magnetic tape and computer printouts, 1 minute digitized values on magnetic tape (for some intervals), photo and microfilm copies of recordings. USGS Open File Reports of the reduced data are expected in late 1983.

ITEM: 2071
DATE: 27/05/83

TUCUMAN, ARGENTINA

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- S 24.90
STATION LONGITUDE ----- E 244.80
ALTERNATE NAMES -----
DATES OF OPERATION ----- 06/1493 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Askania variograph Gv 3

RAW DATA ----- H, D and Z components (magnetograms)
DATA REDUCTION PRACTICE ----- Hourly values routinely, changing on special events.
REGULAR REDUCED DATA AVAILABLE AFTER ----- August 1983
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- Hourly H, D and Z values
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Eng. H. Posse
Instituto de Geodesia y Topografia
Universidad Nacional de Tucuman
Av. Independencia 1800
4000 S.M. de Tucuman
Argentina

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. J. R. Manzano
Instituto de Fisica
Universidad Nacional de Tucuman
Av. Independencia 1800
4000 S.M. de Tucuman
Argentina

ADDITIONAL COMMENTS ----- Hourly H, D and Z values are sent to WDC-A, WDC-B and WDC-C; hourly value tables and magnetograms are only available for special events through the station. At the time this entry was written the instrument was in the process of calibration and was expected to be running routinely in June.

ITEM: 2211
DATE: 06/11/83

TULSA (TUL), USA

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run Measurements
STATION LATITUDE ----- N 35.91
STATION LONGITUDE ----- E 264.22
ALTERNATE NAMES ----- Oklahoma Geophysical Observatory
DATES OF OPERATION ----- 1961 to present
OBSERVING SCHEDULE ----- Continuous
INSTRUMENT DESCRIPTION ----- EDA FM-105B 3 component fluxgate magnetometer, EDA DIM-100 declination inclination magnetometer, Geometrics G-846 proton precession magnetometer.

RAW DATA ----- Ink paper magnetograms
DATA REDUCTION PRACTICE ----- By 1984 plan to produce hourly value tables of H, Z, H and five minute values of F_o
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- Original magnetograms microfilmed by WDC-A
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- Raw data available
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jim Lawson
Oklahoma Geophysical Observatory
Box 8
Leonard, OK 74043-0008
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- A geomagnetic instrumentation sheet is available from Dr. Lawson.

ITEM: 2197
DATE: 22/07/83

TUNTUNGAN, INDONESIA

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run Measurements
STATION LATITUDE ----- N 3.51
STATION LONGITUDE ----- E 98.56
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1981 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- La Cour magnetometer, normal speed recording, magnetic element H, D, Z, continuous recording of magnetic declination, horizontal and vertical component, chart speed 20 mm/hour. S.v. H and Z roughly: 3-4 nT/mm. S.v. D roughly: 10 nT/mm.

RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- Yearbook of Tuntungan hourly mean values for D, H and Z.
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- 1982 to present
ADDRESS FOR INFORMATION ABOUT STATION ----- Chief of Geophysical Division
Meteorological and Geophysical Agency
Jalan Arief Sakhawan Hakim no. 3
Jakarta
Indonesia
Tuntungan Magnetic Observatory
c/o Chief of Geophysical Station
Jalan Iskandar Muda no. 1
Medan
Indonesia

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS -----

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

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*****
ITEM: 2388
UGUT, USSR DATE:
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DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run Measurements
STATION LATITUDE ----- N 60.5
STATION LONGITUDE ----- E 74.0
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1974 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Magnetometer with H, D and Z components
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

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ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and WAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

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ITEM: 1091
UPPSALA, SWEDEN DATE: 01/02/84
*****

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
STATION LATITUDE ----- N 59.80
STATION LONGITUDE ----- E 17.60
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1959 to present
OBSERVING SCHEDULE ----- REGULAR Hourly
INSTRUMENT DESCRIPTION ----- Ionospheric vertical sounder 0.5 - 16 MHz
type 15-14, peak power 5 kW, pulse repetition
rate 50 Hz, pulse length 60 microsec, height
range 80 - 1000 km. Panoramic display recorded
on 24 x 36 film frame. Two delta aerials.
RAW DATA ----- 35 mm film
DATA REDUCTION PRACTICE ----- Scaling according to international rules
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
FORM OF REDUCED DATA ----- Data sheet
DATA ROUTINELY PUBLISHED ----- Monthly bulletins
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. Harald Derblom
Uppsala Ionospheric Observatory
Uppsala S-755 90
Sweden

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Change in the instrument August 1977.

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*****
ITEM: 648
GUJAIN, INDIA DATE: 01/02/84
*****

DISCIPLINE ----- D01 Geomagnetic Standard and Rapid Run
Measurements
STATION LATITUDE ----- N 23.02
STATION LONGITUDE ----- E 75.78
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1975 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- A set of IZMIRAN (Bobrov) quartz variometers
for D, H and Z; variations of the three geo
magnetic elements, D, H and Z are continuously
recorded, along with baselines whose values
are determined separately. All the three
elements, D, H, and Z are recorded on a single
photographic paper at a chart speed of 20
mm/hour.
RAW DATA ----- Photographic paper, microfilm copies
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Computer printouts
DATA ROUTINELY PUBLISHED ----- INDIAN MAGNETIC DATA to be published
annually by the Director, Indian
Institute of Geomagnetism, Colaba,
Bombay 400 005, India. Data are
monthly tables of mean hourly values,
magnetic storm statistics
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. R. G. Rastogi, Director
Indian Institute of Geomagnetism
Dr. Nanabhai Moos Marq
Colaba, B-10,
Maharashtra 400 005
India

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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Observatory started as part of Indian participation in the Geomagnetic Meridian Project (GMP). Baseline determinations for H and Z are done by daily observations of absolute H and Z with QHM and BMZ respectively and for D, by observations of absolute D with QHM once a week on Wednesday at about local noon. Observed absolute values periodically standardized by intercomparison with these observed at All bag, using a set of QHM and BMZ as touring standards. A proton precession magnetometer is used for F observations to check consistency of H and Z baselines.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 VALENTIA, UNITED KINGDOM

ITEM: 654
 DATE: 11/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 51.93
 STATION LONGITUDE ----- E 349.75
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1956 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour quick-run magnetometer, continuously recording H, D, and X, chart speed 180 mm/hr up to 07/08/1980 when a change was made to 150 mm/hr. La Cour normal magnetometer continuously recording H, D and Z chart speed 15 mm/hr.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Pulsation and disturbance data as requested by IAGA.
 DATA ROUTINELY PUBLISHED ----- Annual MAGNETIC OBSERVATIONS AT VALENTIA OBSERVATORY 19-- available from Meteorological Service, Glasnevin Hill, Dublin 9, Ireland, United Kingdom.
 DATA SENT TO WDC-A ----- Tables of Pc, Pi, SSC, bays etc.
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Copenhagen
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Valentia Observatory
 Cahirciveen
 Co. Kerry
 Ireland
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data supplied monthly to IAGA Committee for Rapid Variations.

 VLADIVOSTOK, USSR

ITEM: 869
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 43.68
 STATION LONGITUDE ----- E 132.17
 ALTERNATE NAMES ----- Gornotaezhnoe
 Ussurisk
 DATES OF OPERATION ----- 01/1932 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Monthly tables, punch cards, magnetograms on microfilm
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Geomagnetic Station
 p/o Gornotaezhnoe
 Ussurisk District
 692533 Primorskiy Krai
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- North-Eastern Complex Research Institute
 Academy of Sciences of the USSR
 Portovaya ul. 16
 685000 Magadan
 USSR
 ADDITIONAL COMMENTS -----

 VICTORIA, CANADA

ITEM: 660
 DATE: 08/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 48.52
 STATION LONGITUDE ----- E 236.58
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System), X (north), Y(east), Z(vertical), F(total intensity) of field recorded once per minute on digital magnetic tape, with an analog output on strip chart at 20 mm/h. Absolute observation of D(declination) and I(inclination) and of total intensity, F, are made once or twice a week.
 RAW DATA ----- Digital magnetic tape, strip chart
 photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables, microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth Physics Branch contains instrument parameters, notes on data quality and instrument changed, annual means
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept. Energy, Mines & Resources
 1 Observatory Crescent
 Ottawa, Ontario K1A0Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Standard Ruska magnetograph continuously records the variations of the earth's magnetic field on photographic paper. 3 variometers record the D(declination), H(horizontal intensity), Z(vertical component) of the field with a paper speed of 20 mm/hr. Portable fluxgate magnetometer for absolute D.I. observations, proton precession magnetometer for F observation. Digital recording commenced 11/1970. Special purpose data usually available after 2 months.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 WARKENHAGEN, GDR

ITEM: 1154
 DATE: 01/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 54.00
 STATION LONGITUDE ----- E 11.07
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer, proton F,X,Y
 Magnetometer about 2 nT/mm, 1 date/60 s;
 Magn. Norm. Reg. 1 system and 1 storm-
 system, about 2.2 nT/mm or 0.43°/mm and
 about 5 nT/mm, 20 mm/h.

RAW DATA ----- Photographic paper, strip chart
 for Proton Magnetometer F,X,Y
 SPECIAL

DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Photographic paper, paper tape
 DATA ROUTINELY PUBLISHED ----- Review and special dates in the
 YEARBOOK OF THE ADOLF-SCHMIDT-
 OBSERVATORY in Niemege

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Klaus Lengning
 Adolf-Schmidt-Obs fur Erdmag in Niemege
 Lindenstr. 7
 Niemege, Kreis Belzig 1824 DDR
 GDR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special propose data available after 6 months.

 WIEN-KOBENZL, AUSTRIA

ITEM: 2243
 DATE: 24/07/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 48.76
 STATION LONGITUDE ----- E 16.32
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1954 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Topfer-Eschenhagen variometer and La Cour
 variometer, since 1954 (T, H, and Z), and
 Elsec proton procession magnetometer, since
 12/1974 (F)(120 mm/hour).
 Literature: Geophysical Observatory Wien-
 Kobenzl, Archive for Meteorology, Geophysics
 and Bioclimatology, Series A, 1956.

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- YES
 DATA ROUTINELY PUBLISHED ----- Cards, hourly - 25
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES: WDC-B2
 DATA SENT TO WDC-C ----- YES: WDC-C1 and WDC-C2
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. Duna
 Zentralanstalt fur Meteorology Geodynamik
 1190 Wien, Hohenwart 3B
 Austria

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Previous sites: Wien-Favoriten; Wien-Hofe Warte;
 Wien-Auhof

 WLEN, USSR

ITEM: 2351
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 66.17
 STATION LONGITUDE ----- E 169.83
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1935 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Magnetometer

RAW DATA ----- Magnetograms on photo paper
 REGULAR

DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 30 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of mean hourly values
 and magnetograms

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Arctic & Antarctic Research Institute
 Fontanka 34
 192104 Leningrad D-104
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 WINGST, FRG

ITEM: 668
 DATE: 01/09/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 53.74
 STATION LONGITUDE ----- E 9.07
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1938 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Magnetometer Schulze(D,H), La Cour(Z), recorder
 Schulze. Recordings of time variations of com-
 ponents declination(D), horizontal(H) and vertical
 (Z) intensities. Photographic recorder, classical
 type, chart speed 70 mm/s, scale values about 4,
 5 nT/mm(D,H), 3 nT/mm(Z), change of record daily.

RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Microfilm, tables of hourly
 values, photographic prints

DATA ROUTINELY PUBLISHED ----- ERDMAGNETISCHES JAHRBUCH, Numerische
 Ergebnisse und Magnetogramme Wingst,
 monthly report (K-indices and special
 events from magnetograms) published
 by Deutsches Hydrographisches Institut,
 Hamburg.

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Deutsches Hydrographisches Institut
 Bernhard-Noche-Str. 78
 Hamburg 4 D 2000
 FRG

ADDRESS FOR INFORMATION ABOUT DATA ----- Erdmagnetisches Observatorium Wingst
 Am Olymp 13
 Wingst D 2177
 FRG

ADDITIONAL COMMENTS ----- Auxiliary equipment: storm system, direct recorder
 for D and H.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 WINGST, FRG

ITEM: 669
 DATE: 01/09/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 53.74
 STATION LONGITUDE ----- E 9.07
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1950 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction coil magnetometer, induction coils with mu-metal core, Mollgalvanometers for dx/dt, dy/dt, Zernike-galvanometer for dz/dt, photographic recorder, chart speed: 300 mm/h, asymptotic scale values (long period) in nT/s/mm: 0.15 (dx/dt), 0.07 (dy/dt), 0.006 (dz/dt), change of record daily.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Microfilm, photographic prints for single records
 DATA ROUTINELY PUBLISHED ----- Monthly Report: events (pc, pi, etc.) editor: Deutsches Hydrographisches Institut
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Deutsches Hydrographisches Institut
 Bernhard-Nocht-Str. 78
 Hamburg 4 D 2000
 FRG
 ADDRESS FOR INFORMATION ABOUT DATA ----- Erdmagnetisches Observatorium Wingst
 Am Olymp 13
 Wingst D 2177
 FRG
 ADDITIONAL COMMENTS ----- Intermittent operation of Z: 21/06/1973-06/06/1974, 09/07/1974-31/12/1974, 17/02/1975-04/07/1975, 22/08/1975-08/08/1975. Special purpose data available after 1 month.

 WITTEVEEN, THE NETHERLANDS

ITEM: 674
 DATE: 21/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 52.81
 STATION LONGITUDE ----- E 6.67
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1939 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour, rapid run, magnetic elements H, Z, D, continuous recording by La Cour, rapid run recorder, chart speeds 3 mm/min (from 1957-1974) scale values until 1967: 5 nT/mm, thereafter 2 nT/mm, 1 nT/mm.
 RAW DATA ----- Photographic paper
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Microfilm of raw data
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief, Division of Geophysics
 Royal Netherlands Meteorological Inst.,
 PO Box 201
 3730 AE - De Bilt
 The Netherlands
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 WINGST, FRG

ITEM: 2108
 DATE: 01/09/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 53.74
 STATION LONGITUDE ----- E 9.07
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1980 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer (DX, Y, Z), protonmagnetometer Varian(F). Recordings of minute values of horizontal components geomagnetic north(X) and geomagnetic east(Y), vertical component(Z) and total intensity (F). Magnetic tape recorder.
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, minute values (format WDC), tables of hourly values.
 DATA ROUTINELY PUBLISHED ----- ERDMAGNETISCHES JAHRBUCH, Numerische Ergebnisse und Magnetogramme Wingst, (from 1981 on).
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Deutsches Hydrographisches Institut
 Bernhard-Nocht-Str. 78
 Hamburg 4 D 2000
 FRG
 ADDRESS FOR INFORMATION ABOUT DATA ----- Erdmagnetisches Observatorium Wingst
 Am Olymp 13
 Wingst D 2177
 FRG
 ADDITIONAL COMMENTS ----- Secondary equipment: Magnetometer Schulze(D,H), La Cour(Z).
 Participation in organized network: comparison of magnetic values between European observatories; Wingst is one of 13 top observatories. Former station location Wilhelmshaven 1874-1911 and 1932-1934.

 WITTEVEEN, THE NETHERLANDS

ITEM: 674
 DATE: 21/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 52.81
 STATION LONGITUDE ----- E 6.67
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1938 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- La Cour magnetometers, normal speed recording, magnetic elements H, Z, D, continuous recording of magnetic declination, horizontal and vertical component, chart speed 15 mm/h, after 11/1977 20 mm/h values roughly 6 nT/mm.
 RAW DATA ----- Photographic paper, digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape, microfilm
 DATA ROUTINELY PUBLISHED ----- Yearbook Geomagnetism, 1938-1969, Witteveen hourly mean values, etc. for D,H,Z.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Chief, Division of Geophysics
 Dr. A. R. Ritsma
 Royal Netherlands Meteorological Inst.,
 PO Box 201
 3730 AE - De Bilt
 Netherlands
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Hourly, daily, monthly and yearly mean values are on digital magnetic tape.

D01 Geomagnetic Standard and Rapid Run Measurements (Cont.)

 YAKUTSK, USSR

ITEM: 867
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 62.02
 STATION LONGITUDE ----- E 129.72
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1932 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Mean hourly values, magnetograms
 DATA ROUTINELY PUBLISHED ----- "Cosmic Data" Bulletin (Monthly Review)
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Observatory
 Institute of Cosmophysical Research &
 Aeronomy
 Lenin Prospekt, 31
 677007 Yakutsk-7
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 YUZHNO-SAKHALINSK, USSR

ITEM: 870
 DATE: 01/05/84

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 46.95
 STATION LONGITUDE ----- E 142.72
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1946 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard magnetometers
 RAW DATA ----- Magnetograms on photo paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
 FORM OF REDUCED DATA ----- Microfilm copies of mean hourly values
 and magnetograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetic Observatory
 Sakhalin Complex Research Institute
 Novoaleksandrovsk
 694050 Sakhalinskaya Oblast
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 YELLOWKNIFE, CANADA

ITEM: 685
 DATE: 08/08/83

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 62.48
 STATION LONGITUDE ----- E 245.53
 ALTERNATE NAMES ----- Yellowknife B
 DATES OF OPERATION ----- 10/1974 to present
 INSTRUMENT DESCRIPTION ----- AMOS (Automatic Magnetic Observatory System),
 digital recording of earth's magnetic field,
 X(north), Y(east), Z(vertical), F(total intensity)
 of field recorded once per minute on digital mag-
 netic tape with analog output on strip chart at
 20 mm/h. Absolute observations of D(declination)
 and I (inclination) and of total intensity F are
 made once a week.
 RAW DATA ----- Digital magnetic tape, strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Digital magnetic tape, tables,
 microfilm
 DATA ROUTINELY PUBLISHED ----- Annual report available from Earth
 Physics Branch contains instrument
 parameters, notes on data quality and
 instrument changes, annual means
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Canadian Magnetic Observatory Network
 Div. of Seismology and Geomagnetism
 Dept. of Energy, Mines & Resources
 1 Observatory Cres
 Ottawa, Ontario K1A 0Y3
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 3 component fluxgate with digital output serves as
 stand-by recorder. Portable fluxgate magnetometer
 for absolute D, I observations, proton precession
 magnetometer for F observation. Special purpose
 data available after 2 months.

 ZHIGANSK, USSR

ITEM: 2231
 DATE: 01/01/80

DISCIPLINE ----- D01 Geomag Standard and Rapid Run Measurements
 STATION LATITUDE ----- N 66.7
 STATION LONGITUDE ----- E 123.3
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1977 to present
 OBSERVING SCHEDULE ----- Expeditional, long-continued
 INSTRUMENT DESCRIPTION ----- Magnetovariational station (MVS) with
 scanning 20 mm/h for geomagnetic field
 variation recording; fluxmeter with
 scanning 30 mm/min, 15 mm/min for geo-
 magnetic pulsation recording. Re-
 cording is analogous.
 RAW DATA ----- Analogous recording
 DATA REDUCTION PRACTICE ----- Occasional
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetograms, tellurograms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Cosmophysical
 Research and Aeronomy
 Lenin Avenue 31
 67707 Yakutsk
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

D02 Magnetospheric Micropulsation Phenomena

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*****
ANDOYA, NORWAY
*****
ITEM: 2017
DATE: 01/09/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 60.17
STATION LONGITUDE ----- E 16.01
ALTERNATE NAMES ----- Oknehasen
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- On request
INSTRUMENT DESCRIPTION ----- Pulsation Magnetometer, 2 axis induction.
Frequency range: 0.002 - 1 Hz
H and D sensors. Sensitivity: 0.03 nT.
Dynamic range:  $\pm 50$  nT
Chart recorder and digital tape 7-track
(12 bit)

RAW DATA ----- Computer compatible tape
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- MNF, Andoya Rocket Range
P.O. Box 60
8480 Andenes
Norway

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
BOROK, USSR
*****
ITEM: H37
DATE: 00/00/75

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 58.03
STATION LONGITUDE ----- E 38.33
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1957 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Induction magnetometer: pulsations 0.001-1 Hz
RAW DATA ----- Magnetic tape, strip chart
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Analog magnetic tape, strip chart,
tabular matter

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- Prof. V. A. Troitskaya
Institute of Physics of the Earth
10, Bolshaya Gruzinskaya
Moscow 123242
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating
material in 1980.
    
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*****
BOROK, USSR
*****
ITEM: 773
DATE: 00/00/75

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 58.03
STATION LONGITUDE ----- E 38.97
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction Magnetometer
RAW DATA ----- Magnetic tape, strip chart
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tabular matter
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Anatol V. Gul-eiml
Geophys Obs Borok, Inst Phys of Earth
Yaroslavskaia Region
Borok, Nekouzskiy District 152742
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1980.
    
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*****
BROKEN HILL, AUSTRALIA
*****
ITEM: 2000
DATE: 01/10/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 32.00
STATION LONGITUDE ----- E 141.46
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1982 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Induction magnetometer
RAW DATA ----- Analog magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- 35 mm film spectra
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. B. J. Fraser
Physics Department
Newcastle University
NSW 2308
Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data available on request depending on circumstances.
    
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D02 Magnetospheric Micropulsation Phenomena (Cont.)

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*****
BUDKOV, CZECHOSLOVAKIA
*****
ITEM: 820
DATE: 01/01/80

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 49.07
STATION LONGITUDE ----- E 14.02
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction Magnetometer
RAW DATA ----- Strip charts
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Microfilm
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. K. Dobeš
Geophysical Inst., Czechoslovak Acad Sci
Bochní 11
Prague 141 31
Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1983.
    
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*****
CAPE PARRY, CANADA
*****
ITEM: 2154
DATE: 10/01/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 70.17
STATION LONGITUDE ----- E 235.28
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1982 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction loop magnetometer, 2 components,
H and D Fluxgate and riometer
RAW DATA ----- Digital, 10 second sample
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Digital
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. John V. Olson
Geophysical Institute
University of Alaska
Fairbanks, AK 99701
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
CANARIAS, CANARY ISLANDS
*****
ITEM: 1054
DATE: 01/02/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- M 28.48
STATION LONGITUDE ----- E 343.74
ALTERNATE NAMES ----- Centro Geofísico de Canarias - TEN
DATES OF OPERATION ----- 01/1961 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Absolute Measurements: proton vector magnetometer,
Askania declinometer; 00 declinometer;
Askania theodolite magnetometer (Gauss method);
terrestrial inductor; two QMNs and one BMZ.
Recorders: D, H, Z La Cour variographs, 20 mm/h
(scale values, 2.2 nT/mm H, 2.1 nT/mm Z, 0.75
1/mm D). H variograph for pulsations, 4 mm/min,
scale values: 0.4R to 0.50 nT/mm.
Measurements: D, H, Z - weekly

RAW DATA ----- Film, photographic paper, tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, microfilm
DATA ROUTINELY PUBLISHED ----- ANUARIOS DE GEOMAGNETISMO, Subdirección
General de Geodesia y Geofísica, Inst.
Geográfico Nacional, Apartado 3007,
Estafeta 3 Madrid, Spain.

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES: Lyngby
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- A. García Cogollor
Centro Geofísico de Canarias
Calle de la Marina
Edificio Multiple Planta II
Santa Cruz de Tenerife
Canary Islands
Spain

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Published data are tables of hourly and mean values,
K-indices, magnetic phenomena.
    
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D02 Magnetospheric Micropulsation Phenomena (Cont.)

CASEY, ANTARCTICA

ITEM: 92
DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 66.54
STATION LONGITUDE ----- E 110.36
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1980 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction magnetometer
RAW DATA ----- Paper chart
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----

Director, Antarctic Division
Department of Science & Technology
Channel Highway
Kingston, 7150, Tasmania
Australia
Prof. K. D. Cole
La-Trobe University
Department of Physics
Bundoora, Victoria 3083
Australia

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- Experiment is run in conjunction with:
Prof. V. Troitskaya
Division of Electromagnetic Fields
of the Earth
Institute of Physics of the Earth
Moscow
USSR

CHOUTUPPAL (HYDERABAD), INDIA

ITEM: 2030
DATE: 20/07/79

DISCIPLINE ----- D02 Recording of Telluric and Magnetic Pulsations.
STATION LATITUDE ----- N 17.30
STATION LONGITUDE ----- E 78.93
ALTERNATE NAMES -----
DATE OF OPERATION ----- 01/1967 to present
OBSERVATION SCHEDULE ----- Continuous and round the clock.
INSTRUMENT DESCRIPTION ----- Buried electrodes in NS and EW directions
and magnetic induction equipment. Pulsations,
in the range 0.5 to 1000 sec, recorded conti-
nuously in the two telluric (NS and EW) and
the three magnetic components (Hx, Hy, and Z)
of earth's electromagnetic field. Photographic
recording of all pulsations at speeds of
30 mm/minute and 90 mm/hour.

RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 to 24 months
FORM OF DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- OBSERVATORIES DATA VOLUME
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----

Director
National Geophysical Research Institute
Uppal Road
Hyderabad Andhra Pradesh 5007
India

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- Same as above
The observatory is an inland station (approximately
300 km from the nearest sea coast) and is outside
the influence of the equatorial electrojet.
Calibration signals are given daily; frequency
response of the recording systems are checked
once every six months.
No response received to inquiry for updating material
in 1983.

CHICHIJIMA, JAPAN

ITEM: 111
DATE: 07/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 27.00
STATION LONGITUDE ----- E 142.14
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1974 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction magnetometer: composed of manually
cured coils, dc amplifiers and 1 M Ω -track mag-
netic tape recorder; 3 component (dx/dt, dy/dt,
dz/dt) continuous observation; 0.0075 inch/s.
Analog magnetic tape (1/2 inch,
4600 feet)

RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape report of magnetic
pulsation
DATA ROUTINELY PUBLISHED ----- Report of Magnetic Pulsation, annual
report
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----

Director
Kakioka Magnetic Observatory
Kakioka 595
Yasato-machi, Ibaraki-ken 315-01
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

COLLEGE, USA

ITEM: 121
DATE: 10/01/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 64.86
STATION LONGITUDE ----- E 212.15
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction loop magnetometer. Micropulsations. 2
components H and D recorded continuously on direct
tape at 24 inch/h, also recorded digitally since
July 1981.

RAW DATA ----- Analog magnetic tape, digital magnetic
tape
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----

Dr. John Olson
Geophysical Institute
University of Alaska
Fairbanks, AK 99701
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

D02 Magnetospheric Micropulsation Phenomena (Cont.)

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*****
DAVIS, ANTARCTICA                               ITEM: 139
*****                                         DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 68.3
STATION LONGITUDE ----- E 77.97
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1981 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction magnetometer, two component H and D.
RAW DATA ----- Paper chart
DATA REDUCTION PRACTICE ----- REGULAR and SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA ----- 35 mm film
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Director, Antarctic Division
Department of Science & Technology
Channel Highway
Kingston, 7150, Tasmania
Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
FUERSTENFELDBRUCK, FRG                         ITEM: 183
*****                                         DATE: 04/01/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 48.17
STATION LONGITUDE ----- E 11.28
ALTERNATE NAMES -----
DATES OF OPERATION ----- 12/1959 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Grenet-type variometers (modified in own work-
shop) (induction), classical photo-recording
with galvanometers, quick-run (6 mm/min).
RAW DATA ----- Photorecorded graphics
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysikalisches Observatorium
Ludwigshöhe 8
Fuerstenfeldbruck D 8080
FRG
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Grenet-type variometers serve in a chain of stations
distributed by Institute of Geophysics, University of
Göttingen. Special statistical processing by own
scheme.
    
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*****
ESKDALEMJUR, UNITED KINGDOM                   ITEM: 166
*****                                         DATE: 22/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 55.32
STATION LONGITUDE ----- E 356.80
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1976 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- IGS Vector Rubidium Magnetometer. Bias Coils
giving Z, NE, NW components. Digitally onto
cassette at 2.5 seconds sample rate. Preso-
l. 1/40 nt. Timing accuracy of digital
records 0.2 second absolute.
RAW DATA ----- Digital on 1/2 inch machine
compatible tape.
DATA REDUCTION PRACTICE ----- Special
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Reduced data is for specific
analysis in several forms
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Unit
Municipal House, IGS
West Hains Road
Edinburgh EH9 3LA
United Kingdom
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- The array of stations reported here was the basis
of deployments in Scandinavia, Iceland, Faeroes,
and Newfoundland for the IMS. In addition, the
British Antarctic Survey operates identical in-
struments at Halley Bay and South Georgia. Special
purpose reduction of data usually available after
12 months.
    
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D02 Magnetospheric Micropulsation Phenomena (Cont.)

 FUERSTENFELDBRUCK, FRG

ITEM: 2054
 DATE: 04/01/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 48.17
 STATION LONGITUDE ----- E 11.28
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- Fall 1975 to present
 OBSERVING SCHEDULE ----- Intermittent
 INSTRUMENT DESCRIPTION ----- Mu-Metal Induction Coils, 3 components
 RAW DATA ----- Direct-recorder, 15 cm/min
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geophysikalisches Observatorium
 Ludwigshöhe 8
 Fuerstenfeldbruck D 8080
 FRG
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Variometers operate in the range p_{cl}, and are due to be compared with other operations in the European-Region (special arrangements with other Obs.) At times of IAGLR, International Geophysical Calendar.

 HARTLAND, UNITED KINGDOM

ITEM: 240
 DATE: 22/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 50.99
 STATION LONGITUDE ----- E 355.52
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/75 - 07/1977
 OBSERVING SCHEDULE ----- 1980 to present
 INSTRUMENT DESCRIPTION ----- REGULAR
 IGS type Rubidium vector magnetometer. Bias coils giving Z, NE, NW components. Digitally onto cassette at 2.5 s. Sample rate resolution 1/40 nT. Timing accuracy of digital records 0.2 s absolute.
 RAW DATA ----- Digital on 1/2 inch machine compatible tape. Analog on paper chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA ----- Reduced data is for specific analysis in several forms
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Unit
 Murchison House, IGS
 West Mains Road
 Edinburgh EH9 3LA
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The array of stations reported here is the basis of deployments in Scandinavia, Iceland, Faeroes and Newfoundland for IMS. In addition, British Antarctic survey operate identical instruments at Halley Bay and South Georgia. Special purpose reduction of data usually available after 12 months.

 HALLEY BAY, ANTARCTICA

ITEM: 233
 DATE: 07/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 75.52
 STATION LONGITUDE ----- E 333.05
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Rubidium vapor magnetometer (IGS model), magnetic pulsation studies, records of skew D and Z (Stuart, Rep. Prog. Phys., 1972, 35, 803-881), sensitivity about 0.35 gamma/mm, chart speed 30 cm/h.
 RAW DATA ----- Strip chart, digital magnetic tape cassette.
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Atmospheric Sciences Division
 British Antarctic Survey
 High Cross, Madingley Road
 Cambridge CB3 0ET
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Station on moving ice shelf.

 HARTLAND, UNITED KINGDOM

ITEM: 241
 DATE: 10/01/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 51.00
 STATION LONGITUDE ----- E 355.52
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Vector rubidium magnetometer, pulsations (Note - broad band recording allows relationship with other activity to be seen.). Recording digital on cassettes at 2.55 sample rate. Resolution 1/40 nT. Timing accuracy of digital records 0.2 s absolute.
 RAW DATA ----- Digital on 1/2 inch machine compatible tape
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- M/R magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. C. A. Green
 Geomagnetism Unit
 I.G.S. West Mains Rd.
 Edinburgh EH 9 3LA
 Scotland
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Part of United Kingdom network. Reduced data is for specific analysis and may be in several forms, usually available after 12 months. The array of stations reported here is the basis of deployments in Scandinavia, Iceland, Faeroes and Newfoundland for IMS. In addition British Antarctic Survey operate identical instruments at Halley Bay and South Georgia.

D02 Magnetospheric Micropulsation Phenomena (Cont.)

 ITEM: 154
 DATE: 00/00/75

 HESS ISLAND, USSR

 DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 80.62
 STATION LONGITUDE ----- E 88.05
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Pulsations 0.005-1 Hz
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip chart
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION --- Prof. V. A. Troitskaya
 Institute of Physics of the Earth
 17, bolshaya Kuznitskaya
 Moscow 123242
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received in inquiry for updating
 material in 1980.

 ITEM: 1157
 DATE: 01/05/84

 HERMANUS, REP. OF S. AFRICA

 DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 34.42
 STATION LONGITUDE ----- E 19.23
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1963 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction magnetometer with bandpass response
 centered at 120 mHz with low (high) frequency
 fall off of 20 dB/decade (80 dB/decade). H
 and D components recorded digitally with
 resolution of 3.18×10^{-5} nT/sec/digit.
 RAW DATA ----- 3M data cartridges
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Transferred to magnetic tape. Also
 A4 sheets with 24 hour plots.
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Hermanus Magnetic Observatory
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Above instrument replaced induction magnetometer with
 SEFRAM photodyne chart recorder which was put into
 operation in 1963.

 ITEM: 250
 DATE: 01/01/80

 HERMANUS, REP. OF S. AFRICA

 DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 34.42
 STATION LONGITUDE ----- E 19.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1963 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction magnetometer (Bar fluxmeter) with
 SEFRAM photodyne recorder, chart speed 6 mm/min,
 continuous recording of variations in D and H in
 frequency range 0.3 to 0.003 Hz. Nominal sensi-
 tivity 12.5 mm/nT (0.08 nT/mm).
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables of magnetic pulsation data,
 SSCs, etc.
 DATA ROUTINELY PUBLISHED ----- MAGNETIC BULLETIN (Hermanus)
 Regular Bulletin stopped at end of 1979.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Kyoto, Hallsham, Lyngby
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Magnetic Observatory (CSIR)
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data available on request are copies of records of
 specific events only. Prior to 4/1963 pulsations
 were recorded with a La Cour rapid run magnetometer.
 No response received to inquiry for updating material
 in 1991.

 ITEM: 292
 DATE: 07/07/83

 KAKIOKA, JAPAN

 DISCIPLINE ----- D02 Magnetospheric Micropulsations Phenomena
 STATION LATITUDE ----- N 36.23
 STATION LONGITUDE ----- E 140.19
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction magnetometer composed of permalloy
 core-coils, dc amplifiers, FM 7 track magnetic
 tape recorder, three component (dx/dt, dy/dt,
 dz/dt) continuous observations, tape speed
 0.015 inch/s.
 RAW DATA ----- Analog magnetic tape (1/2 inch, 3600ft)
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape
 DATA ROUTINELY PUBLISHED ----- Report of Magnetic Pulsation, annual report
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION --- Director
 Kakioka Magnetic Observatory
 Kakioka 595
 Yasato-machi
 Ibaraki-ken 315-01
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

D02 Magnetospheric Micropulsation Phenomena (Cont.)

 KANOYA, JAPAN

ITEM: 296
 DATE: 07/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 31.42
 STATION LONGITUDE ----- E 130.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1958 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Induction Magnetometer composed of permalloy
 cored-coils, dc amplifiers, FM 7-track mag-
 netic tape recorder and visible chart re-
 corder, three component (dx/dt, dy/dt, dz/dt)
 continuous observations, chart speed
 6 mm/minute, tape speed 0.015 inch/second.

RAW DATA ----- Strip chart, analog magnetic
 tape (1/2 inch, 3600 ft)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, microfilm
 DATA ROUTINELY PUBLISHED ----- Report of the geomagnetic and geo-
 electric observations (rapid
 variation), annual report
 Report of Magnetic Pulsation
 YES

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Kyoto
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 Kakoka Magnetic Observatory
 Kakoka 595
 Yasato-nachi
 Ibaraki-ken 315-01
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LAUNCESTON, AUSTRALIA

ITEM: 335
 DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 41.67
 STATION LONGITUDE ----- E 147.16
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction Magnetometer
 RAW DATA ----- Analog magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film spectra
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. B. J. Fraser
 Newcastle University
 Physics Department
 NSW 2308
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose
 observations are usually available
 after 6 months. WDC-A has 1968-1970 data listings.

 KINGSTON, USA

ITEM: 970
 DATE: 01/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 41.31
 STATION LONGITUDE ----- E 288.27
 ALTERNATE NAMES ----- Univ. of Rhode Island - ELF
 DATES OF OPERATION ----- 01/1967 to 1974
 1974 to present; Intermittent operation
 OBSERVING SCHEDULE ----- IRREGULAR
 INSTRUMENT DESCRIPTION ----- ELF (extremely low frequency) magnetic and elec-
 tric field receivers, 3-30 Hz, 2 orthogonal com-
 ponents of horizontal magnetic field, vertical
 coils, 44 000 turns, 2 m diam r, sensitivity
 about 1 milligamma/sq root of Hz. Vertical
 electric field: 10 m high ball antenna. Record-
 ing are continuous (except during local thunder-
 storms) on 0.0375 ips magnetic tape until 1974-
 now used only intermittently.

RAW DATA ----- Analog magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
 FORM OF REDUCED DATA ----- Graphical plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Charles Polk
 University of Rhode Island
 Department of Electrical Engineering
 Kingston, RI 02881
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Description of electric field equipment and calibra-
 tion in IEEE TRANSACTIONS ON ANTENNAS AND PROPAGA-
 TION, Vol AP-21, No 4, July 1973, pp 514-523.
 Station description in AFGL GEOPHYSICS AND SPACE
 DATA BULLETIN, Vol 1, No 1, 1973. Special
 purpose data (power spectra of selected periods)
 available after 4 months on digital magnetic tape.
 Also available are paper charts showing availability
 of data periods and unusual level changes.
 Regular data are summaries of amplitude data.

 LERWICK, UNITED KINGDOM

ITEM: 344
 DATE: 10/01/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 60.13
 STATION LONGITUDE ----- E 358.82
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1975 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IGS-type rubidium vector magnetometer. Rubid-
 ium vapor sensor, bias coils to give Z, NE and
 NW components. Recording digital on cassette
 tape at 2.5 s sample rate.

RAW DATA ----- Paper chart, digital magnetic
 tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- M/R magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. C. A. Green
 Geomagnetism Unit
 I.G.S. West Mains Rd.
 Edinburgh EH9 3LA
 Scotland
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Part of UK network. Reduced data is for specific
 analysis and may be in several forms, usually available
 after 12 months. The array of stations reported here
 is the basis of deployments in Scandinavia, Iceland,
 Faeroes and Newfoundland for IMS. In addition British
 Antarctic Survey operate identical instruments at
 Halley Bay and South Georgia.

D02 Magnetospheric Micropulsation Phenomena (Cont.)

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*****
LERNICK, UNITED KINGDOM
*****
ITEM: 345
DATE: 22/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 60.13
STATION LONGITUDE ----- E 158.82
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1975 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- I.G.S. Type Rubidium Vector Magnetometer
                               bias coils giving Z, NE, NW components.
                               Digitally onto cassette at 2.5 s second sample
                               rate. Resolution 1/40 nT. Timing accuracy of
                               digital records 0.2 second absolute.

RAW DATA ----- Digital on 1/2 inch machine com-
                               patible tape

DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER -----
FORM OF REDUCED DATA ----- Reduced data is for specific
                               analysis, in several forms

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Geomagnetism Unit
                               Murchison House, 165
                               West Mains Road
                               Edinburgh EH9 3LA
                               United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- The array of stations reported here was the basis
                               of deployments in Scandinavia, Iceland, Faeroes
                               and Newfoundland for the IMS. In addition, the
                               British Antarctic Survey operates identical
                               instruments at Halley Bay and South Georgia.
    
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*****
MACQUARIE ISLAND
*****
ITEM: 379
DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 54.50
STATION LONGITUDE ----- E 158.95
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction magnetometer
RAW DATA ----- Analog magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- 35 mm film spectra
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. B. J. Fraser
                               Newcastle University
                               Physics Department
                               N.S.W.
                               2308
                               Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data are available on request depending on circum-
                               stances and volume. Special purpose data are
                               available after 6 months.
    
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*****
MACQUARIE ISLAND
*****
ITEM: 377
DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 54.50
STATION LONGITUDE ----- E 158.95
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Alaskan system, AM recorded on slow tape deck,
                               6 feet/hour. New system operational in 1975 to
                               present.

RAW DATA ----- Magnetic tape
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Director, Antarctic Division
                               Department of Science & Technology
                               Channel Highway
                               Kingston, 7150, Tasmania
                               Australia
                               Professor J. V. Olson
                               University of Alaska
                               Fairbanks, AK 99701
                               USA

ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS -----
    
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*****
MACQUARIE ISLAND
*****
ITEM: 2094
DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 54.48
STATION LONGITUDE ----- E 158.97
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction magnetometer, 3 components. 0.005
                               5 Hz.

RAW DATA ----- Analog magnetic tape, some digital
                               tape
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Analog magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. J. V. Olson
                               Geophysical Institute
                               University of Alaska
                               Fairbanks, AK 99701
                               USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Digitization of data recording scheduled to
                               begin in 1985/86.
    
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D02 Magnetospheric Micropulsation Phenomena (Cont.)

 MAWSON, ANTARCTICA

ITEM: 2100
 DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 67.60
 STATION LONGITUDE ----- E 62.90
 ALTERNATE NAMES ----- 06/1983 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction magnetometer
 RAW DATA ----- Analog magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR, SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film spectra
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. B. J. Fraser
 Newcastle University
 Physics Dept.
 NSW 2308
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data available on request, depending on circumstances and volume special purpose data available after 18 months.

 MIRNY, ANTARCTICA

ITEM: 838
 DATE: 00/00/75

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 66.58
 STATION LONGITUDE ----- E 93.02
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Pulsations 0.001-1 Hz
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Analog magnetic tape, strip chart
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Prof. V. A. Troitskaya
 Institute of Physics of the Earth
 10, Bolshaya Gruzinskaya
 Moscow 123242
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980.

 MEMAMBETSU, JAPAN

ITEM: 396
 DATE: 07/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 43.91
 STATION LONGITUDE ----- E 144.29
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Induction Magnetometer: composed of permalloy core-coils, dc amplifiers, FM seven-track magnetic tape recorder and visible chart recorder; three component (dx/dt, dy/dt, dz/dt) continuous observation, chart speed 6 mm/min, tape speed 0.015 inch/second.
 RAW DATA ----- Strip chart, analog magnetic tape (1/2 inch, 3600 feet)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Magnetic Tape, microfilm
 DATA ROUTINELY PUBLISHED ----- REPORT OF THE GEOMAGNETIC AND GEOELECTRIC OBSERVATIONS (RAPID VARIATION), annual report
 Report of Magnetic Pulsation
 YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: Kyoto
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Director
 Kakioka Magnetic Observatory
 Kakioka 595
 Yasato-machi
 Ibaraki-ken 315-01
 Japan

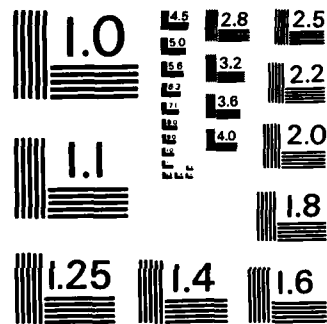
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MUNDARING, AUSTRALIA

ITEM: 420
 DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 32.00
 STATION LONGITUDE ----- E 116.20
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1975 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Induction magnetometer
 RAW DATA ----- Analog magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film spectra
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. B. J. Fraser
 Physics Department
 Newcastle University
 Newcastle, NSW 2308
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data usually available after six months.



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

D02 Magnetospheric Micropulsation Phenomena (Cont.)

 MAGYCEK, HUNGARY

ITEM: 426
 DATE: 22/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 47.63
 STATION LONGITUDE ----- E 16.72
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Earth currents recorder (MTV-2 type variometer) Rapid Run Magnetometer. Earth current recording continuously with chart speed of 6 mm/min. Geomagnetic recording on special intervals with MTV-2 type variometer (made in Hungary). Scale value 0.01 nT/mm on the chart.

RAW DATA ----- Photographic paper, strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables of the pulsations indices
 DATA ROUTINELY PUBLISHED ----- Geophysical Observatory Reports, Observatory of Nagyecsk, MTA GGF1, Sopron, H-5401 Pf 5, Hungary

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. Adam
 MTA GGF1
 Múzeum - u. 6-B, P.O.B. 5
 Sopron H-5401
 Hungary

ADDRESS FOR INFORMATION ABOUT DATA -----
 Dr. J. Ver-
 MTA GGF1
 Múzeum - u. 6-B, P.O.B. 5
 Sopron H-5401
 Hungary

ADDITIONAL COMMENTS -----

 NGOYA, REP. OF S. AFRICA

ITEM: 760
 DATE: 01/01/80

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 28.83
 STATION LONGITUDE ----- E 31.88
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction magnetometer
 RAW DATA ----- Strip chart, magnetic tape
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip chart, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. W. J. Scourfield
 Physics Dept, Univ of Natal
 King George V Avenue
 Durban, Natal
 Rep. of S. Africa

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 NEWCASTLE, AUSTRALIA

ITEM: 434
 DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 32.75
 STATION LONGITUDE ----- E 151.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction magnetometer, Continuous observations Analog magnetic tape
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- 35 mm film spectra
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. B. J. Fraser
 Physics Dept
 Newcastle University
 Newcastle, NSW 2308
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 6 months. Data are available on request depending on circumstances and volume. WDC-A at Boulder has 1968 to 1970 data listings.

 NIEMEGL, GDR

ITEM: 1010
 DATE: 01/08/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 52.07
 STATION LONGITUDE ----- E 12.68
 ALTERNATE NAMES ----- Potsdam
 Seddin
 DATES OF OPERATION ----- 01/1890 to present
 OBSERVING SCHEDULE ----- Station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 Induction magnetometer; normal magnetometer; 3 systems; 1 storm system; Earth currents. Normal recordings 20 mm/h or 60 mm/h about 2 nT/mm or 0.31/mm, Earth Currents (geogr. E-W and N-S) 3 system with 200 m, 1000 m and about 30 km or 40 km; 20 mm/h about 0.2-0.5 mV/km/mm; X,Y,Z changes 6 mm/min or 20 mm/min 0.02; 0.002 nT/s/mm Earth Current (1000 m) 80 mm/hour about 0.1-0.2 mV/km/mm, proton magnetometer F,X,Y, monthly review and Yearbook.

RAW DATA ----- Photographic paper, strip chart, digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- List, microfilm, magnetic and paper tape, computer printouts
 DATA ROUTINELY PUBLISHED ----- Monthly Review and Magnetic Yearbook of the Adolf-Schmidt-Observatory

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Copenhagen
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Klaus Lengning
 Adolf-Schmidt-Obs Erdmagnetismus Niemege
 Lindenstr. 7
 Niemege, Kreis Belgig 1824
 GDR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Station moved: 01/1890 Potsdam (N52.38 [13.07], 01/1908 Seddin (N52.28 [13.02], 1/1932 Niemege). Normal Reg. and Earth currents are on photographic paper, proton magnetometer data on digital (1 date/60s) strip chart, induction magnetometer and Earth current on digital magnetic tape (1 dates/s) on the 3 World Days, after 1/1/1984 at all days. Special purpose data available after 1 month.

D02 Magnetospheric Micropulsation Phenomena (Cont.)

 NOVOLAZAREVSKAYA, ANTARCTICA

ITEM: 840
 DATE: 00/00/75

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 70.77
 STATION LONGITUDE ----- E 11.82
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Pulsations 0.005-1 Hz
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip chart
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

Prof. V. A. Troitskaya
 Institute of Physics of the Earth
 10, Bolshaya Gruzinskaya
 Moscow 123242
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980.

 PAMATAI, FRENCH POLYNESIA

ITEM: 2217
 DATE: 01/01/80

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 17.34
 STATION LONGITUDE ----- E 210.65
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1966 - present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Fluxmeter
 RAW DATA ----- bars (Selzer)
 DATA REDUCTION PRACTICE ----- None
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

H.G. Barszczus
 Observatoire de Geophysique Pamatel
 Centre O.R.S.T.O.M.
 B.P. 529
 Papeete, Tahiti
 French Polynesia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

 OULU, FINLAND

ITEM: 453
 DATE: 01/08/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 65.08
 STATION LONGITUDE ----- E 25.87
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Induction magnetometer
 RAW DATA ----- Strip chart, analog magnetic tape
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

Jouko Kangas
 Dept of Physics, Univ of Oulu
 Linnamaa
 SF-90570 Oulu 57
 Finland

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The station at Oulu belongs to a N-S network extending from L = 3.4 (Nurmijarvi) to L = 6.1 (Kevo).

 PORT AUX FRANCAIS, KERGUELEN

ITEM: 306
 DATE: 27/01/76

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 49.44
 STATION LONGITUDE ----- E 70.42
 ALTERNATE NAMES ----- Kerguelen
 DATES OF OPERATION ----- 02/1964 to present
 OBSERVING SCHEDULE ----- 1975 station moved
 INSTRUMENT DESCRIPTION ----- REGULAR
 Fluxmeter (3 components), ULF emission, continuous tape recording from 0.3 to 5 Hz.
 RAW DATA ----- Strip chart (30 mm/min), analog magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----

Monsieur le Dir. des Lab. Scientifiques
 T.A.A.F.
 27 rue Oudinot
 Paris 75700
 France

ADDRESS FOR INFORMATION ABOUT DATA ----- Madame S. Perraut
 C.N.E.T./C.R.P.E.
 38-40 rue du General Leclerc
 Issy les Moulin eaux 92131
 France
 ADDITIONAL COMMENTS ----- Station moved in 1975 (former location S49.35 E70.20).
 No response received to inquiry for updating material in 1980 or 1983.

D02 Magnetospheric Micropulsation Phenomena (Cont.)

 SANAE, ANTARCTICA

ITEM: 2109
 DATE: 01/05/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 70.31
 STATION LONGITUDE ----- E 357.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1983 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Induction magnetometer with bandpass response centred at 120 mHz with a low (high) frequency fall off of 20 dB/decade (80 dB/decade). H, D and Z components recorded digitally with resolution of 3.18×10^{-5} nT/s digit.

RAW DATA ----- 3M data cartridge
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Transferred to magnetic tape. Also A4 sheets with 24-hour plots.

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic Observatory (CSIR)
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Above instrument replaced induction magnetometer with SEFRAM photodyne chart recorder.

 SAN PABLO-TOLEDO, SPAIN

ITEM: 7777
 DATE: 01/02/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- N 39.55
 STATION LONGITUDE ----- E 355.65
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1982 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Fluxometer bars
 RAW DATA ----- Records
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Monthly
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES: records
 ADDRESS FOR INFORMATION ABOUT STATION ----- Observatorio Geofisico Central
 Apartado 46
 Toledo
 Spain
 ADDRESS FOR INFORMATION ABOUT DATA ----- Observatorio Geofisico Central
 Apartado 46
 Toledo
 Spain
 ADDITIONAL COMMENTS -----

 SANAE, ANTARCTICA

ITEM: 1045
 DATE: 01/01/80

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
 STATION LATITUDE ----- S 70.31
 STATION LONGITUDE ----- E 357.64
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1970 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Fluxbar magnetometer (H, D), geomagnetic pulsations 10-600s, continuous recording, chart speed 6 mm/min, paper tape output.

RAW DATA ----- Chart, paper tape
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Power spectra, polarization modograms

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. A. D. M. Walker
 Physics Dept., Univ. of Natal
 King George V Avenue
 Durban 4000
 Rep. of S. Africa
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Co-investigators Prof. M. Scouffield, Mr. M. Barker, Dr. A. Hughes (same address as above). Special purpose data available after 12 months. No response received to inquiry for updating material in 1983.

 SIPLE, ANTARCTICA

ITEM: 555
 DATE: 01/01/80

DISCIPLINE ----- D02 Magnetic Micropulsation Phenomena
 STATION LATITUDE ----- S 76.00
 STATION LONGITUDE ----- E 276.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1973 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Search coil magnetometer, vector magnetic fluctuations .01 Hz to 10 Hz, 4 ft. permalloy rods (3 axis) with 5x10E05 turns of wire/preamp/A to D converter/magnetic tape recorder. Continuous observations.

RAW DATA ----- Digital tape
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Graphical plots of selected events
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- L. J. Cahill
 Space Science Center
 University of Minnesota
 Minneapolis, MN 5545
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 12 months. Reobserv station is now in operation. No response received to inquiry for updating material in 1983.

D02 Magnetospheric Micropulsation Phenomena (Cont.)

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*****
SIPLE, ANTARCTICA
*****
ITEM: 1048
DATE: 15/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 76.00
STATION LONGITUDE ----- E 276.00
ALTERNATE NAMES -----
DATES OF OPERATION ----- 12/1970 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- REGULAR
Fluxgate Magnetometer, 2 s samples of data on
digital tape; also performance parameters
RAW DATA ----- Digital magnetic tape, 2 s points,
7 track, 556 bpi
SPECIAL
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Digital magnetic tape, 2 s points
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. L. J. Lanzerotti
Bell Laboratories
Murray Hill, NJ 07974
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Conjugate to Northern Hemisphere. Special purpose
data available after 12 months. Conjugate data often
available from one or more stations from L = 3.2
to L = 4.4.
    
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*****
SYOMA, ANTARCTICA
*****
ITEM: 2208
DATE: 07/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 69.00
STATION LONGITUDE ----- E 39.58
ALTERNATE NAMES -----
OBSERVING SCHEDULE ----- Regular
DATES OF OPERATION ----- 02/1966 to present
INSTRUMENT DESCRIPTION ----- Induction coil, Geomagnetic field fluctuations;
3.0 to 0.00 1 Hz, FM magnetic tape (0.03 inch/sec)
and digital magnetic tape (1 Hz sampling)
RAW DATA ----- Chart, analog FM tape and digital tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape (analog and digital),
Sonographs.
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- National Institute of Polar Research
Kaga 1-9-10
Itabashi-ku Tokyo 173
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
SOUTH POLE, ANTARCTICA
*****
ITEM: 2305
DATE: 15/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 90.00
STATION LONGITUDE ----- E
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1982 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Fluxgate magnetometer, 1 second samples of data
on digital tape; also performance parameters.
RAW DATA ----- Digital magnetic tape, 1 second points,
9 track
SPECIAL
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Same as raw data
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. L. J. Lanzerotti
Bell Laboratories
Murray Hill, NJ 07974
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
THULE, GREENLAND
*****
ITEM: 609
DATE: 16/04/75

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 76.60
STATION LONGITUDE ----- E 291.20
ALTERNATE NAMES ----- Geopole
DATES OF OPERATION ----- 08/1966 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Induction loop, geomagnetic field fluctuations;
4.0 to 0.003 c/s, 2 meter 16000 turn air core
induction loop antenna. Chart speed 3 inch/h,
F. M. tape speed 1 inch/min.
RAW DATA ----- Ink chart, analog F. N. tape
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Miscellaneous
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Wallace H. Campbell
Theoretical and Applied Geophysics, USGS
Federal Center
Denver, CO 80225
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1980 or 1983.
    
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D02 Magnetospheric Micropulsation Phenomena (Cont.)

TULSA (TUL), USA

ITEM: 2212
DATE: 06/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 35.91
STATION LONGITUDE ----- E 264.21
ALTERNATE NAMES ----- Oklahoma Geophysical Observatory
DATES OF OPERATION ----- 1961 to present
OBSERVING SCHEDULE ----- Continuous
INSTRUMENT DESCRIPTION ----- Earth electric potentials Ex Ey, each between electrodes spaced 305 m apart recorded on strip chart at 76 mm/h.
RAW DATA ----- Ink on paper strip
DATA REDUCTION PRACTICE ----- Not reduced
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- Raw data available for WDC-A to copy
DATA SENT TO WDC-B ----- If their program ever receives this kind of data
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- Raw data available
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jim Lawson
Oklahoma Geophysical Observatory
Box 8
Leonard, OK 74043-0008
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Some early records of EZ (measured in a 2600 ft well), and of total field (recorded with a helium magnetometer) are available - Recording of both was phased out prior to 1970.

YORK, UNITED KINGDOM

ITEM: 686
DATE: 07/07/83

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- N 53.97
STATION LONGITUDE ----- E 358.92
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1971 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 1G5 type Rubidium vector magnetometer, Rubidium vapor sensor; bias coils to give Z, NE and NW components. Continuous paper chart, 3-channel, 12.5 mm/minute; also digitally on cassette tape at 2.5 second sample rate.
RAW DATA ----- Paper chart, digital magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- M/R magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- Dr. D. Orr
University of York
Heslington, York YO1 500
United Kingdom
ADDRESS FOR INFORMATION ABOUT STATION ----- Same as above
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of the United Kingdom's IMS network.

WOOMERA, AUSTRALIA

ITEM: 676
DATE: 01/06/84

DISCIPLINE ----- D02 Magnetospheric Micropulsation Phenomena
STATION LATITUDE ----- S 31.10
STATION LONGITUDE ----- E 136.78
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Induction magnetometer
RAW DATA ----- Analog magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Film spectra (35 mm)
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. B. J. Fraser
Physics Dept, Newcastle University
NSW 2308
Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data are available on request depending on circumstances and volume required. WDC Boulder has 1968-1970 data listings.

D03 Space Magnetism

BOULDER, USA

ITEM: 926
DATE: 10/05/84

DISCIPLINE ----- D03 Space Magnetism
STATION LATITUDE ----- Geosynchronous Orbit
STATION LONGITUDE ----- Geosynchronous Orbit
ALTERNATE NAMES ----- Boulder Observatory
SOLTERNARN
DATES OF OPERATION ----- 1974 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Satellite X-ray, Particle and Magnetic Sensors,
GOES-5; GOES-6 Geostationary satellites
with X-ray, particle and magnetic sensors pro-
vide continuous data to SOLTERNARN.

RAW DATA ----- Strip charts, magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, microfilm
DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- Space Environment Services Center
NOAA R/E/SE2
325 Broadway
Boulder, CO 80303
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of the US Operational Flare Patrol Network.

E. Aurora

E. Aurora

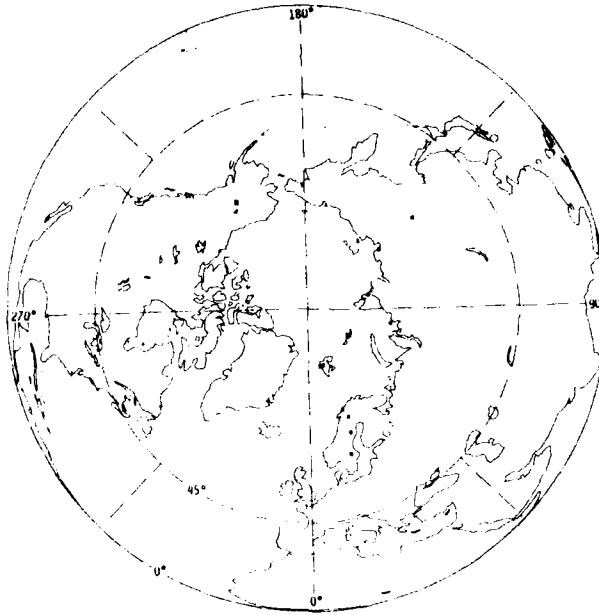
Below is a listing of the four maps contained for this discipline:

E01 All-Sky Camera	North Pole View
E01 All-Sky Camera	South Pole View
E02 Visual Observations	
E03 Other Optical Techniques	North Pole View
E04 Radio and Radar Observations	
E02 Visual Observations	
E03 Other Optical Techniques	South Pole View
E04 Radio and Radar Observations	

Note that two of the maps contain three subdisciplines. Each of the maps is clearly labelled with both the subdisciplines and map projection.

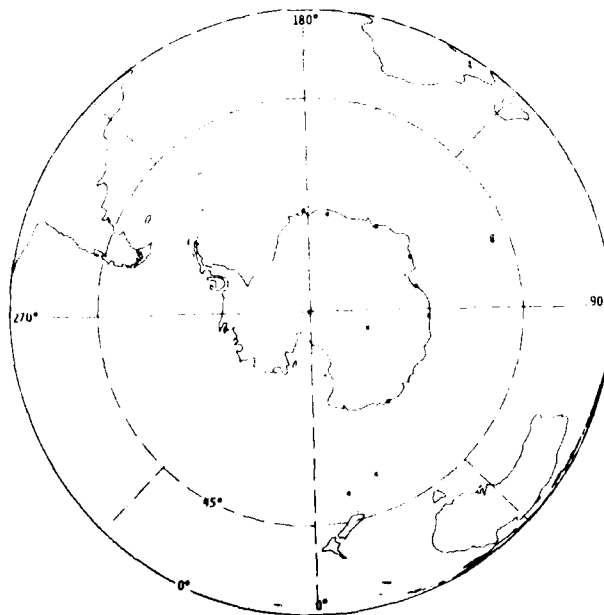
E.1 Maps

NORTH POLE VIEW



E01 ALL-SKY CAMERA

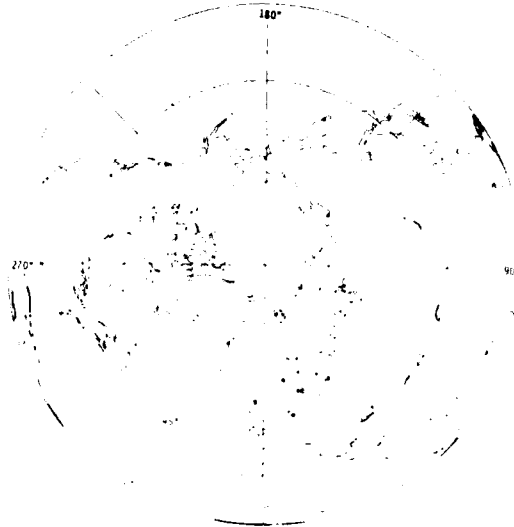
SOUTH POLE VIEW



E01 ALL-SKY CAMERA

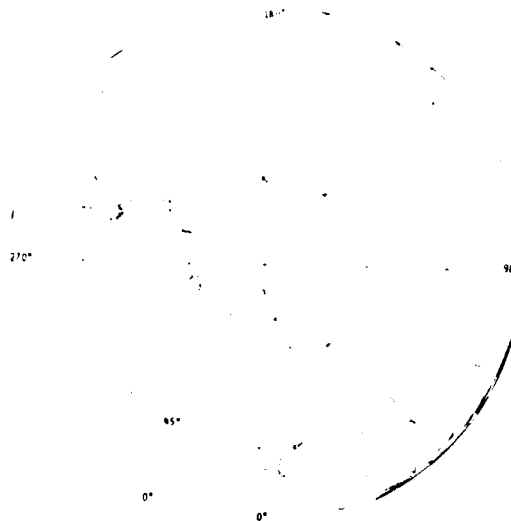
E.1 Maps (Cont.)

NORTH POLE VIEW



E02 VISUAL OBSERVATIONS
E03 OTHER OPTICAL TECHNIQUES
E04 RADIO AND RADAR OBSERVATIONS

SOUTH POLE VIEW



E02 VISUAL OBSERVATIONS
E03 OTHER OPTICAL TECHNIQUES
E04 RADIO AND RADAR OBSERVATIONS

E01 All-Sky Camera

ANDROYA, NORWAY

ITEM: 2032
DATE: 01/09/83

DISCIPLINE ----- E01 All-Sky Camera (Aurora)
STATION LATITUDE ----- N 60.17
STATION LONGITUDE ----- E 16.01
ALTERNATE NAMES ----- Okebasen
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- On request
INSTRUMENT DESCRIPTION ----- A 35 mm all sky camera with a Fisheye-Nikon-Auto with an 8 mm f/2.8 lens. The camera unit is remote controlled via a control box. Time between exposures is between 10 and 90 s, in 10 s increments. Exposure time is between 2 and 18 s, in 2 s increments.
RAW DATA ----- Negative film
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- NTNF, Andoya Rocket Range
P.O. Box 60
8440 Andenes
Norway
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

CHATANIKA, USA

ITEM: 107
DATE: 22/07/83

DISCIPLINE ----- E01 All-Sky Camera (Aurora)
STATION LATITUDE ----- N 65.10
STATION LONGITUDE ----- E 212.57
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1973 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- All-Sky Camera. Exposure - 1 minute and faster, as required.
RAW DATA ----- 35 mm film
DATA REDUCTION PRACTICE ----- NONE
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Archives
Geophysical Institute
University of Alaska
Fairbanks, Alaska 99701
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of Univ. of Alaska N-S meridian chain through Fairbanks.

CAMPBELL ISLAND

ITEM: 82
DATE: 21/08/78

DISCIPLINE ----- E01 All-sky Camera (Aurora)
STATION LATITUDE ----- S 52.25
STATION LONGITUDE ----- E 169.15
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- REGULAR
16 and 35 mm All-sky camera, 16 mm ASC 1958-1963,
35 mm ASC 1965-1974, 16 mm ASC 1974-present.
Approximately 1 exp/min when cloud free.
RAW DATA ----- Film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Film, cassettes
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES (for cooperative studies)
ADDRESS FOR INFORMATION ABOUT STATION ----- Officer in Charge
P.E.L. Atmospheric Station
DSIR
Lauder, Central Otago
New Zealand
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

CHELYSKIN, USSR

ITEM: R77
DATE: 08/08/75

DISCIPLINE ----- E01 All-Sky Camera
STATION LATITUDE ----- N 77.80
STATION LONGITUDE ----- E 104.30
ALTERNATE NAMES ----- Cape Chelyuskin
DATES OF OPERATION ----- 12/1957 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- REGULAR
All-sky camera
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. V. Starkov
Polar Geophysical Institute
Academy of Sciences of the USSR
Apatity, Murmansk Region 184200
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980.

E01 All-Sky Camera (Cont.)

 COLLEGE, USA

ITEM: 124
 DATE: 20/08/83

DISCIPLINE ----- E01 All-Sky Camera (Aurora)
 STATION LATITUDE ----- N 64.86
 STATION LONGITUDE ----- E 212.19
 ALTERNATE NAMES ----- Fairbanks
 Ester Dome Observatory
 Poker Flat Research Range (N65.13, E212.52)
 Chatanika

DATES OF OPERATION ----- 1955 to present
 OBSERVING SCHEDULE ----- REGULAR (September to April)
 INSTRUMENT DESCRIPTION ----- All-sky camera, 16 mm and 35 mm All-sky, dusk to
 dawn, 1 frame/minute minimum,
 35 mm is irregular.

RAW DATA ----- Negative film, positive copies are
 available upon request.

DATA REDUCTION PRACTICE ----- ASCA plots
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- ASCA plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- G. J. Romick
 Geophysical Institute
 University of Alaska, Fairbanks
 Fairbanks, AK 99701
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Connie Burnett, Archives
 Geophysical Institute
 Fairbanks, AK 99701
 USA

ADDITIONAL COMMENTS ----- Stations collectively called COLLEGE:
 1955-1957 Geophysical Institute (Chapman Building)
 1957-1961 Bellaine Lake Field Station (COL)
 (N64.87, E212.21)
 1961-1969 Ester Dome Observatory (EDO)
 (N64.88, E211.95)
 1969- present Poker Flat Research Range (PKR)
 (N65.13, E212.52)

 UJAXO, USSR

ITEM: 874
 DATE: 00/00/75

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- N 73.50
 STATION LONGITUDE ----- E 80.40
 ALTERNATE NAMES ----- Dixon Island
 DATES OF OPERATION ----- 11/1957 to present
 Intermittent operation

OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- All-sky Camera

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. V. Starov
 Polar Geophysical Institute
 Academy of Sciences of the SSSR
 Apolity, Murmansk Region 144200
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980.

 DAVIS, ANTARCTICA

ITEM: 140
 DATE: 01/06/84

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- S 68.58
 STATION LONGITUDE ----- E 77.97
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1969 to present
 OBSERVING SCHEDULE ----- REGULAR (if less than 62.5% cloud cover)
 INSTRUMENT DESCRIPTION ----- 179 degree field of view, photographing visual
 aurora. Automatic operation with one per
 minute exposures. Data and time are recorded
 on each frame.

RAW DATA ----- 35 mm monochromatic film
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director, Antarctic Division
 Department of Science & Technology
 Channel Highway
 Kingston, Tasmania 7150
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- All sky camera only operates during periods of
 sufficient darkness.

 FORT YUKON, USA

ITEM: 178
 DATE: 22/07/83

DISCIPLINE ----- E01 All-Sky Camera (Aurora)
 STATION LATITUDE ----- N 66.56
 STATION LONGITUDE ----- E 214.78
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1968 to present
 Intermittent operation

OBSERVING SCHEDULE ----- OCCASIONAL
 INSTRUMENT DESCRIPTION ----- All-sky Camera, Exposure 1 per minute and
 faster, as required.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- NONE MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Archives
 Geophysical Institute
 University of Alaska
 Fairbanks, AK 99701
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Part of ground support for Poker Flat Rocket Re-
 search Range.

E01 All-Sky Camera (Cont.)

ITEM: 878
DATE: 00/00/75

HEISS ISLAND, USSR

DISCIPLINE ----- E01 All-sky Camera
STATION LATITUDE ----- N 80.70
STATION LONGITUDE ----- E 56.20
ALTERNATE NAMES ----- Heiss
DATES OF OPERATION ----- 12/1957 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- All-sky camera
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. G. V. Starkov
Polar Geophysical Institute
Academy of Sciences of the USSR
Apatity, Murmansk Region 184200
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating
material in 1980.

ITEM: 2043
DATE: 01/09/83

LONGYEARBYEN (LYR), NORWAY

DISCIPLINE ----- E01 All-sky Camera (Aurora)
STATION LATITUDE ----- N 79.00
STATION LONGITUDE ----- E 15.00
ALTERNATE NAMES ----- Spitzbergen
Svalbard
DATES OF OPERATION ----- 1978 to present
OBSERVING SCHEDULE ----- December and January, 24 hour continuous
INSTRUMENT DESCRIPTION ----- 16 mm All Sky Camera
RAW DATA ----- 16 mm film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- February
FORM OF REDUCED DATA ----- ASCA plots
DATA ROUTINELY PUBLISHED ----- As much as possible
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- 16 mm ASC archived at Geophysical Institute
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Charles Deehr
Geophysical Institute
University of Alaska, Fairbanks
Fairbanks, AK 99701
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- This station is about 110 km SE geographically from
the main Norwegian scientific station at Ny Alesund.

ITEM: 316
DATE: 01/01/80

KIRUNA, SWEDEN

DISCIPLINE ----- E01 All-Sky Camera (Aurora)
STATION LATITUDE ----- N 67.84
STATION LONGITUDE ----- E 20.42
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1958 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- All-sky camera, 16 mm black/white film, one
picture/minute.
RAW DATA ----- 16 mm black/white film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Hourly values of auroral intensity
and cloudiness
DATA ROUTINELY PUBLISHED ----- Catalog of data in KIRUNA GEO-
PHYSICAL DATA
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Library
Kiruna Geophysical Institute
Kiruna S-98101
Sweden
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
in 1983.

ITEM: 371
DATE: 01/09/83

LYCKSELE, SWEDEN

DISCIPLINE ----- E01 All-sky Camera (Aurora)
STATION LATITUDE ----- N 64.62
STATION LONGITUDE ----- E 18.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1957 to present
INSTRUMENT DESCRIPTION ----- All-sky camera
RAW DATA ----- 16 mm color film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Ove Klang
Ionospheric Observatory
Boe 100
Lycksele, S-92100
Sweden
ADDRESS FOR INFORMATION ABOUT DATA ----- Library
Kiruna Geophysical Institute
Kiruna, S-98101
Sweden
ADDITIONAL COMMENTS -----

E01 All-Sky Camera (Cont.)

 MACQUARIE ISLAND *****
 ITEM: 380
 DATE: 01/06/84

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- S 54.50
 STATION LONGITUDE ----- E 158.95
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 179 degree field of view, photographic visual
 aurora. Automatic operation with exposures of
 one per minute. Data and time are recorded on
 each frame.

RAW DATA ----- 35 mm monochrome microfilm
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Computer printout
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 Department of Science and Technology
 Channel Highway
 Kingston 7150, Tasmania
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- All-sky camera only operates during periods of
 sufficient darkness.

 MIRNY, ANTARCTICA *****
 ITEM: 879
 DATE: 00/00/75

DISCIPLINE ----- E01 All-sky Camera
 STATION LATITUDE ----- S 66.60
 STATION LONGITUDE ----- E 93.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1957 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 All-sky camera

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. V. Starkov
 Polar Geophysical Institute
 Academy of Sciences of the USSR
 Aptity, Murmansk Region 184200
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1980.

 MANSON, ANTARCTICA *****
 ITEM: 693
 DATE: 01/06/84

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- S 67.61
 STATION LONGITUDE ----- E 62.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1954 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 179 degree field of view, photographing visible
 aurora. Automatic operation with exposures of
 one per minute or three per one minute. Data
 and time are recorded on each frame.

RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Director
 Antarctic Division
 Department of Science and Technology
 Channel Highway
 Kingston 7150, Tasmania
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- All-sky camera only operates during periods of
 sufficient darkness.

 NOVOLAZAREVSKAYA, ANTARCTICA *****
 ITEM: 880
 DATE: 00/00/75

DISCIPLINE ----- E01 All-sky Camera
 STATION LATITUDE ----- S 70.80
 STATION LONGITUDE ----- E 11.80
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1965 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 All-sky camera

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. V. Starkov
 Polar Geophysical Institute
 Academy of Sciences of the USSR
 Aptity, Murmansk Region 184200
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980.

E01 All-Sky Camera (Cont.)

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*****
NYAALESUND, NORWAY
*****
ITEM: 2126
DATE: 04/01/84

DISCIPLINE ----- E01 All-sky Camera (Aurora)
STATION LATITUDE ----- N 78.92
STATION LONGITUDE ----- E 11.93
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1966 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 16 mm all-sky camera, 1 picture per minute (weather
                                providing)
RAW DATA ----- 16 mm positive color film
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 8 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Dr. Steinar Berger
                                The Auroral Observatory
                                University of Tromso
                                P.O. Box 953
                                N-9001 Tromso
                                Norway
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
POKER FLAT, USA
*****
ITEM: 2130
DATE: 22/07/83

DISCIPLINE ----- E01 All-Sky Camera (Aurora)
STATION LATITUDE ----- N 65.13
STATION LONGITUDE ----- E 212.52
ALTERNATE NAMES -----
DATES OF OPERATION ----- November 1970 to present
OBSERVING SCHEDULE ----- Intermittent operation occasional
INSTRUMENT DESCRIPTION ----- 35 mm All-sky camera, exposure 1 per minute
                                and faster, as required.
RAW DATA -----
DATA REDUCTION PRACTICE ----- None
REGULAR REDUCED DATA AVAILABLE AFTER -----
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Archives
                                Geophysical Institute
                                University of Alaska
                                Fairbanks, AK 99701
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of ground support for Poker Flat Rocket
                                Research Range.
    
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*****
POKER FLAT, USA
*****
ITEM: 470
DATE: 22/07/83

DISCIPLINE ----- E01 All-Sky Camera (Aurora)
STATION LATITUDE ----- N 65.13
STATION LONGITUDE ----- E 212.52
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 16 mm all-sky camera, aurora, one picture per
                                minute taken during dark season
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER -----
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Archives
                                Geophysical Institute
                                University of Alaska
                                Fairbanks, Ak 99701
                                USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of Univ. of Alaska chain of NS meridian stations.
    
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*****
PORT AUX FRANCAIS, KERGUELEN
*****
ITEM: 307
DATE: 01/01/80

DISCIPLINE ----- E01 All-sky Camera (Aurora)
STATION LATITUDE ----- S 49.35
STATION LONGITUDE ----- E 70.22
ALTERNATE NAMES ----- Kerguelen
DATES OF OPERATION ----- 07/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Aurora and airglow equipment, regular operations
                                under cloudless and moonlight conditions, multi-
                                color photometer.
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA ----- Graphical plots
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- G. Weill
                                Service d'Aeronomie
                                B.P. no.3
                                91370 Verrieries Buisson
                                France
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 18 months.
                                No response received to inquiry for updating material
                                in 1983.
    
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E01 All-Sky Camera (Cont.)

 SANAE, ANTARCTICA

ITEM: 781
 DATE: 01/05/84

DISCIPLINE ----- E01 All-sky Camera
 STATION LATITUDE ----- S 70.30
 STATION LONGITUDE ----- E 357.66
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1960 to present
 OBSERVING SCHEDULE ----- On clear nights March-September
 INSTRUMENT DESCRIPTION ----- 35 mm camera with fish-eye lens
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- 35 mm cinematographic film
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Antarctic Programme
 Hermanus Magnetic Obs.
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Station on moving ice shelf, rebuilt three times
 since 1960.

 SYDVA, ANTARCTICA

ITEM: 2209
 DATE: 07/07/83

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- S 69.00
 STATION LONGITUDE ----- E 39.44
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1966 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- All-sky camera, Exposure 3 per minute
 and faster as required.
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Film, tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- National Institute of Polar Research
 Kege 1-9-11
 Itabashi-ku, Tokyo 173
 Japan
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 SOUTH POLE, ANTARCTICA

ITEM: 571
 DATE: 22/07/83

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- S 90.00
 STATION LONGITUDE ----- E 0.
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- All-sky camera, Aurora - during dark season,
 (April thru September) 1 picture per minute
 is taken on 35 mm film.
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- NONE
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Archives
 Geophysical Institute
 University of Alaska
 Fairbanks, AK 99701
 USA
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 TERRE ADELIE, ANTARCTICA

ITEM: 604
 DATE: 01/01/80

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- S 66.67
 STATION LONGITUDE ----- E 140.00
 ALTERNATE NAMES ----- Dumont d'Urville
 DATES OF OPERATION ----- 01/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Aurora and airglow equipment, photometers, all-sky
 camera, Regular observations under cloudless and
 moonlight conditions.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- G. Weill
 Service d'Aeronomie
 B.P. no 3
 Verrico 75014
 France
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Special purpose data available after 18 months.
 No response received to inquiry for updating material
 in 1983.

E01 All-Sky Camera (Cont.)

 TIKIE BAY, USSR

ITEM: 2226
 DATE: 01/01/80

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- N 71.6
 STATION LONGITUDE ----- E 128.8
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1958 to present
 Intermittent operation
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard All-sky camera
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- Occasional
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Negatives
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Via WDC-B
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Cosmophysical Research
 and Aeronomy
 Lenin Avenue 31
 67707 Yakutsk
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 VOSTOK, ANTARCTICA

ITEM: 881
 DATE: 00/00/75

DISCIPLINE ----- E01 All-sky Camera
 STATION LATITUDE ----- S 78.40
 STATION LONGITUDE ----- E 106.90
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 05/1958 to present
 Intermittent operation
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- All-sky camera
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. V. Starkov
 Polar Geophysical Institute
 Academy of Sciences of the USSR
 Apeltiy, Murmansk Region 184200
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980.

 TROMSO, NORWAY

ITEM: 2222
 DATE: 04/01/84

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- N 69.46
 STATION LONGITUDE ----- E 18.94
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1968 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- 16 mm all-sky camera, one picture per minute
 (weather providing)
 RAW DATA ----- 16 mm positive color film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 8 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Steinar Berger
 The Aurora Observatory
 University of Tromso
 P.O. Box 953
 N-9001 Tromso
 Norway
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 YAKUTSK, USSR

ITEM: 2235
 DATE: 00/00/80

DISCIPLINE ----- E01 All-sky Camera (Aurora)
 STATION LATITUDE ----- N 62.02
 STATION LONGITUDE ----- E 129.72
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/58 to present
 Intermittent operation
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Standard All-sky camera
 RAW DATA ----- 35 mm film
 DATA REDUCTION PRACTICE ----- Occasional
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Negatives
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- Via WDC-B
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Cosmophysical
 Research and Aeronomy
 Lenin Avenue 31
 677007 Yakutsk
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

E02 Visual Observations

DUMONT D'URVILLE, ANTARCTICA

ITEM: 1055
DATE: 01/01/80

DISCIPLINE ----- E02 Visual Observations (Aurora)
STATION LATITUDE ----- S 66.67
STATION LONGITUDE ----- E 140.00
ALTERNATE NAMES ----- Terre Adelle
DATES OF OPERATION ----- 01/1957 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Aurora: regular observations under cloudless
and moonlit conditions.

RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA ----- Computer printouts
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----

DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- G. Weill
Service d'Aeronomie
B.P. no. 3
91370 Verrieries
Buisson
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 18 months.
No response received to inquiry for updating
material in 1983.

PORT AUX FRANCAIS, KERGUELEN

ITEM: 967
DATE: 01/01/80

DISCIPLINE ----- E02 Visual Observations (Aurora)
STATION LATITUDE ----- S 49.35
STATION LONGITUDE ----- E 70.22
ALTERNATE NAMES ----- Kerguelen
DATES OF OPERATION ----- 07/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Visual observations of aurora during cloudless
and moonlit conditions.

RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----

DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- G. Weill
Service d'Aeronomie
B.P. no. 3
91370 Verrieries
Buisson
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 18 months.
No response received to inquiry for updating material
in 1983.

E03 Other Optical Techniques

ANDØYA, NORWAY

ITEM: 2921
DATE: 01/09/83

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
STATION LATITUDE ----- N 60.17
STATION LONGITUDE ----- E 16.01
ALTERNATE NAMES ----- Okebasen
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- On Request
INSTRUMENT DESCRIPTION -----

The auroral TV-system comprises an intensified ISOCOM camera, with additional equipment for distributing video to recorders and monitors at the optical site and control center. There are 1/2" and 1" recorders for time-lapse and normal recording. The camera uses standard Nikon 1.
1/2" reel or umatic cassette

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

NTNF, Andoya Rocket Range
P.O. Box 60
8480 Andenes
Norway

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

BATTELLE, USA

ITEM: 489
DATE: 01/08/83

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
STATION LATITUDE ----- N 46.40
STATION LONGITUDE ----- E 240.40
ALTERNATE NAMES ----- Richland
DATES OF OPERATION ----- 01/1968 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION -----

Auroral photometers. All-sky scanning photometers monitoring auroral emissions O1 5577A, O1 6300A, N2+ 4278A, H β 4861 and S350A background. Observing is scheduled routinely for each night except the five day period centered on full moon (no data taken during the five day period).

RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- All-sky gray scale, isophote and isoslope circle maps, lists

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Donald Slater or Ed Kleckner
Battelle Obs., Battelle Memorial Inst.
P.O. Box 999
Richland, WA 99352
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Intensities are listed for every 3 degrees of azimuth for 6 elevation scans. The photometers have 3 degree field of views and data is recorded digitally. All-sky coverage is obtained every 12 minutes. Additional sites of identical photometers are:
Northwest Territories, Canada (61.3N, 242.4E) 1979-1982
Alberta, Canada (53.3N, 246.5E) 1978-present
Montana, USA (48.9N, 244.9E) 1980-present
Montana, USA (48.6N, 252.9E) 1975-1981
New York, USA (42.6N, 286.1E) 1978-1980
Colorado, USA (40.1N, 254.8E) 1978-present
Michigan, USA (45.8N, 271.9E) 1977-present

ANDØYA, NORWAY

ITEM: 2027
DATE: 01/09/83

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
STATION LATITUDE ----- N 60.17
STATION LONGITUDE ----- E 16.01
ALTERNATE NAMES ----- Okebasen
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- On Request
INSTRUMENT DESCRIPTION -----

The photometer has four independent channels and with the use of interference filter four different spectral emissions can be measured. Background level can be corrected by tilting the filters. A mirror system provides a preset scan of the sky in any selected azimuth direction.
Channel 1: 427.8 nm (N2)
Channel 2: 486.1 nm (H-beta)
Channel 3: 557.7 nm (O1)
Channel 4: 630.0 nm (O1)
Output range: 0-100,000 counts/s
Scanning range: 0-180° in auto or manual mode
Scanning speed: 2, 4, 8 or 16°/s
Analog output: 0-10 volts
Digital output: TTL compatible, 8 bit
Aperture: 7.07 x 10⁻⁴ sr
Paper chart

RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

NTNF, Andoya Rocket Range
P.O. Box 60
8480 Andenes
Norway

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- A new scanning photometer is planned to be installed in 1984/1985.

DUMONT D'URVILLE, ANTARCTICA

ITEM: 1056
DATE: 01/01/80

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
STATION LATITUDE ----- S 66.67
STATION LONGITUDE ----- E 140.00
ALTERNATE NAMES ----- Terre Adelle
DATES OF OPERATION ----- 01/1957 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Auroral photometers, regular observations under cloudless and moonlit conditions.

RAW DATA ----- Strip charts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA ----- Computer printouts

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- G. Weill
Service d'Aeronomie
B.P. no. 3
91370 Verrieries
Buisson
France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 18 months. No response received to inquiry for updating material in 1983.

E03 Other Optical Techniques (Cont.)

 KIRUNA, SWEDEN

ITEM: 317
 DATE: 01/01/80

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- N 67.84
 STATION LONGITUDE ----- E 20.42
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Four channel auroral photometer, meridian sweep,
 digital recording.
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED ----- Catalog of data in KIRUNA GEO-
 PHYSICAL DATA
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Library
 Kiruna Geophysical Institute
 Kiruna S-981 01
 Sweden
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

 LONGYEARBYEN, NORWAY

ITEM: 2033
 DATE: 01/09/83

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- N 79.00
 STATION LONGITUDE ----- E 15.00
 ALTERNATE NAMES ----- Spitzbergen
 Svalbard
 DATES OF OPERATION ----- 1978 to present
 OBSERVING SCHEDULE ----- December and January, 24 hour continuous
 INSTRUMENT DESCRIPTION ----- Meridian scanning photometer, wavelengths:
 4278, 4861, 5577, 6300, and 7320; sometimes
 5200 and 6563.
 RAW DATA ----- Digital data on magnetic tape
 DATA REDUCTION PRACTICE ----- Quick look data on latitude,
 intensity, time available
 REGULAR REDUCED DATA AVAILABLE AFTER ----- End of season
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Not just as data
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Charles Deehr
 Geophysical Institute
 University of Alaska, Fairbanks
 Fairbanks, AK 99701
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LENINGRAD, USSR

ITEM: 747
 DATE: 10/01/75

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- N 59.95
 STATION LONGITUDE ----- E 30.70
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Auroral Photometer, 5577A, 6300A
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Microfilm tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Michail I. Pudovkin
 Dept. of Terrestrial Physics, Phys Inst
 Leningrad State University
 Leningrad 199 164
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating
 material in 1980.

 LONGYEARBYEN, NORWAY

ITEM: 2034
 DATE: 01/09/83

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- N 79.00
 STATION LONGITUDE ----- E 15.00
 ALTERNATE NAMES ----- Spitzbergen
 Svalbard
 DATES OF OPERATION ----- 1978 to present
 OBSERVING SCHEDULE ----- December and January, 24 hour continuous
 INSTRUMENT DESCRIPTION ----- 1/2 meter and 1 meter spectrometers (Ebert-Fastie)
 wavelength scan over given interval 10-30 s, scan
 summation possible, recorded on digital tape
 Digital photomultiplier pulse counting
 system
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- As needed for particular study
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- As much as possible
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Charles Deehr
 Geophysical Institute
 University of Alaska, Fairbanks
 Fairbanks, AK 99701
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

E03 Other Optical Techniques (Cont.)

 LYCKSELE, SWEDEN

ITEM: 373
 DATE: 01/08/83

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- N 64.62
 STATION LONG. ----- E 18.67
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1957 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- 4-channel photometers, one meridian sweep every 15 minutes.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Sve Klång
 Ionospheric Observatory
 Box 100
 Lycksele, S-92100
 Sweden

ADDRESS FOR INFORMATION ABOUT DATA ----- Library
 Kiruna Geophysical Institute
 Kiruna, S-98101
 Sweden

ADDITIONAL COMMENTS -----

 POKER FLAT, USA

ITEM: 2744
 DATE: 01/09/83

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- N 65.11
 STATION LONGITUDE ----- E 212.52
 ALTERNATE NAMES ----- PKR
 DATES OF OPERATION ----- 1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Meridian scanning photometer, wavelengths: 4278, 4861, 5577, 6300, and 7320. Tilt filters

RAW DATA ----- Digital data on magnetic tape
 DATA REDUCTION PRACTICE ----- Quick look data on latitude, intensity.
 REGULAR REDUCED DATA AVAILABLE AFTER ----- As soon as possible
 FORM OF REDUCED DATA ----- Microfilm, tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- G. J. Romick
 Geophysical Institute
 University of Alaska, Fairbanks
 Fairbanks, Ak 99701
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS -----

 PAPATUNKA, USSR

ITEM: 788
 DATE: 00/00/75

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- N 52.58
 STATION LONGITUDE ----- E 158.14
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Auroral Photometer, 5577A, 6300A

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Microfilm, tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Michail I. Pudovkin
 Dept of Terrestrial Physics, Phys Inst
 Leningrad State University
 Leningrad 199 164
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980.

 POKER FLAT, USA

ITEM: 2045
 DATE: 01/09/83

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- N 64.86
 STATION LONGITUDE ----- E 212.15
 ALTERNATE NAMES ----- Geophysical Institute (Elvey Building)
 University of Alaska, Fairbanks Campus

DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- September to April, clear nights
 INSTRUMENT DESCRIPTION ----- Two 6" Fabry Perot Interferometers, one views at 6200A routinely, and the other at 5577A, or Na, or 6300A, for special purpose.

RAW DATA ----- Digital data on magnetic tape represents
 pressure scanned FP fringe

DATA REDUCTION PRACTICE ----- Reduced to winds and temperatures
 REGULAR REDUCED DATA AVAILABLE AFTER ----- As soon as possible
 FORM OF REDUCED DATA ----- Plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES, sometimes
 ADDRESS FOR INFORMATION ABOUT STATION ----- G. J. Romick
 Geophysical Institute
 University of Alaska, Fairbanks
 Fairbanks, Ak 99701
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above

ADDITIONAL COMMENTS -----

E03 Other Optical Techniques (Cont.)

 PORT AUX FRANCAIS, KERGUELEN

 ITEM: 968
 DATE: 01/01/80
 DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- S 49.35
 STATION LONGITUDE ----- E 70.22
 ALTERNATE NAMES ----- Kerguelen
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Multicolor photometer, regular operations
 under cloudless and moonlit conditions.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Graphical plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- G. Weill
 Service d'Aeronomie
 B.P. no. 3
 91370 Verriers
 Buisson
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 18 months.
 No response received to inquiry for updating material
 in 1983.

 SANAE, ANTARCTICA

 ITEM: 2205
 DATE: 01/05/84
 DISCIPLINE ----- E03 Other Optical Techniques
 STATION LATITUDE ----- S 70.32
 STATION LONGITUDE ----- E 357.66
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1975
 OBSERVING SCHEDULE ----- Selected clear nights, March - September
 INSTRUMENT DESCRIPTION ----- Meridian scanning, tilting filter
 photometer (486.6 nm) for recording
 proton aurora (H line).
 RAW DATA ----- Chart rolls
 DATA REDUCTION PRACTICE ----- Selected events for research purposes
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Intensity versus time plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Antarctic Programme
 Magnetic Observatory
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Station on moving ice shelf, rebuilt in 1979.

 SANAE, ANTARCTICA

 ITEM: 1046
 DATE: 01/02/84
 DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
 STATION LATITUDE ----- S 70.31
 STATION LONGITUDE ----- E 357.65
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Low light level TV camera and video cassette
 recorder.
 RAW DATA ----- 1/2" and 3/4" videotape
 DATA REDUCTION PRACTICE ----- SPECIAL (As required)
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- 1/2" and 3/4" videotape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. M. W. J. Scourfield or P. A. Wakerly
 Physics, University of Natal
 King George V Avenue
 Durban 4001, Natal
 Rep. of S. Africa
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TIXIE BAY, USSR

 ITEM: 2229
 DATE: 01/01/80
 DISCIPLINE ----- E03 Other Optical Technique (Aurora)
 STATION LATITUDE ----- N 71.6
 STATION LONGITUDE ----- E 128.8
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1969 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- REGULAR
 Fabry Perot interferometer with the plate diameter
 50 mm, multilayer, dielectric mirror covering;
 reflection coefficient within 6000 A is 97%. The
 plate flatness wavelength/50, finesse effectiveness
 ~7. Interference filters: a) transmission
 coefficients for 5577A line - 46%, for 6300 line
 - 49%. b) Transmission band of filters - wavelength
 about 50 A. To increase the light is used 3-camera
 electron optical transformer with multialkali
 photocathode. Interferometer is used for invest-
 igations of Doppler temperatures of 6300 A emissions
 in aurora and night sky airglow as well as for
 investigations of neutral winds on Doppler shift
 in 6300 A.
 RAW DATA ----- Photo prints
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Bull. Abastuman. Astrophys.
 Obser. 1972, No. 42, 91-96.
 Aurora and Night Sky Airglow.
 Publ. "Soviet Radio", Moscow, No.
 24, 1976, 59-63.
 Physical Processes in High Latitudinal
 Upper Atmosphere. Publ. Yakutsk,
 1976, 17-22.
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Cosmophysical
 Research and Aeronomy
 Lenin Avenue 31
 67707 Yakutsk
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

E03 Other Optical Techniques (Cont.)

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*****
TIXIE BAY, USSR
*****
ITEM: 2228
DATE: 06/00/80

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
STATION LATITUDE ----- N 71.6
STATION LONGITUDE ----- E 128.8
ALTERNATE NAMES -----
DATES OF OPERATION ----- J2/1973 to present
OBSERVING SCHEDULE ----- Intermittent during winter months
INSTRUMENT DESCRIPTION ----- REGULAR
Fabry Perot Spectrometer for investigations of
Doppler temperature fast variations of 5577A line
in aurora and of excitation mechanisms of oxygen
emissions. Diameter of working plate aperture -
40 mm; covering is multilayer, dielectric;
reflection coefficient of mirror surfaces within
5400-6800 A varies from 87% to 95%. Flatness -
wavelength/50. Effective finesse is 16. Resolving
capability is R = 10^5. Focal length of
camera objective is 47 mm. Piezoelectric method
of scanning.

RAW DATA ----- Registigrams
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tables and registigrams
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Cosmophysical Research and
Aeronomy
Lenin Avenue 31
67707 Yakutsk
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
YAKUTSK, USSR
*****
ITEM: 2233
DATE: 06/00/80

DISCIPLINE ----- E03 Other Optical Techniques (Aurora)
STATION LATITUDE ----- N 62.00
STATION LONGITUDE ----- E 129.70
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1957 to present
OBSERVING SCHEDULE ----- Intermittent
INSTRUMENT DESCRIPTION ----- Regular
Auroral Spectrograph SP-48, spectral range 3800-
8000 A, linear dispersion in A/mm - 100, resolving
capability in A - 3.5 A. Diffraction grating:
a) number of hatches per mm - 1200, b) hatched area
is 135.90 mm^2. Focal length of collimator
objective is 630 mm, its relative aperture is 1:4.7.
Focal length of the camera objective is 70 mm, its
relative aperture to be 1:0.8. SP-49 studies
atmospheric emission brightness and atmospheric
temperature on hydroxyl emission.

RAW DATA ----- Photo prints
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Negatives
DATA ROUTINELY PUBLISHED ----- Physics of High Latitudinal Upper Atmosphere,
Publ. Yakutsk Branch, Yakutsk, 1974, 1975,
Bull. Abastum. Astrophys. Observ., 1972,
No. 42, 25-28.

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Cosmophysical Research and
Aeronomy
Lenin Avenue 31
67707 Yakutsk
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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E04 Radio and Radar Observations

 HANKASALMI, FINLAND

ITEM: 2065
 DATE: 27/07/83

DISCIPLINE ----- E04 Radar Aurora
 STATION LATITUDE ----- N 62.5
 STATION LONGITUDE ----- E 26.9
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1977 to present
 OBSERVING SCHEDULE ----- CONTINUOUS
 INSTRUMENT DESCRIPTION ----- STARE (Scandinavian Twin Auroral Radar Experiment):
 The combined data from two VHF (140 MHz) radar
 stations provide maps of the location, intensity
 and total velocity of those ionospheric irregularities
 which lie within the common field of view of the
 two radars. Tromso (N 69.7, E 19.2) is located
 near the center of the common viewing area, which
 has a size of 200 000 km squared. The spatial
 resolution is 20 x 20 km squared, and the temporal
 resolution typically 20 s or 60 s.

RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- Event oriented
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. E. Nielsen
 Max-Planck Institut fur Aeronomie
 Postfach 20
 D-3411 Katlenburg, Lindau 3
 FRG

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MALVIK, NORWAY

ITEM: 2096
 DATE: 27/07/83

DISCIPLINE ----- E04 Radar Aurora
 STATION LATITUDE ----- N 63.40
 STATION LONGITUDE ----- E 10.70
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1977 to present
 OBSERVING SCHEDULE ----- Continuous
 INSTRUMENT DESCRIPTION ----- STARE (Scandinavian Twin Auroral Radar Experiment):
 The combined data from two VHF (140 MHz) radar
 stations provide maps of the location, intensity,
 and total velocity of those ionospheric
 irregularities which lie within the common
 field of view of the two radars. Tromso (N
 69.7, E 19.2) is located near the center of the
 common viewing area, which has a size of 200
 000 km2. The spatial resolution is 20 x 20
 km2, and the temporal resolution typically 20s
 or 60s.

RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- Event oriented
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. E. Nielsen
 Max-Planck Institut fur Aeronomie
 Postfach 20
 D-3411 Katlenburg Lindau 3
 FRG

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KUHLLINGSBORN, GDR

ITEM: 984
 DATE: 01/02/84

DISCIPLINE ----- E04 Radar Aurora
 STATION LATITUDE ----- N 54.12
 STATION LONGITUDE ----- E 11.77
 ALTERNATE NAMES ----- Obs fur Ionospharenforschung Zentralinstitut fur
 Solar-Terrestrische Physik (MHI)
 DATES OF OPERATION ----- 1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 33 MHz radar equipment, auroral radar observations,
 continuous records

RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 0.5 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Geophysikalische Beobachtungsergebnisse
 (Geophysical Data) monthly bulletin

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES; Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. G. Entzian
 Observatorium fur Ionospharenforschung
 Mitschurin Str. 4-6
 Kuhlungsborn DDR 2565
 GDR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The monthly bulletin, Geophysical Data, is available
 from Akad. d. Wissenschaften der DDR, Zentralinstitut
 fur Solar-Terrestrische Physik (MHI), DDR 1199 Berlin-
 Adlershof.

 MCURRHO STATION, ANTARCTICA

ITEM: 548
 DATE: 01/01/80

DISCIPLINE ----- E04 Radar Aurora
 STATION LATITUDE ----- S 77.75
 STATION LONGITUDE ----- E 167.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Infrasonic microphone, 10-100 second period
 subsound waves related to aurora. A capacitor
 microphone array, whose inputs are filtered by
 1000 ft. lengths of pipe with very small radial
 holes and covering a 3 quadrant arc of 35 sp.
 km, continuously monitors atmospheric pressure.
 Data are recorded on 1/4 inch per minute direct
 magnetic tape.

RAW DATA ----- Analog magnetic tape
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Charles R. Wilson
 Geophysical Institute
 University of Alaska
 Fairbanks, AK 99701
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1983.

E04 Radio and Radar Observations (Cont.)

 SLOPE POINT, NEW ZEALAND

ITEM: 2151
 DATE: 21/08/83

DISCIPLINE ----- E04 Radar Aurora
 STATION LATITUDE ----- S 44.67
 STATION LONGITUDE ----- E 169.03
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1974 to present
 OBSERVING SCHEDULE ----- Continuous
 INSTRUMENT DESCRIPTION ----- 51 MHz pulse radar with doppler capability with antenna beam oriented due south geographic

RAW DATA ----- 35 mm film, magnetic tape
 DATA REDUCTION PRACTICE ----- Special purposes only
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES (for cooperative studies)
 OFFICER IN CHARGE ----- PEL Atmospheric Station
 NSIR
 LAUDER, Central Otago
 New Zealand
 ADDRESS FOR INFORMATION ABOUT STATION ----- Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 UPSALA, SWEDEN

ITEM: 2310
 DATE: 10/07/83

DISCIPLINE ----- E04 Radio and Radar Observations (Aurora)
 STATION LATITUDE ----- N 59.80
 STATION LONGITUDE ----- E 17.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1983 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- SABRE (Sweden and Britain Radar Experiment): The combined data from two VHF (about 145 MHz) radar stations provide maps of the location, intensity and total velocity of those ionospheric irregularities which lie within the common field of view of the two radars. The center of the common viewing area, which has a size of 200,000 km squared, is located at 66.0°N, 6.0°E. The spatial resolution is 20 x 20 km squared, and the temporal resolution typically 20 s or 60 s.

RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- Event oriented
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. Nielsen
 Max-Planck-Institut für Aeronomie
 Postfach 20
 D-3411 Katlenburg-Lindau,
 FRG.
 and
 Prof. Dr. T. R. Jones
 Department of Physics
 University of Leicester
 Leicester LE1 7RH
 United Kingdom
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SYDRA, ANTARCTICA

ITEM: 58H
 DATE: 03/01/84

DISCIPLINE ----- E04 Radio and Radar Observations (Aurora)
 STATION LATITUDE ----- S 69.00
 STATION LONGITUDE ----- E 39.35
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Aurora radar, radio and radar observations, 50 and 112 MHz continuous recording, 35 mm film, A-scope and R-scope, Strip chart of radio aurora echo intensity.

RAW DATA ----- 35 mm film and strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Tables and strip chart
 DATA ROUTINELY PUBLISHED ----- (AWE) DATA REPORTS (IONOSPHERE), annually issued by Polar Research Institute

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES United Kingdom
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Sydne Base (Japanese Antarctic Res Exp)
 Radio Research Laboratories
 2-1, Nukua-Fitamachi 4-chome
 Kojimachi, Tokyo 104
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- WDC-2 for Ionosphere
 Radio Research Laboratories
 2-1, Nukua-Fitamachi 4-chome
 Kojimachi, Tokyo 104
 Japan
 ADDITIONAL COMMENTS ----- Special purpose data usually available after 15 months.

 WICK, UNITED KINGDOM

ITEM: 2311
 DATE: 10/07/83

DISCIPLINE ----- E04 Radio and Radar Observations (Aurora)
 STATION LATITUDE ----- N 54.50
 STATION LONGITUDE ----- E 356.90
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- SABRE (Sweden and Britain Radar Experiment): The combined data from two VHF (about 145 MHz) radar stations provide maps of the location, intensity and total velocity of those ionospheric irregularities which lie within the common field of view of the two radars. The center of the common viewing area, which has a size of 200,000 km squared, is located at 66.0°N, 6.0°E. The spatial resolution is 20 x 20 km squared, and the temporal resolution typically 20 s or 60 s.

RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE ----- Event oriented
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Dr. T. R. Jones
 Department of Physics
 University of Leicester
 Leicester LE1 7RH
 United Kingdom
 and
 Dr. J. Nielsen
 Max-Planck-Institut für Aeronomie
 Postfach 20
 D-3411 Katlenburg-Lindau,
 FRG.
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

F. Cosmic Rays

F. Cosmic Rays

Below is a listing of the two maps contained for this discipline:

F01 Neutron Monitors and Supermonitors

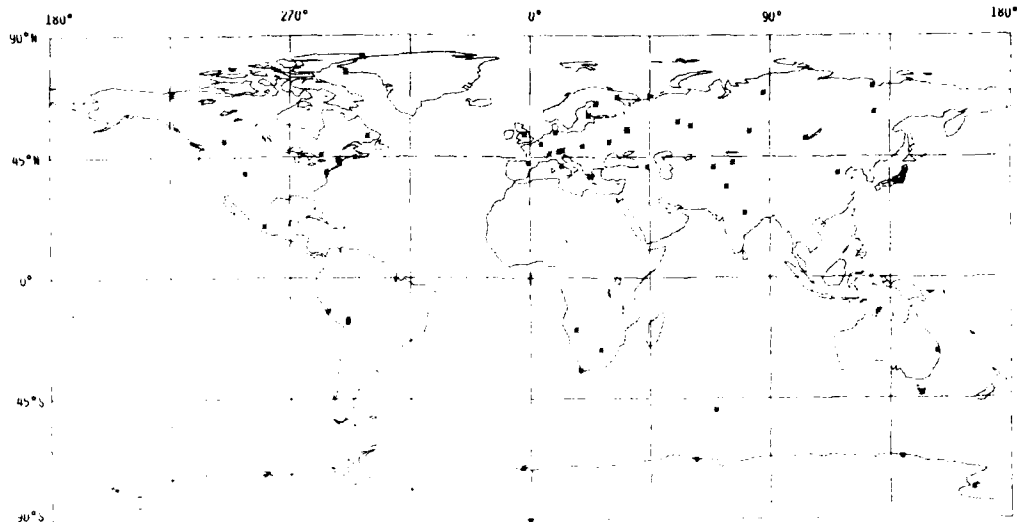
F02 Ionization Chambers

F03 Meson Telescope

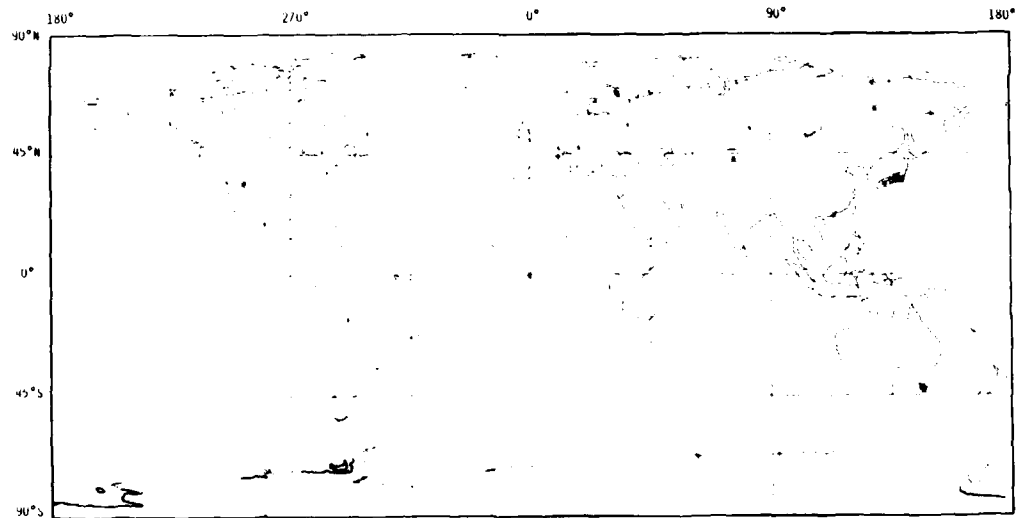
F04 Balloon Measurements

Note that one of the maps has incorporated three subdisciplines. Both of the maps are clearly labelled.

F.1 Maps



F01 NEUTRON MONITORS AND SUPERMONITORS



**F02 IONIZATION CHAMBERS
F03 MESON TELESCOPE
F04 BALLOON MEASUREMENTS**

F01 Neutron Monitors and Supermonitors

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*****
ALERT, CANADA
*****
ITEM: 8
DATE: 21/08/83

DISCIPLINE ----- F01 Neutron Monitors and Super-Monitors
STATION LATITUDE ----- N 42.50
STATION LONGITUDE ----- E 297.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1965 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 18-NM-64 Neutron Monitor cosmic ray nucleonic
component intensity. The monitor is housed in a
building specially constructed for the purpose.
The equipment comprises an 18-NM-64 neutron moni-
tor (three 6-counter units), a digital mercury
serobarometer and an automatic data readout.
The counting totals from each of the 3 units and
the reading of the barometer are recorded on
punched paper tape at 5 minute intervals.

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- Punched paper tape
REGULAR REDUCED DATA AVAILABLE AFTER ----- NONE REGULAR
FORM OF REDUCED DATA ----- 2 MONTHS
DATA ROUTINELY PUBLISHED ----- Tables, magnetic tape
DATA SENT TO WDC-A ----- Yearly, 6-12 months after year's end
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. Bercovitch
National Research Council of Canada
100 Sussex Drive
Ottawa, Ontario K1A 0R6
Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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*****
APATITY, USSR
*****
ITEM: 21
DATE: 01/04/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 67.50
STATION LONGITUDE ----- E 33.33
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1968 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 10SY-Neutron Monitor-64
RAW DATA ----- Tables, computer printouts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- COSMIC DATA, MAUPP Publishing House,
Moscow (KOSMYCHESKIE DANNYE),
monthly review

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- L. L. Lazutin
Polar Geophysical Institute
Academy of Sciences of the USSR
184200 Apatity, Murmanskaya Oblast'
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.

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*****
ALMA-ATA, USSR
*****
ITEM: 11
DATE: 09/12/75

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 43.25
STATION LONGITUDE ----- E 74.92
ALTERNATE NAMES ----- Cosmic Ray Lab, Kazakh State U
DATES OF OPERATION ----- 1973 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 18-NM-64 Neutron Supermonitor

RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Monthly tables, graphical plots
DATA ROUTINELY PUBLISHED ----- "Cosmic Data" Bulletin (Monthly Review)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Cosmic Ray Group
Ionospheric Section
Kazakh Academy of Sciences
Kamenskoye Plate
480068 Alma-Ata
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Operation intermittent 1-4/1980.
No response received to inquiry for updating material
in 1980.

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*****
ATHENS, GREECE
*****
ITEM: 784
DATE: 22/07/83

DISCIPLINE ----- F01 Neutron Monitors and Super-Monitors
(Cosmic Rays)
STATION LATITUDE ----- N 37.96
STATION LONGITUDE ----- E 23.70
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1970 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Super NM-64

RAW DATA -----
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tabular matter
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Helen Mavrounchalaki
Cosmic Ray Group, Nuclear Physics
Laboratory
104, Solonos Street
Athens 144
Greece

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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F01 Neutron Monitors and Supermonitors (Cont.)

 BAGNERES, FRANCE

ITEM: 42
 DATE: 01/01/80

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 STATION LATITUDE ----- N 43.08
 STATION LONGITUDE ----- E .15
 ALTERNATE NAMES ----- Bagneres-De-Bigorre
 DATES OF OPERATION ----- 01/1971 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 3-NM-64 Neutron Supermonitor. The data are recorded every 1/4 h. Average hourly counting rate 1400x100. Scaling factor 100. 2-NM-64 in use 1-4/1971.

RAW DATA ----- Tables
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts, graphical plot
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: WDC-C1
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Jean Folques
 Lab de Physique Cosmique du C.N.R.S.
 Route des Gatinnes
 Verrieres-le-Bu, 91 370
 France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The atmospheric pressure is hourly measured on 1/10 mm Hg (Analog recorder). Special purpose data available after 3-4 months.
 No response received to inquiry for updating material in 1983.

 CALGARY, CANADA

ITEM: 790
 DATE: 00/00/75

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- N 51.08
 STATION LONGITUDE ----- E 245.90
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Neutron supermonitor

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, bulletins
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NGAA)
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Doraswamy Venkatesan
 Physics Department
 University of Calgary
 Calgary, Alberta T2N 1N4
 Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

 BRISBANE, AUSTRALIA

ITEM: 712
 DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 STATION LATITUDE ----- S 27.43
 STATION LONGITUDE ----- E 153.08
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 12/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Neutron Supermonitor (9 counters)

RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. G. Fenton
 Hobart Cosmic Ray Res. Group
 Department of Physics
 University of Tasmania
 P.O. Box 252 C
 Hobart, Tasmania 7001
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Short term data for selected events available in retrospect.
 This instrument replaces an IGY type neutron monitor previously located a few kilometers away (11/1960 to 9/1977).

 CHACALTAYA, BOLIVIA

ITEM: 102
 DATE: 10/11/75

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 STATION LATITUDE ----- S 16.35
 STATION LONGITUDE ----- E 291.87
 ALTERNATE NAMES ----- Inst. Inv. Fisicas, USMA
 La Paz
 DATES OF OPERATION ----- 10/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 2-section standard IGY neutron supermonitor, continuous counting of cosmic rays. 12 proportional counters, 6.84x10²⁰ counts/h max. counting rate; values every 5 minutes. Mean station pressure 504 mm Hg, altitude 3400m, barometric coefficient -0.96/mm Hg, scaling of observed counts by 100 done electronically, data corrected for temperature effects. Normal integrating period 15 min, normal reporting period 1 h. Flare mode of observation has 1 min integrating periods.

RAW DATA ----- Paper tape, computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts, graphical plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Carlos Aguirre, Director
 Instituto de Investigaciones Fisicas
 Universidad Mayor de San Andres
 La Paz
 Bolivia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980 or 1983.

F01 Neutron Monitors and Supermonitors (Cont.)

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*****
CLIMAX, USA
*****
ITEM: 117
DATE: 01/07/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 39.37
STATION LONGITUDE ----- E 253.82
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1950 to 12/1951 - Intermittent
01/1952 to present - Continuous
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Simpson type neutron monitor (1GY). Mean station
pressure 504 mm Hg, altitude 3400 m, barometric
coefficient -0.943/mm Hg. 2-section standard 1GY
station, each section 12 BF cubed counting tubes.
Scaling of observed counts by 100 done by electronics,
normal integrating period 1 min, normal
reporting period 1 h, data corrected for ambient
temperature effects.

RAW DATA ----- Magnetic tape recording (1982 to present)
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1.5 MONTHS
FORM OF REDUCED DATA ----- Magnetic tapes, computer printouts,
computer plots
DATA ROUTINELY PUBLISHED ----- Observed counts, daily averages, hourly
plots published monthly in SOLAR-GEO-
PHYSICAL DATA (NOAA). All data are
temperature and pressure corrected
observed counts.

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- J. A. Simpson
Univ of Chicago
Enrico Fermi Inst, LASR
933 E. 56th Street
Chicago, Illinois 60637
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Dat Librarian - c/o J. A. Simpson
Univ. of Chicago
Enrico Fermi Inst, LASR
933 E. 56th St.
Chicago, Illinois 60637
USA

ADDITIONAL COMMENTS ----- Operation is normally continuous with nominal (less
than 1 month) gaps due to station malfunction, main-
tenance, etc. Significant changes in station hardware
or operation have been made. All published data are
normalized over resulting data discontinuities.
These normalization data are available. Special purpose
observations are available after 0.5 months. Co-
investigator: S. Tejero (same address).
    
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*****
DARWIN, AUSTRALIA
*****
ITEM: 2039
DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- S 12.42
STATION LONGITUDE ----- E 130.87
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1977 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Neutron Supermonitor (9 counters)

RAW DATA -----
DATA REDUCTION PRACTICE ----- Special
REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
FORM OF REDUCED DATA ----- Tabular matter, magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. G. Fenton
Hobart Cosmic Ray Res. Group,
Physics Department
University of Tasmania
G.P.O. Box 252 C
Hobart Tasmania 7001
Australia
Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Short term data for selected events available in
retrospect.
    
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*****
DEEP RIVER, CANADA
*****
ITEM: 145
DATE: 21/09/82

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 46.10
STATION LONGITUDE ----- E 282.50
ALTERNATE NAMES -----
DATES OF OPERATION ----- 04/1962 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 48-NM-64 neutron monitor. Cosmic ray nucleonic
component intensity. The monitor is housed in a
building specially constructed for the purpose.
The equipment comprises a 48-NM-64 neutron
monitor, 3 18-counter units, a digital mer-
cury servobarometer and an automatic data
readout. The counting totals from each of the
3 units and the reading of the barometer are
recorded on punched paper tape at 5 minute
intervals.

RAW DATA ----- Punched paper tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, graphs, magnetic tape
DATA ROUTINELY PUBLISHED ----- Yearly, 6-12 months after year's end
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. Bercovitch
National Research Council of Canada
100 Sussex Drive
Ottawa, Ontario K1A 0R6
Canada
Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
DOURBES, BELGIUM
*****
ITEM: 183
DATE: 01/01/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 50.10
STATION LONGITUDE ----- E 4.60
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1968 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Neutron Supermonitor 9-NM-64, divided into
three independent sections - counts recorded
every 5 minutes with the value of the baro-
metric pressure measured with a digital
barometer - numerical reports on paper
strips and magnetic tape.

RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Tables and computer tapes
DATA ROUTINELY PUBLISHED ----- Institut Royal Meteorologique
de Belgique - Bureau National
d'Observations Ionosphériques et
du Rayonnement Cosmique

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. Van den
Broekweg 11
L'Institut Royal Meteorologique
de Belgique
Sart Tilmanne
Belgium
Same as above

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data reduction reports available in progress for
the normal event series.
    
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F01 Neutron Monitors and Supermonitors (Cont.)

ITEM: 157
DATE: 02/07/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 43.10
STATION LONGITUDE ----- E 299.17
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1964 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- 18-NM-64 Neutron Monitor, automatic digitized data reduced 5 minute data averaging. Output for DEC-10 format.

RAW DATA -----
DATA REDUCTION PRACTICE ----- Regular Special
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Computer printouts, graphical plots
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- John A. Inkwood
Physics Department
University of New Hampshire
Durham, NH 03824
USA
SPECIAL PURPOSE INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose observations are usually available after one month.

ITEM: 210
DATE: 21/08/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 33.27
STATION LONGITUDE ----- E 299.60
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 18-NM-64 Neutron Monitor, cosmic ray nucleonic component intensity. The monitor is housed in a building specially constructed for the purpose. The equipment comprises an 18-NM-64 neutron monitor (three G-counter units), a digital mercury servobarometer and an automatic data reader. The counting totals from each of the 3 units and the reading of the barometer are recorded on punched paper tape at 5 min intervals.

RAW DATA ----- Punched paper tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables, graphs, magnetic tape
DATA ROUTINELY PUBLISHED ----- Yearly, 6-12 months after year's end
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. Bercovitch
National Research Council of Canada
100 Sussex Drive
Ottawa, Ont. K1A 0R6
Canada
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

ITEM: 184
DATE: 01/05/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 37.02
STATION LONGITUDE ----- E 140.45
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1971 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- 4-NM-64 Cosmic Ray Neutron Supermonitor, 3-NM-64: before 04/1979). The raw data are the counting rate for ten minutes. The average counting rate is 7.5×10^4 cph, and the barometric coefficient is -0.64% .

RAW DATA ----- Digital recording data, digital hourly value tables.
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Monthly tables (hourly values) of computer printouts
DATA ROUTINELY PUBLISHED ----- YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Physical and Chemical Research, Tokyo
YES
Toshio Inada
Dept. of Physics
Faculty of Education
Fukushima University
7-1 Sugumichi, Asakawa
Matsukawa-machi, Fukushima 960-12
Japan
SPECIAL PURPOSE INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data are digital recording data for 10 min., digital hourly value tables (uncorrected and corrected for barometric effect), and barometer data.

ITEM: 221
DATE: 27/07/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 34.07
STATION LONGITUDE ----- E 74.42
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1969 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Lead free cosmic ray neutron monitor, 21 BF3 counters of length 3 feet. Counting rate 30,000/h.

RAW DATA -----
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- M. Razdan
HARL-NRL, Bhabha Atomic Res Center
Nasim Bagh
Srinagar, Kashmir
India
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Data available from 1980 onwards. Special purpose data usually available after 3 months.

F01 Neutron Monitors and Supermonitors (Cont.)

 HERMANUS, REP. OF S. AFRICA

ITEM: 256
 DATE: 01/05/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- S 34.42
 STATION LONGITUDE ----- E 19.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1973 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 12-NM-64 Chalk River type neutron monitor (super monitor) comprising 3-NM-64 pile with additional 13 cm paraffin wax shielding and 9-NM-64 pile with conventional shielding. Observing schedule hourly counting rates of the 12 tubes, and (separately) 10 min mixed totals and multiplicities of the 9-NM-64. Digital recording on punched paper tape.

RAW DATA ----- Digital magnetic tape
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, magnetic tape
 DATA ROUTINELY PUBLISHED ----- HERMANUS NEUTRON MONITOR DATA, distributed on exchange basis
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES Umea, Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Magnetic Observatory (CSIR)
 P.O. Box 32
 Hermanus 7200
 Rep. of S. Africa
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Special purpose data available after 3 months. Auxiliary equipment - EXACTEL servobarometer. Prior to commissioning of 12-NM-64, recording instruments used were an IGY pattern neutron monitor (5/1957-5/1964), a 3-NM-64 neutron monitor (9/1964-7/1972) and a 9-NM-64 (8/1972-12/1972). Gap in operation 6/1964-8/1964.

 HOBART, AUSTRALIA

ITEM: 713
 DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- S 42.90
 STATION LONGITUDE ----- E 147.33
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 04/1978 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Neutron Supermonitor (9 counters)
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, magnetic tape
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. G. Fenton
 Hobart Cosmic Ray Res. Group
 Department of Physics
 University of Tasmania
 G.P.O. Box 252 C
 Hobart, Tasmania 7001
 Australia
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Short term data for selected events available in retrospect.

 HOBART, AUSTRALIA

ITEM: 2444
 DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- S 42.90
 STATION LONGITUDE ----- E 147.33
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1962 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- IGY 3 Section
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, magnetic tape
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. G. Fenton
 Hobart Cosmic Ray Res. Group
 Department of Physics
 University of Tasmania
 G.P.O. Box 252 C
 Hobart, Tasmania 7001
 Australia
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- The monitor was a single section four counter only, from 1962 until 1968.

 HUANCAYO, PERU

ITEM: 271
 DATE: 01/07/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- S 12.03
 STATION LONGITUDE ----- E 284.67
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1953 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Station operation began in 1951, with continuous operation from January 1953.
 SIMPSON Neutron Monitor (IGY), mean station pressure 518 mm Hg, altitude 3400 m, barometric coefficient -0.96/mm Hg, observed counts scaled by 100 done by electronics, normal integrating period 1 min, reporting period is 1 h, data corrected for ambient temperature effects, 2-section standard IGY station, each section consisting of 12 BF-cubed counting tubes and associated electronics.

RAW DATA ----- Magnetic tape recording (1982 to present)
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1.5 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tapes, computer printouts, computer plots
 DATA ROUTINELY PUBLISHED ----- SOLAR-GEOPHYSICAL DATA (NOAA)
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. A. Simpson
 Univ. of Chicago
 Enrico Fermi Inst., LASR
 933 E 56th Street
 Chicago, IL 60637
 USA
 Data Librarian
 c/o Dr. J. A. Simpson
 Univ. of Chicago
 Enrico Fermi Inst., LASR
 933 E 56th Street
 Chicago, IL 60637
 USA

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Operation is normally continuous with nominal (less than 1 month) gaps due to station malfunction and repair, maintenance, etc. Significant changes in station hardware or operation have been made. All published data has been normalized over resulting data discontinuities. Normalization parameters are available. Special purpose data available after 1 month. Co-investigator: S. Tejero (same address).

F01 Neutron Monitors and Supermonitors (Cont.)

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*****
INNSBRUCK, AUSTRIA
*****
ITEM: 2207
DATE: 01/09/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 47.32
STATION LONGITUDE ----- E 11.38
ALTERNATE NAMES ----- Observatorium Hatelkar
DATES OF OPERATION ----- 1968 to present
OBSERVING SCHEDULE ----- REGULAR: hourly
INSTRUMENT DESCRIPTION ----- 18-NM-64; 3-RF3-tubes; 260.00 counts/hour
RAW DATA ----- Monthly tables; automatically corrected
to constant pressure of 610 Torr.

DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- Every 2 to 3 months

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES; 10 minute data
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Herbert Oberdeggenberger
Institut f. Experimental-Physik
Schneefstrasse 41
A6020 Innsbruck
Austria
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
IRKUTSK, USSR
*****
ITEM: 276
DATE: 01/05/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 52.28
STATION LONGITUDE ----- E 104.02
ALTERNATE NAMES ----- Zui
DATES OF OPERATION ----- 12/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 18-NM-64 Neutron supermonitor
RAW DATA ----- regular Matter
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables of the hourly values; tables
of 5-min values for the periods
of outstanding geophysical events

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Sibirskii
P.G.R. 4
664697 Irkutsk 33
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
INUVIK, CANADA
*****
ITEM: 281
DATE: 21/08/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 69.35
STATION LONGITUDE ----- E 226.74
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 18-NM-64 Neutron Monitor; cosmic ray nucleonic
component intensity--the monitor is housed in a
building specially constructed for the purpose.
The equipment comprises an 18-NM-64 Neutron Monitor
(3 six-counter units), a digital mercury
servobaronometer and an automatic data readout. The
counting totals from each of the 3 units and the
reading of the barometer are recorded on punched
paper tape at 5 min intervals.

RAW DATA ----- Punched paper tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables; magnetic tape
DATA ROUTINELY PUBLISHED ----- Yearly, 6-12 months after year's end
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. Bercovitch
National Research Council of Canada
100 Sussex Drive
Ottawa, Ontario K1A 0R6
Canada
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```

```

*****
IZMIRAN, USSR
*****
ITEM: 293
DATE: 01/11/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 55.47
STATION LONGITUDE ----- E 37.32
ALTERNATE NAMES ----- Moscow
DATES OF OPERATION ----- 07/1957 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- REGULAR
Neutron Supermonitor
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- "Kosmicheskii Dannya", Izmiran
DATA SENT TO WDC-A ----- YES; NDC-BV
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- Prof. L. I. Obmer
IZMIRAN
Troitsk
Moscow Region 143042
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```


F01 Neutron Monitors and Supermonitors (Cont.)

 JUNGFRAUJUCH, SWITZERLAND

ITEM: 289
 DATE: 22/07/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)

STATION LATITUDE ----- N 46.55
 STATION LONGITUDE ----- E 7.98

ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1968 to present
 OBSERVING SCHEDULE ----- REGULAR

INSTRUMENT DESCRIPTION ----- IGY Neutron Monitor, intensity variations of
 cosmic radiation--Apparatus consists of 3
 sections with 6 counters each.

RAW DATA ----- Typewriter output, paper tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts, graphical
 plots, magnetic tape

DATA ROUTINELY PUBLISHED ----- DATA OF THE IGY NEUTRON MONITOR
 JUNGFRAUJUCH, Physikalisches
 Institut, Univ of Berne, Switzer-
 land

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Tokyo

DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. H. Oebrunner
 Physikalisches Inst., Universitat Bern
 Sidlerstrasse 5
 Bern CH-3012
 Switzerland

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Altitude 3500 m; Collected data of 6 months are
 routinely published in the books cited above.

 KIEV, USSR

ITEM: 851
 DATE: 19/06/79

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)

STATION LATITUDE ----- N 40.72
 STATION LONGITUDE ----- E 30.30

ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1970 to present
 OBSERVING SCHEDULE ----- REGULAR

INSTRUMENT DESCRIPTION ----- Neutron supermonitors

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1.5 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphical plots

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. K. Yushinuk
 Inst of Geophysics, Ukrainian Acad of Sci
 32, Pottladn Avenue
 Kiev 68
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KIEV, USSR

ITEM: 324
 DATE: 22/07/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)

STATION LATITUDE ----- N 54.30
 STATION LONGITUDE ----- E 29.19

ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1957 to present
 OBSERVING SCHEDULE ----- REGULAR

INSTRUMENT DESCRIPTION ----- IGY neutron monitor (07/1957-12/1964), 10-NM-64
 supermonitor (01/1964-present), modulation.

RAW DATA ----- Counter printouts, tables,
 punched paper tapes

DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables, punched paper tapes,
 computer printouts

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Tokyo

DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Aleks Rohrs
 Inst für Reine und Angewandte Kernphysik
 179hausenstr. 40-60
 K191, Schleswig-Holstein D-23
 K191

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 LA PAZ, BOLIVIA

ITEM: 2146
 DATE: 01/01/80

DISCIPLINE ----- F01 Neutron Monitor and Supermonitors
 (Cosmic Rays)

STATION LATITUDE ----- S 15.30
 STATION LONGITUDE ----- E 291.91

ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1966 to present
 OBSERVING SCHEDULE ----- REGULAR

INSTRUMENT DESCRIPTION ----- Cosmic Rays Solar Modulation

RAW DATA -----
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Tables paper tape

DATA ROUTINELY PUBLISHED ----- NO
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----

ADDRESS FOR INFORMATION ABOUT STATION ----- Instituto de Investigaciones Fisicas
 Laboratorio de Fisica Cosmica
 Universidad Mayor de San Andres
 La Paz
 Bolivia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1983.

F01 Neutron Monitors and Supermonitors (Cont.)

LEEDS, UNITED KINGDOM
 ITEM: 336
 DATE: 22/07/83

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- N 53.82
 STATION LONGITUDE ----- E 358.40
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1954 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 18-NM-64 Neutron Monitor, SF 1:100 basic time interval 5 minutes, 3 sections. During solar flares recording interval is automatically reduced to 1 minute.

RAW DATA ----- Tables (computer printouts)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables (computer printouts)
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Tokyo
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. C. J. Hatton
 Director of Combined Studies
 Univ of Leeds
 Leeds, West Yorkshire
 LS2 9JT
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- During the period of operation, the instruments have been changed several times. 18-NM-64 working since 1965.

MAGADAN, USSR
 ITEM: 2389
 DATE:

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 STATION LATITUDE ----- N 60.10
 STATION LONGITUDE ----- E 151.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1971 to present
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Super neutron monitor
 RAW DATA ----- Pressure corrected data
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

BRNO, CZECHOSLOVAKIA
 ITEM: 355
 DATE: 01/02/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- N 49.20
 STATION LONGITUDE ----- E 20.22
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01-1971 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 4-NM-64 105H Neutron Monitor, Carmichael type
 RAW DATA ----- Computer printouts
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Karel Kudela
 Inst. Experimental Physics
 Solovjevova 47
 60200 Pilsen
 Czechoslovakia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose observations are usually available after 1 month.

MAWSON, ANTARCTICA
 ITEM: 714
 DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- S 67.60
 STATION LONGITUDE ----- E 62.88
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Neutron monitor 12-counter IGY-type
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 24 MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. A. G. Fenton
 Hobart Cosmic Ray Res. Group
 Dept. of Physics
 University of Tasmania
 G.P.O. Box 252 C
 Hobart, Tasmania 7001
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Short term data for selected events available in retrospect.

F01 Neutron Monitors and Supermonitors (Cont.)

***** ITEM: 235J
MEMBER, ANTARCTICA DATE: 01/06/84 *****

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)

STATION LATITUDE ----- S 77.90
STATION LONGITUDE ----- E 167.60

ALTERNATE NAMES -----
DATES OF OPERATION ----- 1960 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 15X-type Neutron monitor, recordings hourly-2 min.

RAW DATA ----- Standard
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Standard for WDC
DATA ROUTINELY PUBLISHED ----- Regularly in Bartol Research Foundation
Publication

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- Maybe
ADDRESS FOR INFORMATION ABOUT STATION -----
Dr. Martin A. Pomerantz
Bartol Research Foundation
Franklin Institute
University of Delaware
Newark, Delaware 19711
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

***** ITEM: 407
MEMBER, JAPAN DATE: 22/07/83 *****

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)

STATION LATITUDE ----- N 39.70
STATION LONGITUDE ----- E 141.13

ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 15X Neutron Monitor (08/1970 to 1971),
Neutron Supermonitor (02/1977 to present).

RAW DATA ----- Tables, computer printouts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED ----- Annual Report of the Faculty of
Education, the University of Iwate,
Morioka, Japan, Tables, once a year or
Cosmic Ray Intensity Data Book, by WDC-02
for Cosmic Rays, Institute of Physical
and Chemical Research, Iitabashi, Tokyo,
Japan.

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Prof. Hachiro Takahashi
Dept. of Physics, Iwate University
18-33, Ueda-3
Morioka, Iwate-ken 020
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data is usually available after 2-3
months.

***** ITEM: 410
MEMBER, ITALY, MEDICE DATE: 11/12/84 *****

DISCIPLINE ----- F01 Neutron Monitor and Supermonitors
(Cosmic Rays)

STATION LATITUDE ----- N 43.45
STATION LONGITUDE ----- E 10.40

ALTERNATE NAMES -----
DATES OF OPERATION ----- 1966 to present
OBSERVING SCHEDULE ----- Intermittent operation
INSTRUMENT DESCRIPTION ----- Regular
RAW DATA ----- 15X Neutron Monitor, N-NN-64 Supermonitor
DATA REDUCTION PRACTICE ----- Paper tape, computer printout
REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Dr. Evelyn A. Kraft
Istituto Nazionale di Fisica Nucleare
Laboratorio di Fisica
Viale dell'Industria
00186 Roma, Italy

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

***** ITEM: 2152
MEMBER, USSR DATE: 11/05/84 *****

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)

STATION LATITUDE ----- N 55.19
STATION LONGITUDE ----- E 37.11

ALTERNATE NAMES ----- Krasnaya Pakhra
DATES OF OPERATION ----- 1966 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- INNM-64 Neutron Supermonitor

RAW DATA ----- Punched paper tape
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Punched paper tape, tabular matter

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
LZMIPAN
p.ri. Akademiya
142490 Trestskaya, Moscow Region
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

F01 Neutron Monitors and Supermonitors (Cont.)

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*****
MT NURIKUSA, JAPAN
*****
ITEM: 416
DATE: 04/01/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
                    (Cosmic Rays)
STATION LATITUDE ----- N 36.11
STATION LONGITUDE ----- E 137.55
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1956 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Neutron supermonitor, 4-NM-64, sometimes
                    3 counters, regularly 4 counters.
RAW DATA ----- Printout counts per hour
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, computer print-
                    outs
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Masami Wada
                    The Inst of Phys & Chem Research
                    7-13, Kagae-1, Itabashi
                    Tokyo 173
                    Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Continuation of ISY type monitor: 11/56-8/64. Pressure
                    readings are much influenced by wind, and "fine"
                    correction using the free air pressure is carried
                    out.
    
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*****
MT WELLINGTON, AUSTRALIA
*****
ITEM: 2445
DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
                    (Cosmic Rays)
STATION LATITUDE ----- S 42.92
STATION LONGITUDE ----- E 147.20
ALTERNATE NAMES ----- The Springs, Hobart
DATES OF OPERATION ----- 06/1970 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Neutron supermonitor (6 counters) at 725 m above
                    sea level.
RAW DATA -----
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, tabular matter
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. G. Fenton
                    Hobart Cosmic Ray Group
                    Department of Physics
                    University of Tasmania
                    G.P.O. 252C
                    Hobart, Tasmania 7001
                    Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Short term data for selected events available in
                    retrospect.
    
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*****
MT WASHINGTON, USA
*****
ITEM: 414
DATE: 01/01/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
                    (Cosmic Rays)
STATION LATITUDE ----- N 44.30
STATION LONGITUDE ----- E 284.70
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1953 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Neutron monitor - 12-tube ISY Monitor.
RAW DATA ----- Magnetic tape
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Magnetic tape, computer printouts
                    and graphical plots
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- John A. Lockwood
                    University of New Hampshire
                    Physics Department
                    Durham, NH 03824
                    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after one month.
    
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*****
NEWAPP, USA
*****
ITEM: 2355
DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
                    (Cosmic Rays)
STATION LATITUDE ----- N 39.70
STATION LONGITUDE ----- E 284.30
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 9-NM-64, records hours and minutes
                    Standard
RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Standard for WDC
DATA ROUTINELY PUBLISHED ----- Yearly in Bartol Research Foundation
                    publication
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- Maybe
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Martin A. Pomerantz
                    Bartol Research Foundation
                    Franklin Institute
                    University of Delaware
                    Newark, Delaware 19711
                    USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Station moved from Swarthmore, Pennsylvania in April
                    1978 (coordinates N39.9, E284.65).
    
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F01 Neutron Monitors and Supermonitors (Cont.)

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*****
NOVOSTROV, USSR
*****
DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 54.80
STATION LONGITUDE ----- E 33.30
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1973 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Neutron Supermonitor
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tables, plots
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. A. A. Lazir
Senzimir
P.O. Box 4
Tajurak 33
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating
material in 1985.

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*****
OKTYOMTSKY, USSR
*****
DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- 55 km south of Yakutsk
STATION LONGITUDE -----
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Neutron monitor
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA -----

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ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this directory from information contained in a World Data Center-B catalog and UAG-83. No confirmation or additional information was received upon inquiry to World Data Center-B.

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*****
NOVOSTROV, USSR
*****
ITEM: 2390
DATE:
DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 54.80
STATION LONGITUDE ----- E 33.30
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1973 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Neutron Supermonitor
RAW DATA ----- Pressure corrected data
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
directory from information contained in a World Data
Center-B catalog and UAG-83.
No confirmation or additional information was received
upon inquiry to World Data Center-B.

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*****
JULU, FINLAND
*****
ITEM: 2182
DATE: 01/05/84
DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 65.05
STATION LONGITUDE ----- E 25.47
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 6-MN-04
RAW DATA ----- Corrected, uncorrected and pressure
data, hourly
DATA REDUCTION PRACTICE ----- Semi-annual reports (tables and plots)
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Pekka Tanstaman
Department of Physics
University of Oulu
90570 Oulu
Finland
ADDRESS FOR INFORMATION ABOUT DATA ----- Hannu Pananen
Department of Physics
University of Oulu
90570 Oulu
Finland
ADDITIONAL COMMENTS -----

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F01 Neutron Monitors and Supermonitors (Cont.)

 STATION: CHINA
 DATE: 1974

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 Cosmic Rays

STATION LATITUDE ----- N 39.40
 STATION LONGITUDE ----- E 118.20
 ALTERNATE NAME ----- Beijing
 DATE OF OPERATION ----- 1944 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Station 125M44, three sections
 Paper tape, counting rate, 10 minute
 computerized
 Monthly table, pressure, uncorrected,
 corrected
 Physico-chemical, analytical data

DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA -----
 DATA PROMINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Address for Information about Data ----- Same as above
 ADDITIONAL COMMENTS -----

 STATION: PUTZHEFSTROOM, REP. OF S. AFRICA
 DATE: 1969

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 Cosmic Rays

STATION LATITUDE ----- S 33.56
 STATION LONGITUDE ----- E 27.04
 ALTERNATE NAME -----
 DATE OF OPERATION ----- 05/1971 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 16 20x neutron monitor - standard 12x neutron
 monitor with 15 of 20x 400-5000 Mc/sec
 Electronics neutron tubes, 20 - mm diameter
 Paper punch, digital, computerized,
 magnetic tape, computer printout
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA -----
 DATA PROMINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Cosmic Ray Research Unit
 Dept. of Physics
 Putzhefstrom University for Col
 Putzhefstrom, 2704
 Rep. of S. Africa
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Special purpose
 data usually available after 1
 month.
 Station located 1301 meters above sea level.

 STATION: PORT AU FRANCAIS, TERRE ELLEN ISLANDS
 DATE: 1964

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 Cosmic Rays

STATION LATITUDE ----- S 49.35
 STATION LONGITUDE ----- E 70.22
 ALTERNATE NAME ----- Hergeleben
 DATE OF OPERATION ----- 1948, 1944 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- 125-M44 neutron monitor with 10 tubes
 Paper tape
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- computer printouts, graphical plots,
 magnetic tape

DATA PROMINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Address for Information about Data -----
 ADDITIONAL COMMENTS -----

 STATION: PORT AU FRANCAIS, TERRE ELLEN ISLANDS
 DATE: 1964

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 Cosmic Rays

STATION LATITUDE ----- S 49.35
 STATION LONGITUDE ----- E 70.22
 ALTERNATE NAME -----
 DATE OF OPERATION ----- 1944 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- 125-M44 Super Neutron Monitor recording slow
 neutrons

RAW DATA ----- computer printouts
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- computer printouts

DATA PROMINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Address for Information about Data ----- Same as above
 ADDITIONAL COMMENTS -----

F01 Neutron Monitors and Supermonitors (Cont.)

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*****
REWA, INDIA
*****
ITEM: 498
DATE: 31/08/73

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 24.19
STATION LONGITUDE ----- E 81.17
ALTERNATE NAMES ----- NI
DATES OF OPERATION ----- 07/14/76 to present
OBSERVING SCHEDULE ----- REGULAR; a few data gaps of short durations till 1979.
DESERVING SCHEDULE ----- Major gaps since 1981.

INSTRUMENT DESCRIPTION ----- Super Neutron Monitor, Cosmic Ray neutron intensi-
sity. The Super Neutron Monitor consists of 18
large size BF3 proportional counters arranged in
the form of 3 separate piles. The pulses pro-
duced by an interacting cosmic ray nucleus is
automatically counted and recorded on paper
tape and typewriter every 10 minutes, along with
the atmospheric pressure.

RAW DATA ----- Paper tape, computer printout
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printouts, graphs,
magnetic tape, computer printout
DATA ROUTINELY PUBLISHED ----- COSMIC RAY NEUTRON MONITOR DATA,
SANAE

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Sant Prasad Agrawal, Reader & Head
Vikram Space Physics Centre (Physics Dept.)
APS University
Rewa (M.P.) 486005
India

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above; or Alternately
Dr. Raj Lalain Singh, Lecturer in Physics
Vikram Space Physics Centre
APS University
Rewa (M.P.) 486005
India

ADDITIONAL COMMENTS ----- This Super Neutron Monitor, which is the only one in India,
has been in continuous operation at PRL Ahmedabad since
July 1966 to Dec 1974. It has been now relocated at VSPC,
Rewa at an altitude of 335 meters, and has been in oper-
ation since July 1976 with some gaps of data in between,
particularly during 1978-1979, mainly because of its remote
location and unexpected problems.
2. The Monitor is temporarily out of operation mainly due
to power supply, man-power, and other associated problems.
However, these are expected to be overcome shortly.
    
```

```

*****
SANAE, ANTARCTICA
*****
ITEM: 531
DATE: 25/06/75

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- S 70.31
STATION LONGITUDE ----- E 357.64
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1964 to present
OBSERVING SCHEDULE ----- Station moved
Intermittent operation
REGULAR
INSTRUMENT DESCRIPTION ----- 3-NM-64 Neutron Monitor. Standard super neu-
tron monitor. 10 minute recording of counting
rate and pressure.

RAW DATA ----- Punch tape, digital printout,
magnetic tape, computer printout
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printouts, graphs,
magnetic tape
DATA ROUTINELY PUBLISHED ----- COSMIC RAY NEUTRON MONITOR DATA,
SANAE

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Cosmic Ray Research Unit
Department of Physics
Potchefstroom University for CHE
Potchefstroom 2520
Rep. of S. Africa

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No data available from 04/02/71 to 17/03/71 when
station was moved a distance of about 500 meters.
Special purpose data usually available after 1
month.
No response received to inquiry for updating material
in 1983.
    
```

```

*****
SOUTH POLE, ANTARCTICA
*****
ITEM: 492
DATE: 01/08/73

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- S 90.00
STATION LONGITUDE ----- E
ALTERNATE NAMES ----- Amundsen Scott
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- NM-64, records hourly + 2 minutes
continuous operations.
RAW DATA ----- Standard
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Standard for WDC
DATA ROUTINELY PUBLISHED ----- Yearly in Partial Research Foundation
publication

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- Maybe
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Martin A. Comanszky
Bartol Research Foundation
Franklin Institute
University of Delaware
Newark, Delaware 19711
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```

```

*****
SOUTH POLE, ANTARCTICA
*****
ITEM: 2357
DATE: 01/06/74

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- S 90.00
STATION LONGITUDE ----- E
ALTERNATE NAMES ----- Amundsen Scott
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- NM-64, records hourly + 2 minutes
continuous operations.
RAW DATA ----- Standard
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Standard for WDC
DATA ROUTINELY PUBLISHED ----- Yearly in Partial Research Foundation
publication

DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- Maybe
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Martin A. Comanszky
Bartol Research Foundation
Franklin Institute
University of Delaware
Newark, Delaware 19711
USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
```

F01 Neutron Monitors and Supermonitors (Cont.)

```

*****
SVERDLOVSK, USSR
*****
ITEM: 2392
DATE:

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 58.34
STATION LONGITUDE ----- E 56.20
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1973 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Neutron supermonitor with 1k BF3 counters.
RAW DATA ----- Uncorrected data
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- Altitude = 300 M.
This entry was completed by the compilers of this
directory from information contained in a World Data
Center-B catalog and UAG-B3.
No confirmation or additional information was received
upon inquiry to World Data Center-B.
    
```

```

*****
TASHKENT, USSR
*****
ITEM: 2394
DATE: 7/2/80

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
(Cosmic Rays)
STATION LATITUDE ----- N 41.33
STATION LONGITUDE ----- E 69.51
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1975 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- IQSY Neutron Monitor, cubical moon telescope.
RAW DATA ----- Tables, paper tape
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- Cosmic data, monthly review
Neuka, Moscow
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Institute of Seismology
Academy of Sciences, USSR
Hurshida 3
Tashkent 700128
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating
material in 1980.
    
```

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*****
SVERDLOVSK, USSR
*****
ITEM: 2393
DATE:

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 56.73
STATION LONGITUDE ----- E 61.07
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1973 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Neutron monitor
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- Altitude = 290 M.
This entry was completed by the compilers of this
directory from information contained in a World Data
Center-B catalog and JAG-B3.
No confirmation or additional information was received
upon inquiry to World Data Center-B.
    
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*****
TBILISI, USSR
*****
ITEM: 2395
DATE:

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 41.72
STATION LONGITUDE ----- E 44.80
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1958 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Neutron supermonitor
RAW DATA ----- Pressure corrected data
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS ----- Altitude = 510 M.
This entry was completed by the compilers of this
directory from information contained in a World Data
Center-B catalog and UAG-B3.
No confirmation or additional information was received
upon inquiry to World Data Center-B.
    
```


F01 Neutron Monitors and Supermonitors (Cont.)

 TERRE ADELIE, ANTARCTICA

ITEM: 605
 DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- S 66.67
 STATION LONGITUDE ----- E 140.02
 ALTERNATE NAMES ----- Dumont d'Urville
 DATES OF OPERATION ----- 01/07/81 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 105V-NM-64 neutron monitor with 18 tubes.
 RAW DATA ----- Paper tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts, graphical plots,
 magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Mr. J. P. Legrand
 T.A.A.F. - I.N.A.G. - Section Mesures
 4, Ave. de Neptune
 94100 St. Maur-des-Fosses
 France
 ADDRESS FOR INFORMATION ABOUT DATA -----
 Dr. M. Debrunner
 Physikalisches Institut
 Universitat Bern
 Sidlerstrasse 5
 3012 Bern
 Switzerland
 ADDITIONAL COMMENTS ----- Collected data of 6 months are routinely published in
 data books.

 TIKHE BAY, USSR

ITEM: 443
 DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- N 71.61
 STATION LONGITUDE ----- E 124.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1966 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Neutron supermonitor NM-64
 RAW DATA ----- Tabular matters: monthly tables
 of hourly values; daily tables of
 5-minute values.
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tabular matters: monthly tables of
 hourly values; daily tables of
 5-minute values.
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Cosmic Ray Variation Lab
 Inst. of Cosmophysical Res and Aeronomy
 Lenin Avenue 31
 Yakutsk
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- In operation 01/74 to 06/74.

 THUILL, GREENLAND

ITEM: 235P
 DATE: 01/06/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- N 76.50
 STATION LONGITUDE ----- E 291.30
 ALTERNATE NAMES ----- Geopole
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 94NM-64,
 10V, records every 2 minutes
 RAW DATA ----- Standard
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Standard for WDC
 DATA ROUTINELY PUBLISHED ----- Yearly in Bartol Research Foundation
 publication
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- Maybe
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Martin J. Pomerantz
 Bartol Research Foundation
 Franklin Institute
 University of Delaware
 Newark, Delaware 19711
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TOKYO, JAPAN

ITEM: 612
 DATE: 04/01/84

DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
 (Cosmic Rays)
 STATION LATITUDE ----- N 35.75
 STATION LONGITUDE ----- E 139.72
 ALTERNATE NAMES ----- Itabashi
 Tokyo-Itabashi
 DATES OF OPERATION ----- 01/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Neutron supermonitor, 36-NM-64, with 36 counters.
 Record on paper tape every 10 minutes. Besides
 the total counts, the counts for incident particles
 are also recorded. Special every minute.
 RAW DATA ----- Paper tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTH
 FORM OF REDUCED DATA ----- Magnetic tape, computer printouts,
 DATA ROUTINELY PUBLISHED ----- Computer printouts are distributed
 every 4 months.
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Masami Wada
 Inst. of Physical and Chemical Research
 7-13, Kaga-1, Itabashi
 Tokyo 173
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data during will be published. Data are on UPSIGRAM
 every day. Data are in "Solar-Geophysical Data".

F01 Neutron Monitors and Supermonitors (Cont.)

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*****
ITEM: 2173
TSUMEB, NAMIBIA DATE: 01/09/83
*****
DISCIPLINE ----- F01 Neutron Monitors and Super Neutron Monitors
STATION LATITUDE ----- S 19.20
STATION LONGITUDE ----- E 17.58
ALTERNATE NAMES -----
DATES OF OPERATION ----- 4/12/76 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 18 MM64 Neutron Monitor, 5 minute
recording of count rate and pressure
RAW DATA ----- Punch tape, digital printout, magnetic
tape, computer printout
DATA REDUCTION PRACTICE ----- Regular Special
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Computer printout, graphs,
magnetic tape
DATA ROUTINELY PUBLISHED ----- COSMIC RAY NEUTRON MONITOR DATA TSUMEB
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Cosmic Ray Research Unit
Department of Physics
Potschefstroom 2520
Rep. of S. Africa
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Station 1240 meters above sea level.

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*****
ITEM: 678
YAKUTSK, USSR DATE: 12/12/75
*****
DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 62.02
STATION LONGITUDE ----- E 129.72
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1958 to present
OBSERVING SCHEDULE ----- Operation intermittent
INSTRUMENT DESCRIPTION ----- REGULAR
Neutron monitor recording cosmic ray neutron
component, counting rate N is 18000 imp/h.
RAW DATA ----- Microfilm (1957-1967), perforated
tape (1967-present)
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Monthly tables of 2-hour averages,
hourly tables from 1971
DATA ROUTINELY PUBLISHED ----- COSMIC DATA, Monthly Review,
publ. Nauka, Moscow 01/1964-
12/1969
Data of neutron supermonitors of
Siberia and Far East, I-VI,
1973, VII-XII, 1972. Yakutsk, 1976.
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
DATA FOR INFORMATION ABOUT STATION ----- Cosmic Ray Variation Lab
Inst Cosmophysical Research & Aeronomy
Lenin Avenue, 31
Yakutsk 677007
USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Gap in operation from 10/1969 to 12/1970; in 2/1971
the neutron monitor is an NM-64, one section con-
sists of 6 counters, counting rate N 160000imp/h.
No response received to inquiry for updating material in
1980.

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*****
ITEM: 2117
TURKU, FINLAND DATE: 01/11/83
*****
DISCIPLINE ----- F01 Neutron Monitors and Supermonitors
STATION LATITUDE ----- N 60.4
STATION LONGITUDE ----- E 22.6
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/10/1983 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Detection of frequencies of neutron multiplicities
in the range: 1 - 300 produced by the C. R.
hadrons (details in Nuclear Instruments and
Methods, 192, 1982, 467-474.
RAW DATA ----- Continuous
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
FORM OF REDUCED DATA ----- Computer lists and drawings
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
DATA FOR INFORMATION ABOUT STATION ----- Dr. J. Torsti
Wihuri Physical Laboratory
University of Turku
SF-20500 Turku
Finland
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- 30 second frequencies for muons (about 6200/30 s) and for
neutrons with multiplicity 1 (about 200/30 s).
1-hour frequency distributions of multiplicities both
for incoming neutrons and charged hadrons.

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F02 Ionization Chambers

```

*****
HONG KONG
*****
ITEM: 269
DATE: 22/07/83

DISCIPLINE ----- F02 Ionization Chambers (Cosmic Rays)
STATION LATITUDE ----- N 22.42
STATION LONGITUDE ----- E 114.20
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1970 to present
OBSERVING SCHEDULE ----- Station moved
INSTRUMENT DESCRIPTION ----- Regular
Cosmic ray muon detector - ionization chamber,
continuous pen recorder through a vibrating
reed electrometer, 12.7 cm/h. The chamber
has about 20 liter inner volume with pure
argon of about 40 atms shielded by 10 cm
lead.

RAW DATA ----- Continuous trace on paper roll,
return zero level every hour
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Hourly values on magnetic tape,
computer printouts

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES: Japan
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Lien Sheng Chuang
The Chinese University of Hong Kong
Shatin, New Territories
Hong Kong

ADDRESS FOR INFORMATION ABOUT DATA ----- Masami Wada
The Institute of Physical and
Chemical Research
7-13, Kagaki, Itahashi
Tokyo 173
Japan

ADDITIONAL COMMENTS ----- Special purpose data available after two months.
In 06/1975, the instrument was moved to a new
building.
    
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*****
MT NINIKURA, JAPAN
*****
ITEM: 416
DATE: 04/11/84

DISCIPLINE ----- F02 Ionization Chambers (Cosmic Rays)
STATION LATITUDE ----- N 36.11
STATION LONGITUDE ----- E 137.58
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1956 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Ionization chamber, cosmic ray muon detector,
ionization current is fed into a vibrating reed
electrometer, charge up voltage is sampled every
minute, the difference is punched on paper tape
every minute. Date is punched every hour. Chamber
is 20 liter inner volume with pure argon at about
40 atms, shielded by 10 cm lead.

RAW DATA ----- Paper tape, 1 byte binary/min.
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Hourly values are on magnetic
tape, Monthly tables from computer printouts.

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- YES: Japan
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Masami Wada
The Inst of Phys & Chem Research
7-13, Kagaki, Itahashi
Tokyo 173
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- After the atmospheric temperature correction and
some other correction, the data will be published.
The building was changed in October, 1961.
    
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*****
KOCHI, JAPAN
*****
ITEM: 2042
DATE: 01/05/84

DISCIPLINE ----- F02 Ionization Chamber (Cosmic Rays)
STATION LATITUDE ----- N 33.55
STATION LONGITUDE ----- E 133.49
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1979 to 03/1980, 05/1980 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionization chamber, cosmic ray muon detector,
20 liter inner volume with pure argon at about
37 atms, shielded by 10 cm lead. Ionization
current is fed into a vibrating reed electrometer,
charge up voltage is sampled every minute, the
difference is punched on paper tape every
minute. Date is punched every hour.

RAW DATA ----- Paper tape, 1 byte binary/min.
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
FORM OF REDUCED DATA ----- Hourly values are on magnetic tape.
Monthly table from computer printouts.

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Masahiko Fusunose
Kochi University
2-5-1 Akebonocho
Kochi 780
Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- The chamber is identical to those at Tokyo, Mt.
Ninokura, and Hong Kong.
Discontinuity in 1980 is for changing the chamber
because of the leakage of gas in the old chamber.
    
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*****
TIKHE BAY, USSR
*****
ITEM: 2227
DATE: 01/01/80

DISCIPLINE ----- F02 Ionization Chambers (Cosmic Rays)
STATION LATITUDE ----- N 71.6
STATION LONGITUDE ----- E 128.8
ALTERNATE NAMES -----
DATES OF OPERATION ----- 12/1977 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Ionization chamber (ASK-2), continuous
recordings of hourly averages of cosmic
ray hard component and ionization bursts.
The chamber volume is 50 liters  $2 \times 3.00$ 
 $10^{16}$  gauss ions, hourly accuracy 0.3%,
barometric coefficient  $-0.143$ /mb.

RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Monthly tables of cosmic ray
intensity hourly means
COSMIC DATA, Monthly Rev., publ.
Novosibirsk 001964-1271966

DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Cosmic Ray Variation Lab.
Institute of Cosmophysical
Research and Astronomy
Lening Avenue 3,
A-100 Yakutsk
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Was in operation from 11/13 to 11/75. From
1976 to present continuous recordings of
hourly averages of cosmic ray hard component
and ionization bursts. The chamber volume is
50 liters,  $2 \times 3.00 \times 10^{16}$  gauss ions,
hourly accuracy 0.3%, barometric coefficient
is  $-0.143$  mb.
    
```

F02 Ionization Chambers (Cont.)

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*****
TOKYO, JAPAN
*****
ITEM: 613
DATE: 04/01/84

DISCIPLINE ----- F02 Ionization Chambers (Cosmic Rays)
STATION LATITUDE ----- N 35.75
STATION LONGITUDE ----- E 139.72
ALTERNATE NAMES ----- Itabashi-Tokyo
                        Tokyo-Itabashi
DATES OF OPERATION ----- 01/1948 to present
                        (See comments below)
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ionization chamber, Cosmic ray muon detector,
                        20 liter inner volume with pure argon at
                        about 30 atms, shielded by 10 cm lead.
                        Ionization current is fed into a vibrating
                        reed electrometer, charge up voltage is sampled
                        every minute, the difference is punched on paper
                        tape every minute. Data is punched every hour.

RAW DATA ----- Paper tape, 1 byte binary/min.
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
FORM OF REDUCED DATA ----- Hourly values are on magnetic
                        tape. Monthly table from computer printouts.

DATA ROUTINELY PUBLISHED ----- NO
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- YES: Japan
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Masami Wada
                        Inst. of Physical and Chemical Research
                        7-13, Kaga-1, Itabashi
                        Tokyo 173
                        Japan
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- There is very slow leakage of the gas, which needs
                        correction for long term variations. After the correction
                        is completed and the temperature (atmospheric) correction
                        is done, the data will be published.

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*****
YAKUTSK, USSR
*****
ITEM: 679
DATE: 01/01/80

DISCIPLINE ----- F02 Ionization Chambers (Cosmic Rays)
STATION LATITUDE ----- N 62.02
STATION LONGITUDE ----- E 129.72
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1953 to Present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Ionization Chamber (ASK-1), continuous
                        recordings of hourly averages of cosmic ray
                        hard component and ionization bursts. The
                        chamber volume is 950 liters,  $d = 1.61 \times 10^6$ 
                        pair ions, hourly accuracy 0.12%, barometric
                        coefficient -0.11% mb.

RAW DATA ----- Photographic paper
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Monthly tables of cosmic ray in-
                        tensity hourly means (1953-75)
                        COSMIC DATA, Monthly Review, publ.
                        Nauka, Moscow, (01/1964-12/1966)

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Cosmic Ray Var Lab
                        Institute Cosmophysical Research
                        and Aeronomy
                        Lenin Avenue, 31
                        Yakutsk 677007
                        USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Continuous recordings in Yakutsk without gaps.

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F03 Meson Telescope

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*****
ALERT, CANADA
*****
ITEM: 9
DATE: 21/08/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
STATION LATITUDE ----- N 82.50
STATION LONGITUDE ----- E 297.67
ALTERNATE NAMES -----
DATES OF OPERATION ----- 10/1965 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 4-MT-64 muon monitor, cosmic ray muon intensity.
The monitor consists of four 1 m-squared cubic
telescopes and one wide angle 2 m x 2 m x 1 m
telescope. The monitor is described in ANNALS
OF THE IUSTY, Vol. 1, 178 (1968). The counting
totals of the cubic and wide angle telescopes
are recorded on punched paper tape at 5-minute
intervals.

RAW DATA ----- Punched paper tape
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, graphs, magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Dr. M. Bercovitch
National Research Council of Canada
100 Sussex Drive
Ottawa, Ontario K1A 0R6
Canada

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Measurements of upper air temperature are made twice
daily by the Canadian Atmospheric Environment
Service on site.
    
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*****
APATITY, USSR
*****
ITEM: 24
DATE: 01/06/84

DISCIPLINE ----- F03 Meson Telescope
STATION LATITUDE ----- N 67.50
STATION LONGITUDE ----- E 33.33
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Muon detector, crossed wide angle muon telescope,
15 minute average data

RAW DATA ----- Tables, computer printouts
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- L. L. Lazutin
Polar Geophysical Institute
Academy of Sciences of the USSR
184200 Apatity, Murmanskaya Oblast
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.
    
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*****
ALMA-ATA, USSR
*****
ITEM: 13
DATE: 01/05/84

DISCIPLINE ----- F03 Meson Telescope
STATION LATITUDE ----- N 43.25
STATION LONGITUDE ----- E 76.92
ALTERNATE NAMES ----- Cosmic Ray Lab, Kazakh State U
DATES OF OPERATION ----- 1973 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Standard meson telescope
RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Monthly tables, graphical plots
DATA ROUTINELY PUBLISHED ----- "Cosmic Data" Bulletin (Monthly Review)
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Cosmic Ray Group
Ionospheric Section
Kazakh Academy of Sciences
Kamenskoye Plato
480068 Alma-Ata
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
BOLOGNA, ITALY
*****
ITEM: 2015
DATE: 01/02/84

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
STATION LATITUDE ----- N 44.50
STATION LONGITUDE ----- E 11.35
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Plastic scintillator counters: Total omni-
directional ionizing component, effective
area 12 m(squared); hard inclined coincidences
45 degrees east, vertical; 45 degrees west,
effective area 4 m(squared).

RAW DATA ----- Cassette
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, graphs
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- M. Galili
Dipartimento di Fisica Universita
Via Irnerio 46,
Bologna 40126
Italy

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.
    
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F03 Meson Telescope (Cont.)

 BUDAPEST, HUNGARY

ITEM: 740
 DATE: 01/08/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 47.49
 STATION LONGITUDE ----- E 18.96
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- Underground Telescope
 RAW DATA ----- Magnetic tape (not IBM compatible)
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. K. Kecskemeti
 Department of Cosmic Rays
 Central Research Inst of Physics
 P.O.B. 49
 Budapest H-1525
 Hungary
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS -----

 CHACALTAYA, BOLIVIA

ITEM: 103
 DATE: 21/01/76

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- S 18.31
 STATION LONGITUDE ----- F 291.90
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1965 to present
 INSTRUMENT DESCRIPTION ----- Meson Telescope
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, punched paper tapes
 DATA ROUTINELY PUBLISHED ----- YES
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Instituto de Investigaciones Fisicas
 Laboratorio de Fisica Cosmica
 Universidad Mayor de San Andres
 La Paz
 Bolivia
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- No response received to inquiry for updating material
 in 1980 or 1983.

 CAMBRIDGE, AUSTRALIA

ITEM: 2446
 DATE: 01/06/84

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- S 42.85
 STATION LONGITUDE ----- E 147.42
 ALTERNATE NAMES ----- Hobart Tunnel
 DATES OF OPERATION ----- 06/1957 to present
 INSTRUMENT DESCRIPTION ----- Meson Telescope, 40 MWÉ, vertical and north pointing
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tabular data, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. A. G. Fenton
 Hobart Cosmic Ray Group
 Physics Department
 University of Tasmania
 G.P.O. Box 252C
 Hobart, Tasmania 7001
 Australia
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- The vertical telescopes have operated continuously
 since 1957. The north pointing instruments have been
 changed on several occasions.

 DEEP RIVER, CANADA

ITEM: 146
 DATE: 21/08/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 46.10
 STATION LONGITUDE ----- E 282.50
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1965 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 4-MT-64 muon monitor. Cosmic ray muon
 intensity. The monitor consists of four
 1 m-sq cubic telescopes and one wide angle
 2 m x 2 m x 1 m telescope. The monitor is
 described in Annals of the IQSY, Vol. 1, 178
 (1968). The counting totals of the cubic
 and wide angle telescopes are recorded on
 punched paper tape at 5-minute intervals.

RAW DATA ----- Punched paper tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphs, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. M. Bercovitch
 Herzberg Inst of Astrophysics, NRCC
 100 Sussex Drive
 Ottawa, Ontario K1A 0R6
 Canada
 Same as above

ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- Measurements of upper air temperature are made twice
 daily by the Canadian Atmospheric Environment Service
 (at Maniwaki, Quebec, 120 km east of Deep
 River).

F03 Meson Telescope (Cont.)

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*****
ITEM: 164
DATE: 01/08/83
*****
DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
STATION LATITUDE ----- N 35.30
STATION LONGITUDE ----- E 253.32
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1965 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION -----
Underground (35 mwe) muon multi-directional
telescope, using plastic scintillators;
wide-angle vertical count rate approximately
333,000/hour. Data recorded hourly on
film. Continuous operation.
RAW DATA ----- 51m
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Dr. Derek B. Swinson
Physics Department
University of New Mexico
800 Yale NE
Albuquerque, NM 87131
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Part of a network of three identical telescopes.
Mt. Inacaltaya, Bolivia (30 mwe*); Embudo Cave,
New Mexico (35 mwe*) and Socorro, New Mexico
(82 mwe*). A larger Telescope at Grand Canyon
Caverns, Arizona (111 mwe*).
Bolivia ceased operating 12/76.
Grand Canyon Caverns ceased operating 1984.
*Below top of atmosphere.

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*****
ITEM: 715
DATE: 01/06/84
*****
DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
STATION LATITUDE ----- S 42.88
STATION LONGITUDE ----- E 147.33
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1953 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Meson Telescope, vertical and inclined
RAW DATA -----
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 36 MONTHS
FORM OF REDUCED DATA ----- Tabular matter, magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A ----- NO
DATA SENT TO WDC-B ----- NO
DATA SENT TO WDC-C ----- NO
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Dr. A. G. Fenton
Hobart Cosmic Ray Res. Group
Department of Physics
University of Tasmania
G.P.O. Box 252 C
Hobart, Tasmania 7001
Australia
Same as above
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS ----- The inclined telescopes were discontinued in 1975.

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*****
ITEM: 211
DATE: 21/08/83
*****
DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
STATION LATITUDE ----- N 53.27
STATION LONGITUDE ----- E 299.60
ALTERNATE NAMES -----
DATES OF OPERATION ----- 11/1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION -----
4-MT-64 muon monitor, cosmic ray muon intensity;
The monitor consists of four 1 m-sq cubic tele-
scopes and one wide angle 2 m x 2 m x 1 m telescope.
The monitor is described in Annals of the IQSY,
Vol. 1, 178 (1968). The counting totals of the
cubic and wide angle telescopes are recorded on
punched paper tape at 5 min intervals
Punched paper tape
RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
FORM OF REDUCED DATA ----- Tables, graphs, magnetic tape
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION -----
Dr. M. Bercovitch
Herzberg Inst of Astrophys, NRC Canada
100 Sussex Drive
Ottawa, Ontario K1A 0R6
Canada
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Measurements of upper air temperature are made twice
daily by the Canadian Atmospheric Environment
Service on site.

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F03 Meson Telescope (Cont.)

 INNSBRUCK, AUSTRIA

ITEM: 2232
 DATE: 01/09/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 47.32
 STATION LONGITUDE ----- E 11.38
 ALTERNATE NAMES ----- Observatorium Hafelekar
 DATES OF OPERATION ----- 1958 to 1977: Geiger counter
 1977 to present: Scintillation telescope
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 2 vertical scintillator telescopes; scintillator
 diameter of 1 meter, aperture = 51°, lead: 10 cm,
 Each section: 180.00 counts/hour.
 RAW DATA ----- Monthly tables
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED ----- Every 2 to 3 months
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES: 10 minute data
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Herbert Oberaugdenberger
 Institut für Experimental-Physik
 Schoepfstrasse 41
 A6020 Innsbruck
 Austria
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 IRKUTSK, USSR

ITEM: 873
 DATE: 01/05/84

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 52.28
 STATION LONGITUDE ----- E 104.02
 ALTERNATE NAMES ----- Zu1
 DATES OF OPERATION ----- 12/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Standard Meson Telescope
 RAW DATA ----- Tabular matter
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tables of the hourly values; tables
 of 5-min values for the periods of
 outstanding geophysical events.
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- SIBIZMIR
 P.O. B. 4
 664697 Irkutsk 33
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 INUVIK, CANADA

ITEM: 282
 DATE: 21/08/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 68.35
 STATION LONGITUDE ----- E 226.28
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1964 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- 4-MT-64 muon monitor, cosmic ray muon intensi-
 ty. The monitor consists of four 1 sq-m cubic
 telescopes and one wide angle 2 m x 2 m x 1 m telescope.
 The monitor is described in ANNALS OF THE IQSY,
 Vol. 1, 178 (1968). The counting totals of the
 cubic and wide angle telescopes are recorded on
 punched paper tape at 5-min intervals.
 RAW DATA ----- Punched paper tape
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphs, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. Bercovitch
 Herzberg Inst Astrophysics, NRC Canada
 100 Sussex Drive
 Ottawa, Ontario K1A 0R6
 Canada
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Measurements of upper air temperature are made
 twice daily by the Canadian Atmospheric Environment
 Service on site.

 MAGADAN, USSR

ITEM: 2397
 DATE:

DISCIPLINE ----- F03 Meson Telescope
 STATION LATITUDE ----- N 60.10
 STATION LONGITUDE ----- E 151.00
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Muon telescope at ground-level
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 ADDRESS FOR INFORMATION ABOUT DATA -----
 ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
 directory from information contained in a World Data
 Center-B catalog and UAG-83.
 No confirmation or additional information was received
 upon inquiry to World Data Center-B.

F03 Meson Telescope (Cont.)

 MATSUMOTO, JAPAN

ITEM: 2103
 DATE: 01/09/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 36.25
 STATION LONGITUDE ----- E 137.47
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 09/1976 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Ground level muon detector. Four 1 m sq. plastic scintillators are set two by two. Two layers construct vertical, inclined (45 degrees) four azimuthal directions. The average counts/h is 600,000 for the vertical component, 120,000 for inclined. 600 m above sea level

RAW DATA ----- Paper tapes (hourly)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Cards, computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Masaaki Ichinose
 Dept. of Physics, Faculty of Liberal Arts
 Shinshu University
 1-1, Asahi-3, Matsumoto 390
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MAWSON, ANTARCTICA

ITEM: 821
 DATE: 01/16/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- S 87.60
 STATION LONGITUDE ----- E 67.00
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1973 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Meson Telescope, under 40 meters water equivalent (mwe) of absorber aligned as follows: 1) along the geomagnetic field direction; 2) normal to the geomagnetic field direction; 3) asymptotically viewing normal to the rotational axis; 4) asymptotically viewing along the rotational axis.

RAW DATA ----- Punched paper tape, teleprint
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Tabular matter, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- By arrangement
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. W. M. Jacklyn
 Physics Dept., Univ. of Tasmania
 G.P.O. Box 252C
 Hobart, Tasmania 7001
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MATSUSHIRO, JAPAN

ITEM: 2104
 DATE: 01/09/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 36.53
 STATION LONGITUDE ----- E 138.02
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1980 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Underground muon detector. Twenty-three 1 m sq. plastic scintillators are set: 16 in the above and 7 in the low, in which each detector has dual-photomultipliers. Upper (U) and lower (L) singles as well as vertical by two layers are constructed. The average counts/h, U and L are about 7x10E4, 2x10E4 for vertical. 220 m.w.e.

RAW DATA ----- Paper tapes (hourly)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Cards, computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Shin-ichi Yasue
 Dept. of Physics, Faculty of Science
 Shinshu University
 1-1, Asahi-3, Matsumoto 390
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MCMURDO, ANTARCTICA

ITEM: 2354
 DATE: 01/06/84

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- S 77.90
 STATION LONGITUDE ----- E 166.60
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1960 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Plastic scintillator meson telescope, recordings every hour

RAW DATA ----- Standard format
 DATA REDUCTION PRACTICE ----- Only for specified studies
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Martin Pomerantz
 Bartol Research Foundation
 Franklin Institute
 University of Delaware
 Newark, Delaware 19711
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

F03 Meson Telescope (Cont.)

 MEXICO CITY, MEXICO

 ITEM: 1007
 DATE: 01/19/83

 DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 19.33
 STATION LONGITUDE ----- E 260.42
 ALTERNATE NAMES ----- C.U. Ciudad Universitaria,
 CARR 944 to present
 DATES OF OPERATION -----
 OBSERVING SCHEDULE -----
 INSTRUMENT DESCRIPTION ----- Multidirectional array
 RAW DATA ----- Magnetic tape, computer printout
 DATA REDUCTION PRACTICE ----- Regular
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED ----- Planned
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Javier A. Itabla
 Instituto de Geofisica
 Ciudad Universitaria
 Mexico City 04510 D.F.,
 Mexico
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The multidirectional array system of meson
 telescopes is planned to start operation on
 6/1/84 in an underground site at a depth of
 approximately 50 M.w.e.

 MT NORIKURA, JAPAN

 ITEM: 417
 DATE: 03/02/84

 DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 36.11
 STATION LONGITUDE ----- E 137.55
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 11/1969 to present
 INSTRUMENT DESCRIPTION ----- Multidirectional Meson Telescope, Cosmic Ray
 Total Component Intensities from 13 directions,
 with 24 sq m X 2 layers plastic scintillators,
 no absorber. Continuous observation with one hour
 accumulation time, raw data punched out on paper
 tapes. Hourly values of barometer corrected
 relative intensities are prepared on solar rota-
 tion basis.
 RAW DATA ----- Paper tapes, Analog chart for
 monitoring.
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, computer printouts
 DATA ROUTINELY PUBLISHED ----- Report of Cosmic Ray Research Lab-
 oratory, Nagoya Univ. No. 2 (1976).
 Includes data for 1971-1975.
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. K. Nagashima
 Cosmic Ray Res. Lab., Nagoya Univ.
 Furo-cho, Chikusa-ku,
 Nagoya 464
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 MISATO, JAPAN

 ITEM: 2102
 DATE: 01/09/83

 DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 36.06
 STATION LONGITUDE ----- E 137.83
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1973 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Underground muon detector. Sixteen 1 m sq.
 plastic scintillators are set four by four.
 Two layers construct vertical, inclined (33
 degrees and 54 degrees) four azimuthal direc-
 tions. The average counts/h is 260,000 for
 the vertical component, 100,000 for inclined
 (33 degrees). Hourly counts are punched on
 paper tape. 34 m.w.e.
 RAW DATA ----- Paper tapes
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Cards, computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Satoru Mori
 Dept of Physics, Faculty of Science
 Shinshu University
 1-1, Asahi-3, Matsumoto 390
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 NAGOYA, JAPAN

 ITEM: 424
 DATE: 03/01/84

 DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 35.15
 STATION LONGITUDE ----- E 136.97
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1970 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Multi-directional Meson Telescope observes Cosmic
 Ray Meson Intensities from 17 directions. Multi-
 directional (17 directions) meson intensities with
 36 sq m X 2 layers plastic scintillators with 5 cm
 Pb absorber. Continuous observation with one hour
 accumulation period, raw data punched out on
 paper tapes. Hourly values of barometer corrected
 relative intensities are prepared on solar rota-
 tion basis.
 RAW DATA ----- Paper tapes
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape, computer printouts
 DATA ROUTINELY PUBLISHED ----- Report of Cosmic Ray Research Lab-
 oratory, Nagoya University, No. 1 (1975),
 NO.3 (1978) Includes data for 1970-1973,
 1974-1976, and 1977-1979 respectively.
 Hourly data tables and plots.
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES: Tokyo
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. K. Nagashima
 Cosmic Ray Res. Lab., Nagoya Univ.
 Furo-cho, Chikusa-ku
 Nagoya 464
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

F03 Meson Telescope (Cont.)

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*****
NEWARK, SA
*****
ITEM: 2356
DATE: 01/06/84

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
STATION LATITUDE ----- N 39.70
STATION LONGITUDE ----- E 284.50
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1964 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Plastic scintillator meson telescope, recordings
every hour
RAW DATA ----- Standard format
DATA REDUCTION PRACTICE ----- Only for specified studies
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Martin Pomerantz
Bartol Research Foundation
Franklin Institute
University of Delaware
Newark, Delaware 19711
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Detector moved from Swarthmore, Pennsylvania, USA in
April 1978 (coordinates N39.9, E284.65).

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*****
OKTYOMTSKY, USSR
*****
ITEM: 2349
DATE:

DISCIPLINE ----- F03 Meson Telescope
STATION LATITUDE ----- 55 km south of Yakutsk
STATION LONGITUDE -----
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Muon telescope at ground-level
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
directory from information contained in a World Data
Center-B catalog and UAG-83.
No confirmation or additional information was received
upon inquiry to World Data Center-B.

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*****
NOVSIBIRSK, USSR
*****
ITEM: 2398
DATE:

DISCIPLINE ----- F03 Meson Telescope
STATION LATITUDE ----- N 54.80
STATION LONGITUDE ----- E 83.00
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Muon telescope at ground level
RAW DATA -----
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----
ADDRESS FOR INFORMATION ABOUT DATA -----
ADDITIONAL COMMENTS ----- This entry was completed by the compilers of this
directory from information contained in a World Data
Center-B catalog and UAG-83.
No confirmation or additional information was received
upon inquiry to World Data Center-B.

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*****
OULU, FINLAND
*****
ITEM: 2185
DATE: 01/05/84

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
STATION LATITUDE ----- N 65.05
STATION LONGITUDE ----- E 25.47
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1963 to present
OBSERVING SCHEDULE ----- REGULAR (hourly)
INSTRUMENT DESCRIPTION ----- Cubical meson telescope
RAW DATA ----- uncorrected and pressure hourly data
DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Pekka Tanskanen
Department of Physics
University of Oulu
90570 Oulu
Finland
ADDRESS FOR INFORMATION ABOUT DATA ----- Hannu Kananen
Department of Physics
University of Oulu
90570 Oulu
Finland
ADDITIONAL COMMENTS -----

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F03 Meson Telescope (Cont.)

 ITEM: 2447
 DATE: 01/06/84
 FURTINA, AUSTRALIA

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- S 41.82
 STATION LONGITUDE ----- E 146.18
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1972 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Meson telescope, 360 MWe, vertical
 RAW DATA -----
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Tabular data, magnetic tape
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. A. G. Fenton
 Hobart Cosmic Ray Group
 Physics Department
 Hobart University
 U.P.O. Box 2501
 Hobart, Tasmania 7001
 Australia
 SAME AS ABOVE
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ITEM: 563
 DATE: 01/06/84
 SOCORRO, USA

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 34.04
 STATION LONGITUDE ----- E 253.07
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 03/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Underground muon telescope (82 mwe), multi-directional, using plastic scintillators; wide-angle vertical count rate 67,000/h; data recorded hourly on film; continuous operation.
 RAW DATA ----- Film
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
 FORM OF REDUCED DATA ----- Hourly counting rates; daily harmonic data in solar time.
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Derek B. Swinson
 Physics Dept., Univ of New Mexico
 800 Yale N.E.
 Albuquerque, NM 87131
 USA
 SAME AS ABOVE
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Part of a network of 3 identical telescopes: Mt. Chacaltaya, Bolivia (39 mwe*); Embudo Cave, New Mexico (35 mwe*) and Socorro, New Mexico (82 mwe*). And a larger telescope at Grand Canyon Caverns, Arizona (111 mwe*). Bolivia ceased operating Dec. 76. *Below top of atmosphere.

 ITEM: 2448
 DATE: 04/01/84
 TAKEYAMA, JAPAN

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 35.59
 STATION LONGITUDE ----- E 139.63
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 02/1977 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Underground (80 mwe) muon multi-directional telescope, meson intensities from 10 directions, with 60 sq m (upper) x 42 sq m (lower) layers plastic scintillators. Continuous observation with one hour accumulation time, raw data recorded on paper tapes and 8" floppy disks, hourly values of barometer corrected relative intensities are prepared on solar rotation axis.
 RAW DATA ----- Paper tapes and 8" floppy disks
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- 8" floppy disks, computer printouts
 DATA ROUTINELY PUBLISHED ----- Report of Cosmic Ray Research Laboratory, Nagoya University, No. 5 (1981) includes data for 1978-1980.
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Prof. Y. Nagashima
 Cosmic Ray Res. Lab., Faculty of Science
 Nagoya Univ.
 Guro-cho, Chikusa-ku
 Nagoya 464
 Japan
 SAME AS ABOVE
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ITEM: 54
 DATE: 04/01/84
 TAKEYAMA, JAPAN

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 35.22
 STATION LONGITUDE ----- E 139.62
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 08/1968 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Underground muon detector. Crossed telescope. Nine 1 m sq plastic scintillators are set three by three. Two layers construct vertical, incline (30 degrees and 50 degrees) four azimuthal directions. The average counts/h is 40000 for the vertical component. Hourly counts are punched on paper tape. 54 m.w.e.
 RAW DATA ----- Paper tapes
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 6 MONTHS
 FORM OF REDUCED DATA ----- Magnetic tapes, computer print-outs
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Masami Wada
 The Inst of Physical & Chemical Research
 7-13, Kaga-1, Itahashi
 Tokyo, 173
 Japan
 SAME AS ABOVE
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- The observation described above was stopped in September 1981, and 16 1 meter sq plastic scintillators were set newly. The new observation was started in June 1981. The new system has computer in-out device. The raw data are in magnetic diskette which are transferred to magnetic tape.

F03 Meson Telescope (Cont.)

 TOKYO, JAPAN

ITEM: 2225
 DATE: 01/05/84

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 35.75
 STATION LONGITUDE ----- E 139.72
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 10/1980 to present
 OBSERVING SCHEDULE ----- Temporary
 INSTRUMENT DESCRIPTION ----- 2 layers of 4 plastic scintillators of 1 m² each consist of directional telescopes. Vertical, N, S, E, and W, and diagonal directions. Counting rate of muons stopped inside the scintillators are recorded.

RAW DATA ----- Paper tape, hourly
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Magnetic tape (hourly values); computer printouts (monthly values).

DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Aoi Inoue
 Institute of Physical and Chemical Research
 7-13 Kaga-1, Itabashi
 Tokyo, 173
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 YAKUTSK, USSR

ITEM: 681
 DATE: 01/01/80

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 62.02
 STATION LONGITUDE ----- E 124.72
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1958 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Muon azimuthal telescope, records μ of cosmic ray muon component on vertical and towards south; north is under 30 degree angle to the zenith:
 1) on Earth's surface, counting rate on vertical 100000 imp/h;
 2) at 20 m depth w.e., counting rate on vertical 35000 imp/h (gap in operation 1964-66);
 3) at 7 m depth w.e., counting rate on vertical 70000 imp/h (gap in operation 4/1967-3/1969);
 4) at 60 m depth w.e., counting rate on vertical 10000 imp/h (from 1963 the instrument location changed to east and west instead of south and north).

RAW DATA ----- Microfilms (1958-1967), perforated tapes (1967-present)
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Monthly tables-2 h means (1957-70), hourly tables (1971-present)
 DATA ROUTINELY PUBLISHED ----- HIGH ENERGY COSMIC RAY VARIATIONS, publ. Nauka, Moscow, 1964; COSMIC RAY VARIATIONS AND SOLAR ACTIVITY, publ. Nauka, Moscow 1968, author A. I. Kupin, MATERIALS OF CONTINUOUS OBSERVATIONS OF MUON INTENSITY IN YAKUTSK ON THE EARTH'S SURFACE AND AT THE DEPTHS 7, 20 and 60 MWE FOR 1972, 1973, 1974, Yakutsk, 1976, 1978, 1979.

DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Cosmic Ray Var Lab
 Inst. Cosmophysical Research & Aeronomy
 Lenin Avenue, 31
 Yakutsk 677007
 USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 TURKU, FINLAND

ITEM: 2118
 DATE: 01/11/83

DISCIPLINE ----- F03 Meson Telescope (Cosmic Rays)
 STATION LATITUDE ----- N 60.4
 STATION LONGITUDE ----- E 22.6
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/10/1983 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Detection of frequencies of neutron multiplicities in the range: 1 - 300 produced by the C. R. Hadrons (details in Nuclear Instruments and Methods, 192, 1982, 467-474).

RAW DATA ----- Continuous
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Computer lists and drawings
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. J. Torsti
 Mihuri Physical Laboratory
 University of Turku
 SF-20500 Turku
 Finland

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- 30 second frequencies for muons (6200/30 s) and for neutrons with multiplicity 1 (200/30 s). 1-hour frequency distributions of multiplicities both for incoming neutrons and charged hadrons.

F04 Balloon Measurements

ALMA-ATA, USSR

ITEM: 14
DATE: 01/01/80

DISCIPLINE ----- F04 Balloon Measurements
STATION LATITUDE ----- N 43.25
STATION LONGITUDE ----- E 76.92
ALTERNATE NAMES ----- Cosmic Ray Lab, Kazakh State U
DATES OF OPERATION ----- 01/1962 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Balloon Measurements of total and directed intensity -- one flight per day.

RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- PHYSICS INSTITUTE, Academy of Sciences, USSR (FIZICHESKII INSTITUT)

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Cosmic Ray Laboratory
Kazakh State University
KTRV St., 136
Alma Ata, Kazakhstan
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1980.

APATITY, USSR

ITEM: 2269
DATE: 04/01/84

DISCIPLINE ----- F04 Balloon Measurements
STATION LATITUDE ----- N 67.50
STATION LONGITUDE ----- E 33.33
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1965 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- RKI Radiosonde with single and double telescope G-M counters.

RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. L. L. Lazutin
Polar Geophysical Institute
Academy of Sciences of the USSR
Apacity, Murmansk Region 184200
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

ALMA-ATA, USSR

ITEM: 15
DATE: 01/10/83

DISCIPLINE ----- F04 Balloon Measurements
STATION LATITUDE ----- N 43.25
STATION LONGITUDE ----- E 76.92
ALTERNATE NAMES ----- Cosmic Ray Lab, Kazakh State U
DATES OF OPERATION ----- 01/1962 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- RKI Radiosonde consists of 2 G-M tubes arranged as telescope interlayered by a 7 mm thick aluminium plate. Wall thickness of G-M tube is 0.05 g/cm sq of steel. The counting rate of a single counter and two-counter coincidences are recorded. The balloons are launched every day at 0700 UT, except Sunday.

RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- Regular
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables of cosmic ray flux dependence on stratospheric pressure
DATA ROUTINELY PUBLISHED ----- COSMIC DATA (Nauka, Moscow)
Cosmic Ray Intensity at Transition Maximum in Stratosphere, since 1972

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Yu. I. Stozhkov
P. N. Lebedev Physical Institute
Leninsky Prospekt, 53
Moscow 117924
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. G. A. Bazilevskaya
P. N. Lebedev Physical Institute
Leninsky Prospekt, 53
Moscow 117924
USSR

ADDITIONAL COMMENTS -----

MIRNY, ANTARCTICA

ITEM: 405
DATE: 01/10/83

DISCIPLINE ----- F04 Balloon Measurements (Cosmic Rays)
STATION LATITUDE ----- S 66.57
STATION LONGITUDE ----- E 92.92
ALTERNATE NAMES -----
DATES OF OPERATION ----- 01/1963 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- RKI-radiosound consists of two G-M tubes arranged as telescope interlayered by a 7 mm thick aluminium plate. Wall thickness of G-M tube is 0.05 g/cm sq of steel. The counting rate of a single counter and two-counter coincidences are recorded. The balloons are launched every day at 0700 UT.

RAW DATA ----- Tables, drawings
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables of cosmic ray flux dependence on stratospheric pressure
DATA ROUTINELY PUBLISHED ----- COSMIC DATA (Nauka, Moscow)
Cosmic Ray Intensity at Transition Maximum in Stratosphere since 1972.

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Yu. I. Stozhkov
P. N. Lebedev Physical Institute
Leninsky Prospekt, 53
Moscow 117924
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. G. A. Bazilevskaya
P. N. Lebedev Physical Institute
Leninsky Prospekt, 53
Moscow 117924
USSR

ADDITIONAL COMMENTS -----

F04 Balloon Measurements (Cont.)

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*****
MOSCOW, USSR
*****
ITEM: 408
DATE: 01/10/83

DISCIPLINE ----- F04 Balloon Measurements (Cosmic Rays)
STATION LATITUDE ----- N 55.93
STATION LONGITUDE ----- E 37.52
ALTERNATE NAMES ----- Dolgoprudny, Moscow Reg.
DATES OF OPERATION ----- 07/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- RK1-radiosound consists of two G-M tubes arranged
as telescope interlayered by a 7 mm thick aluminum
plate. Wall thickness of G-M tube is 0.05 g/cm sq
of steel. The counting rate of a single counter
and two-counter coincidences are recorded. The
balloons are launched every day except Saturday
and Sunday at 0530 UT.

RAW DATA ----- Tables, drawings
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 2 MONTHS
FORM OF REDUCED DATA ----- Tables of cosmic ray flux depend-
ence on stratospheric pressure
DATA ROUTINELY PUBLISHED ----- Beginning from January, 1972, data
on Cosmic Ray Intensity at Transi-
tion Maximum in Stratosphere are
routinely published in COSMIC DATA,
Nauka, Moscow.

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Yu. I. Stozhkov
P. N. Lebedev Physical Institute
Leninsky Prospect, 53
Moscow 117924
USSR

ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. G. A. Bazilevskaya
P. N. Lebedev Physical Institute
Leninsky Prospect, 53
Moscow 117924
USSR

ADDITIONAL COMMENTS -----

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*****
MURMANSK, USSR
*****
ITEM: 1008
DATE: 01/10/83

DISCIPLINE ----- F04 Balloon Measurements (Cosmic Rays)
STATION LATITUDE ----- N 68.95
STATION LONGITUDE ----- E 33.05
ALTERNATE NAMES ----- Olenja, Murmansk Region
DATES OF OPERATION ----- 07/1957 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- RK1 Radiosound consists of 2 G-M tubes
arranged as telescope interlayered by a 7 mm
thick aluminum plate. Wall thickness of
G-M tube is 0.05 g/cm sq of steel. The
counting rate of a single counter and
two-counter coincidences are recorded.
The balloons are launched every day at
0530 UT and every day except Sunday
at 1130 UT.

RAW DATA ----- Tables, drawings
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA ----- Tables of cosmic ray flux depend-
ence on stratospheric pressure
DATA ROUTINELY PUBLISHED ----- COSMIC DATA (Nauka, Moscow) Cosmic
Ray Intensity at Transition Maximum
in Stratosphere, appear routinely
since January 1972

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Yu. I. Stozhkov
P. N. Lebedev Physical Institute
Leninsky Prospect, 53
Moscow 117924
USSR

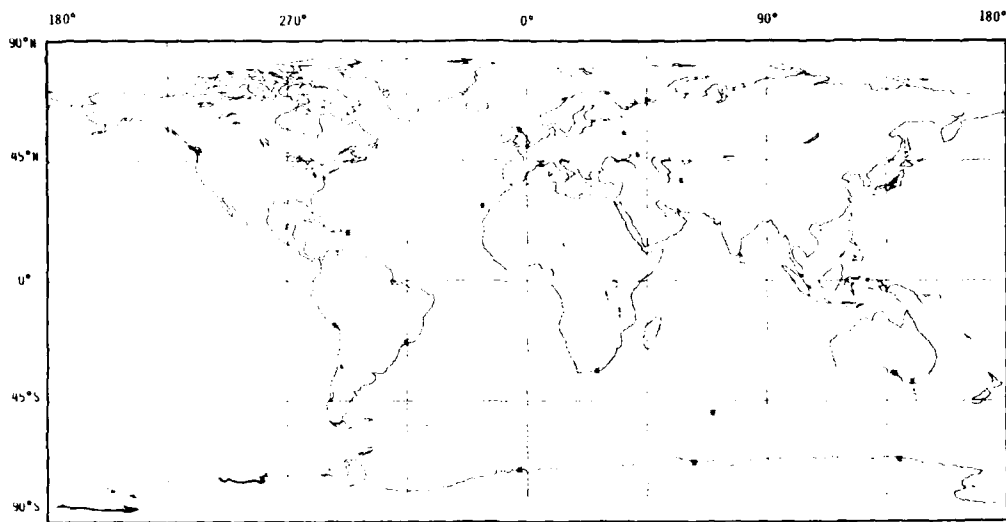
ADDRESS FOR INFORMATION ABOUT DATA ----- Dr. G. A. Bazilevskaya
P. N. Lebedev Physical Institute
Leninsky Prospect, 53
Moscow 117924
USSR

ADDITIONAL COMMENTS ----- 07/1957 to 04/1958 observations occasional; since
05/1958 observations are regularly scheduled.

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G. Airglow

G.1 Maps



G01 AIRGLOW

G01 Airglow

 ABERDEEN, UNITED KINGDOM

ITEM: 1
 DATE: 05/07/83

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 57.15
 STATION LONGITUDE ----- E 357.87
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 01/1976 to present
 OBSERVING SCHEDULE ----- OCCASIONAL
 INSTRUMENT DESCRIPTION ----- Michelson airglow interferometer - wide field. Large path difference built in to enable the measurements of Doppler shifts of airglow emission lines; can be set to be used at small path difference to yield emission radiances with good discrimination against background continuum.

RAW DATA ----- Chart
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. Gadsden
 Department of Natural Philosophy
 Aberdeen University
 Aberdeen AB9 2UE
 United Kingdom

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Twilight gives severe interference in June and July and the length of night is severely limited in May and August. Special purpose data available after 12 months.

 ARECIBO, PUERTO RICO, USA

ITEM: 31
 DATE: 01/03/84

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 18.35
 STATION LONGITUDE ----- E 293.25
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1969 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 OCCASIONAL
 INSTRUMENT DESCRIPTION ----- Tilting filter photometer, 3 photometers at different wavelengths. Usually run during suitable moon and weather conditions. 6300, 5577, and other wavelengths. Digital recording on magnetic tape and machine reduction of data.

RAW DATA ----- Strip chart, digital magnetic tape
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Graphical plots, computer printout
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Craig A. Topley
 Arecibo Observatory
 Post Office Box 995
 Arecibo
 Puerto Rico 00613
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Interferometer, spectrometer, spatial scanner. Special purpose data available after 1 month.

 ADELAIDE, AUSTRALIA

ITEM: 777
 DATE: 01/06/84

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- S 34.60
 STATION LONGITUDE ----- E 138.40
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- IRRREGULAR
 INSTRUMENT DESCRIPTION ----- Airglow Photometer, Fabry-Perot spectrometer

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER -----
 FORM OF REDUCED DATA ----- Tables, graphs
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. F. Jacka
 Mewson Inst for Antarctic Research
 University of Adelaide
 Adelaide, S. A. 5001
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ARECIBO, PUERTO RICO, USA

ITEM: 207
 DATE: 01/01/80

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 18.35
 STATION LONGITUDE ----- E 293.25
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1975 to present
 OBSERVING SCHEDULE ----- Intermittent operation
 INSTRUMENT DESCRIPTION ----- Fabry-Perot airglow interferometer (15 cm diam.) operation still very irregular, used for 5577A temperatures, 6300A winds - I M Fastie Ebert Spectrophotometer

RAW DATA ----- Digital magnetic tape
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Computer printouts and plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- R. F. Woodman
 Arecibo Observatory
 Post Office Box 995
 Arecibo 00612
 Puerto Rico
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Instrument is available for visitor use, but no data are available on request. Other instruments include photometers, spectrometer, and spatial scanner. Spatial scanning photometer is tilting filter instrument used for mapping airglow structure. One meter Ebert-Fastie spectrometer is used for special studies of weak emissions, bands, rotational temperatures. All instruments at Arecibo Observatory are available for use by qualified scientists. Address proposals or inquiries to Director of Observatory Operations, Arecibo Observatory. No response received to inquiry for updating material in 1983.

G01 Airglow (Cont.)

 AREQUIPA, PERU

ITEM: 2314
 DATE: 25/07/83

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- S 16.5
 STATION LONGITUDE ----- E 288.5
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- Continuous (Automatic)
 INSTRUMENT DESCRIPTION ----- Except during full-moon periods
 Fabry-Perot interferometer and tilting filter
 photometer, 6300 A.
 RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter and graphs
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION -----
 Dr. Manfred A. Riondi
 Physics and Astronomy Department
 University of Pittsburgh
 Pittsburgh, PA 15260
 USA
 ADDRESS FOR INFORMATION ABOUT DATA ----- same as above or:
 Dr. John Meriwether
 Space Research Building
 University of Michigan
 2455 Hayward
 Ann Arbor, MI 48109
 USA
 ADDITIONAL COMMENTS -----

 BEVERIDGE, AUSTRALIA

ITEM: 771
 DATE: 01/06/84

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- S 37.47
 STATION LONGITUDE ----- E 144.93
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Airglow photometer 6300 A
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Strip charts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Prof. Keith D. Cole
 Department of Physics
 La Trobe University
 Bundoora, Victoria 3083
 Australia
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 ASHKHABAD, USSR

ITEM: 844
 DATE: 00/00/75

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 37.90
 STATION LONGITUDE ----- E 58.40
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- OCCASIONAL
 INSTRUMENT DESCRIPTION ----- Airglow photometer at 5577 A, 5890 A and 6300 A.
 RAW DATA ----- Strip charts
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- A. P. Savrouchin
 Inst. Phys. Earth & Atm.
 Acad. Sci. Turkmen
 Vagol Street 16
 Ashkhabad 744019
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- same as above
 ADDITIONAL COMMENTS ----- No response to inquiry for updating material in
 1980.

 CACHOEIRA PAULISTA, BRAZIL

ITEM: 536
 DATE: 11/07/83

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- S 22.70
 STATION LONGITUDE ----- E 315.00
 ALTERNATE NAMES ----- NONE
 DATES OF OPERATION ----- 1973 to present
 OBSERVING SCHEDULE ----- 15 days per month centered on New Moon Day
 INSTRUMENT DESCRIPTION ----- Two scanning photometers. One of them scans
 north-south and the other scans east-west
 (geomagnetic). Scanning range of both is $\pm 75^\circ$
 around zenith.
 RAW DATA ----- Chart paper
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- North-south and east-west (geomagnetic)
 intensity profiles of the 6300 A airglow.
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Jose H. A. Sobral
 INPE C.P.515
 12200 Sao Jose Dos Campos
 Sao Paulo
 Brazil
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

G01 Airglow (Cont.)

CANARIAS, CANARY ISLANDS

ITEM: 1106
DATE: 01/01/80

DISCIPLINE ----- G01 Airglow
STATION LATITUDE ----- N 28.48
STATION LONGITUDE ----- E 343.72
ALTERNATE NAMES ----- Tenerife
DATES OF OPERATION ----- 01/1970 to present
OBSERVING SCHEDULE ----- Intermittent operation
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Spectrophotometer for airglow measurements
RAW DATA ----- Strip charts
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Instituto Universitario de Astrofisica
Universidad de La Laguna
La Laguna, Tenerife
Spain
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response received to inquiry for updating material in 1983.

EL LEONCITO, ARGENTINA

ITEM: 762
DATE: 00/00/75

DISCIPLINE ----- G01 Airglow
STATION LATITUDE ----- S 31.80
STATION LONGITUDE ----- E 290.70
ALTERNATE NAMES -----
DATES OF OPERATION -----
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Airglow photometer, 5300 A, 5577 A, 5893 A, 6300 A
RAW DATA ----- Strip charts, pen and ink
DATA REDUCTION PRACTICE -----
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. Rodolfo Agustin Perello
Obs Astronomico Felix Aguilar, Centu
Avda. Benavidez 8175 Oeste
San Juan
Argentina
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response to inquiry for updating material in 1980.
or 1983.

DUMONT D'URVILLE, ANTARCTICA

ITEM: 1057
DATE: 01/01/80

DISCIPLINE ----- G01 Airglow
STATION LATITUDE ----- S 66.67
STATION LONGITUDE ----- E 140.00
ALTERNATE NAMES ----- Terre Adelie
DATES OF OPERATION ----- 01/1957 to present
OBSERVING SCHEDULE ----- Regular
INSTRUMENT DESCRIPTION ----- Airglow photometers, regular observations
under cloudless and moonlit conditions.
RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
FORM OF REDUCED DATA ----- Computer printout
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- G. Weill
Service d'Aeronomie
B.P. no. 3
91370 Verrieres
Buzison
France
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 18 months.
No response received to inquiry for updating
material in 1983.

GRAHAMSTOWN, REP. OF S. AFRICA

ITEM: 2004
DATE: 01/02/84

DISCIPLINE ----- G01 Airglow
STATION LATITUDE ----- S 33.32
STATION LONGITUDE ----- E 26.50
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1982 to present
OBSERVING SCHEDULE ----- Occasional
INSTRUMENT DESCRIPTION ----- Three tilting-filter photometers. Currently
using 391.4, 557.7 and 630.0 nm filters.
Also have 427.8 and 520.0 nm.
RAW DATA ----- Pen and ink strip chart
DATA REDUCTION PRACTICE ----- SPECIAL or upon request
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Data Centre
Department of Physics and Electronics
Rhodes University
Grahamstown 6140
Rep. of S. Africa
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- From 1983 onwards this station has been only operating
on special occasions, or by special request.

G01 Airglow (Cont.)

 HAUTE PROVENCE, FRANCE

ITEM: 243
 DATE: 01/01/80

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 43.92
 STATION LONGITUDE ----- E 5.72
 ALTERNATE NAMES ----- Observatoire de Haute Provence
 DATES OF OPERATION ----- 07/1955 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Photometers, regular operations under cloudless and moonlight conditions.

RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 MONTHS
 FORM OF REDUCED DATA ----- Computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- G. Weill
 Service d'Aeronomie
 B.P. no.3
 91370 Verriers Buisson
 France

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Special purpose data available after 2 months.
 No response received to inquiry for updating material
 in 1983.

 LAUREL RIDGE, USA

ITEM: 267
 DATE: 22/07/83

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 40.16
 STATION LONGITUDE ----- E 280.84
 ALTERNATE NAMES -----
 DATES OF OPERATION -----
 OBSERVING SCHEDULE ----- REGULAR, except full-moon periods
 INSTRUMENT DESCRIPTION ----- Airglow photometer and interferometer, 5577 A,
 5890 A, 5896 A, and 6300 A.

RAW DATA ----- Magnetic tape
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- WEEKS to MONTHS
 FORM OF REDUCED DATA ----- Tabular matter and graphs
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Manfred A. Biondi
 Physics Department
 University of Pittsburgh
 Pittsburgh, PA 15260
 USA

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 KISO, JAPAN

ITEM: 321
 DATE: 03/01/84

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 35.80
 STATION LONGITUDE ----- E 137.63
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 07/1975 to present
 OBSERVING SCHEDULE ----- Regular
 INSTRUMENT DESCRIPTION ----- A zenith airglow photometer (75 mm telescope aperture) automatically measures intensities of 5577 A, NaD, 6300 A airglow emissions and background light every minute. Observations are made regularly on moonless clear nights every month.

RAW DATA ----- Strip chart, punched tape, floppy disk
 DATA REDUCTION PRACTICE ----- REGULAR
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
 FORM OF REDUCED DATA ----- Tables, graphs
 DATA ROUTINELY PUBLISHED ----- From WDC-C2 for Airglow, Tokyo Astron. Obs.

DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Hiroyoshi Tanabe
 Tokyo Astronomical Observatory
 Mitaka, Tokyo 181
 Japan

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Airglow instrument moved from Daitaira Station (N 36.01, E 139.21) to Kiso Station in June 1975.
 Data archived at Tokyo Astronomical Observatory.

 MAWSON, ANTARCTICA

ITEM: 2292
 DATE: 01/06/84

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- S 67.62
 STATION LONGITUDE ----- E 62.87
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1976 to present
 OBSERVING SCHEDULE ----- IRREGULAR
 INSTRUMENT DESCRIPTION ----- Fabry-Perot spectrometer, photometer.

RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tables, graphs
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. F. Jacka
 Mawson Institute for Antarctic Research
 University of Adelaide
 Adelaide, S. A. 5001
 Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

G01 Airglow (Cont.)

 NIIGATA, JAPAN

ITEM: 739
 DATE: 04/01/84

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 37.70
 STATION LONGITUDE ----- E 138.82
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Airglow photometer and spectrometer
 RAW DATA -----
 DATA REDUCTION PRACTICE -----
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA ----- Tabular matter
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C ----- YES: WDC-C2
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. Bun-Iti Salto
 Niigata Airglow Observatory
 Faculty of Science
 Niigata University
 Igarashi 2, Niigata 950-21
 Japan
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS -----

 SANAE, ANTARCTICA

ITEM: 782
 DATE: 01/02/84

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- S 70.30
 STATION LONGITUDE ----- E 357.59
 ALTERNATE NAMES -----
 DATES OF OPERATION ----- 06/1967 to present
 OBSERVING SCHEDULE ----- OCCASIONAL
 INSTRUMENT DESCRIPTION ----- Three tilting-filter photometers. Currently using 391.4, 557.7 and 630.0 nm filters.
 RAW DATA ----- Pen and Ink strip charts
 DATA REDUCTION PRACTICE ----- Special or on request
 REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
 FORM OF REDUCED DATA -----
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST -----
 ADDRESS FOR INFORMATION ABOUT STATION ----- Data Centre
 Dep. of Physics & Electronics
 Rhodes University
 Grahamstown 6140
 Rep. of S. Africa
 Same as above
 ADDRESS FOR INFORMATION ABOUT DATA ----- Recording done as often as possible between 21 March
 ADDITIONAL COMMENTS ----- and 30 September, depending on moon and weather conditions.

 PORT AUX FRANCAIS, KERGUELEN ISLANDS

ITEM: 969
 DATE: 01/01/80

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- S 49.35
 STATION LONGITUDE ----- E 70.22
 ALTERNATE NAMES ----- Kerguelen
 DATES OF OPERATION ----- 07/1957 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Airglow equipment, regular operations under cloudless and moonlit conditions.
 RAW DATA ----- Strip chart
 DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 18 MONTHS
 FORM OF REDUCED DATA ----- Graphical plots
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A -----
 DATA SENT TO WDC-B -----
 DATA SENT TO WDC-C -----
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- G. Meill
 Service d'Aeronomie
 B.P. no.3
 91370 Verriers
 Buisson
 France
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- special purpose data available after 18 months.
 No response received to inquiry for updating material in 1983.

 TSIMLIJANSK, USSR

ITEM: 1161
 DATE: 23/02/77

DISCIPLINE ----- G01 Airglow
 STATION LATITUDE ----- N 47.70
 STATION LONGITUDE ----- E 42.00
 ALTERNATE NAMES ----- REPS'AT
 DATES OF OPERATION ----- 09/1974 to present
 OBSERVING SCHEDULE ----- REGULAR
 INSTRUMENT DESCRIPTION ----- Airglow photometer
 RAW DATA ----- Drawings, tables, computer printouts
 DATA REDUCTION PRACTICE ----- SPECIAL
 REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 MONTHS
 FORM OF REDUCED DATA ----- Tables, computer printouts
 DATA ROUTINELY PUBLISHED -----
 DATA SENT TO WDC-A ----- YES
 DATA SENT TO WDC-B ----- YES
 DATA SENT TO WDC-C ----- YES: Meudon
 DATA AVAILABLE ON REQUEST ----- YES
 ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. N. V. Pushkov
 121818
 PO Akademgorodok
 Moscow Region, Northern Samar
 142 092
 USSR
 ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
 ADDITIONAL COMMENTS ----- Data reduced regularly 10/1970-3/19
 No response received to inquiry for updating material in 1980.

G01 Airglow (Cont.)

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*****
VICTORIA, CANADA
*****
ITEM: 1093
DATE: 01/01/80

DISCIPLINE ----- G01 Airglow
STATION LATITUDE ----- N 48.46
STATION LONGITUDE ----- E 236.70
ALTERNATE NAMES -----
DATES OF OPERATION ----- 02/1967 to present
                           Intermittent operation
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Birefringent Airglow Photometer, observations
                                during clear twilight, strip chart speed 1/4
                                inch/min, twilight sodium 2/1967-8/1968, twilight
                                lithium 9/1968-present.

RAW DATA ----- Strip chart
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- MONTHS
FORM OF REDUCED DATA ----- Tables, graphical plots
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. M. M. Sullivan
                                                University of Victoria
                                                Department of Physics
                                                Victoria, B.C. V8W 2Y2
                                                Canada
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Special purpose data available after 1 month.
                                No response received to inquiry for updating material
                                in 1983.
    
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*****
ZVENIGOROD, USSR
*****
ITEM: 1162
DATE: 23/02/77

DISCIPLINE ----- G01 Airglow
STATION LATITUDE ----- N 55.70
STATION LONGITUDE ----- E 36.80
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1969 to present
OBSERVING SCHEDULE -----
INSTRUMENT DESCRIPTION ----- Airglow photometer

RAW DATA -----
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 3 MONTHS
FORM OF REDUCED DATA -----
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. N. V. Pushkov
                                                IZMIRAN
                                                PU Akademgorodok
                                                Moscow Region 142 092
                                                USSR
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- No response to inquiry for updating material in
                                1980.
    
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H. Miscellaneous

H03 Atmospheric Ozone

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*****
BRISBANE, AUSTRALIA
*****
ITEM: 71
DATE: 01/06/84

DISCIPLINE ----- H03 Atmospheric Ozone
STATION LATITUDE ----- S 27.50
STATION LONGITUDE ----- E 152.90
ALTERNATE NAMES -----
DATES OF OPERATION ----- 09/1956 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ozone Dobson Spectrophotometer, daily total
                                ozone, fortnightly Umkehr
                                Tables
RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- OZONE DATA FOR THE WORLD, Dept.
                                of Environment and WMO-Canada.
                                YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. P. J. Meighen
                                Bureau of Meteorology
                                P.O. Box 1289K
                                Melbourne, Victoria 3001
                                Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
HOBART, AUSTRALIA
*****
ITEM: 1156
DATE: 01/06/84

DISCIPLINE ----- H03 Atmospheric Ozone
STATION LATITUDE ----- S 42.90
STATION LONGITUDE ----- E 147.20
ALTERNATE NAMES -----
DATES OF OPERATION ----- 07/1967 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Dobson ozone spectrophotometer. Measurements of
                                total ozone done 3 times a day, measurement of
                                Umkehr observations for vertical distribution
                                of ozone done once a week depending on weather.
                                Tables
RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- OZONE DATA FOR THE WORLD, Dept. of
                                Environment in cooperation with
                                WMO, Ontario, Canada
                                YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. P. J. Meighen
                                Bureau of Meteorology
                                P.O. Box 1289K
                                Melbourne, Victoria 3001
                                Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
LARNACH, AUSTRALIA
*****
ITEM: 2023
DATE: 01/06/84

DISCIPLINE ----- H03 Atmospheric Ozone
STATION LATITUDE ----- S 12.47
STATION LONGITUDE ----- E 130.83
ALTERNATE NAMES -----
DATES OF OPERATION ----- 08/1975 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Dobson ozone spectrophotometer
                                Tables
RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
FORM OF REDUCED DATA ----- Table
DATA ROUTINELY PUBLISHED ----- Ozone Data for the world
                                YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Dr. P. J. Meighen
                                Bureau of Meteorology
                                P.O. Box 1289K
                                Melbourne, Victoria 3001
                                Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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*****
MACQUARIE ISLAND
*****
ITEM: 2095
DATE: 01/06/84

DISCIPLINE ----- H03 Atmospheric Ozone
STATION LATITUDE ----- S 54.48
STATION LONGITUDE ----- E 158.97
ALTERNATE NAMES -----
DATES OF OPERATION ----- 1963 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ozone Dobson Spectrometer
                                Tables
RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 12 Months
FORM OF REDUCED DATA ----- Table
DATA ROUTINELY PUBLISHED ----- Ozone Data for the world (Canada)
                                YES
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION ----- Mr. P. J. Meighen
                                Bureau of Meteorology
                                P.O. Box 1289K
                                Melbourne, Victoria 3001
                                Australia
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----
    
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H03 Atmospheric Ozone (Cont.)

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*****
MELBOURNE, AUSTRALIA
*****
ITEM: 2016
DATE: 01/06/84

DISCIPLINE ----- H03 Atmospheric Ozone
STATION LATITUDE ----- S 37.71
STATION LONGITUDE ----- E 144.97
ALTERNATE NAMES ----- Aspendale
DATES OF OPERATION ----- 01/1983 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Ozone Dobson spectrometer, mast ozonesonde,
Ozonesonde fortnightly observations, weekly
Umkehr observations, and daily total ozone.

RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1 Months
FORM OF REDUCED DATA ----- Table
DATA ROUTINELY PUBLISHED ----- Ozone Data for the World (Canada)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: Canada
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Mr. P. J. Meighen
Bureau of Meteorology
P.O. Box 1289K
Melbourne, Victoria 3001
Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS ----- Replaces Aspendale station.

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*****
PERTH, AUSTRALIA
*****
ITEM: 459
DATE: 01/06/84

DISCIPLINE ----- H03 Atmospheric Ozone
STATION LATITUDE ----- S 31.56
STATION LONGITUDE ----- E 115.50
ALTERNATE NAMES -----
DATES OF OPERATION ----- 03/1969 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- Dobson Ozone Spectrophotometer.

RAW DATA ----- Tables
DATA REDUCTION PRACTICE ----- REGULAR SPECIAL
REGULAR REDUCED DATA AVAILABLE AFTER ----- 4 MONTHS
FORM OF REDUCED DATA ----- Tables
DATA ROUTINELY PUBLISHED ----- Ozone Data for the World (Canada)
DATA SENT TO WDC-A ----- YES
DATA SENT TO WDC-B ----- YES
DATA SENT TO WDC-C ----- YES: Canada
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Mr. P. J. Meighen
Bureau of Meteorology
P.O. Box 1289K
Melbourne, Victoria 3001
Australia

ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

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H06 Infrasonic Waves

MCMURDO, ANTARCTICA

ITDM: 2309
DATE: 01/08/83

DISCIPLINE ----- H06 Infrasonic Waves
STATION LATITUDE ----- S 77.75
STATION LONGITUDE ----- E 167.50
ALTERNATE NAMES ----- Windless Bight, Antarctica
DATES OF OPERATION ----- 01/1976 to present
OBSERVING SCHEDULE ----- REGULAR
INSTRUMENT DESCRIPTION ----- 7 infrasonic microphone array, digital data
acquisition and analysis system PDP11/03
microcomputer
RAW DATA ----- Digital data
DATA REDUCTION PRACTICE ----- REGULAR
REGULAR REDUCED DATA AVAILABLE AFTER ----- 1/30 MONTHS
FORM OF REDUCED DATA ----- Computer printout, analysis in real-time
DATA ROUTINELY PUBLISHED -----
DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----
DATA AVAILABLE ON REQUEST ----- YES
ADDRESS FOR INFORMATION ABOUT STATION --- Charles R. Wilson
Geophysical Institute
University of Alaska
Fairbanks, Ak 99701
USA
ADDRESS FOR INFORMATION ABOUT DATA ----- Same as above
ADDITIONAL COMMENTS -----

5. CORRECTIONS AND UPDATING

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As mentioned previously the information given in Section 4 of this directory was placed on word processing equipment primarily to facilitate the updating and maintenance of current and accurate MONSEE sensor information. The availability of such a data file also enables us to provide, in a timely fashion, information on the monitoring activities of any particular discipline.

To assist the MONSEE Steering Committee and as an aid to the entire solar-terrestrial physics community, user cooperation in correcting and updating this directory is not only encouraged but is also necessary; we cannot maintain the directory without the collective effort of the individuals involved. Thus, your assistance is requested in the following way:

a. Notify us of new solar-terrestrial monitoring activities. New additions can be made at any time using the forms contained at the end of this section. If a significant number of new entries are received by the MONSEE Steering Committee, a supplement to this second edition will be issued.

b. Notify us of the termination of any solar-terrestrial monitoring activity listed in this second edition of the MONSEE Directory. Your assistance in this matter will greatly facilitate the publication of future editions of this directory.

c. Help us ascertain the status of the sensors listed in Table 4. This table contains an alphabetical listing of all monitors included in the first directory and for which we did not receive any updated information in 1980 or 1983. Also listed in this table are those stations included in the second edition of this directory as the result of an examination of the World Data Center records and for which the information contained in the individual sensor listing (Section 4) is incomplete. Any user of this directory having definitive knowledge concerning the operating status or other helpful information about any of these stations is urged to send this information to the following people:

Mr. J. H. Allen, Director
World Data Center A for Solar-Terrestrial Physics, E/GC2
NOAA/NESDIS
325 Broadway,
Boulder, Colorado 80303, U.S.A.

and

Ms. M. A. Shea, MONSEE Chairman
Air Force Geophysics Laboratory
Space Physics Division (PHP)
Hanscom Air Force Base
Bedford, Massachusetts 01731, U.S.A.

We would particularly appreciate receiving the names and addresses of knowledgeable people who can verify the information contained in the individual entries for which no verification were received.

Finally we would appreciate helpful ideas, suggestions, and criticism on this second edition of the MONSEE Directory.

Table 4. Stations for Which No Response or Verification Has Been Received

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
AHMEDABAD, INDIA	B01	23.00	72.60	730 *
ALMA-ATA, USSR	B01	43.25	76.92	831 *
ALMA-ATA, USSR	F01	43.25	76.92	11 *
ALMA-ATA, USSR	F04	43.25	76.92	14 *
ANDERMA, USSR	B08	63.9		2372 *
ARKHANGELSK, USSR	B08	64.60	40.50	2373 *
ASHKHABAD, USSR	G01	37.90	58.40	844 *
BELSK, POLAND	B06	51.84	20.79	54 *
BELSK, POLAND	B08	51.84	20.79	55 *
BELSK, POLAND	B11	51.84	20.79	916 *
BELSK, POLAND	C06	51.84	20.79	917 *
BINZA, ZAIRE	D01	-4.37	15.25	61 *
BOROK, USSR	D02	58.03	38.97	773 *
BOROK, USSR	D02	58.03	38.33	837 *
BUDKOV, CZECHOSLOVAKIA	D01	49.07	14.02	819 *
BUENOS AIRES, ARGENTINA	A01	-34.55	301.27	74 *
BUENOS AIRES, ARGENTINA	A02	-34.55	301.27	75 *
BUENOS AIRES, ARGENTINA	A04	-34.55	301.27	76 *
BUENOS AIRES, ARGENTINA	A08	-34.55	301.27	828 *
BUENOS AIRES, ARGENTINA	C01	-34.55	301.27	934 *
BUENOS AIRES, ARGENTINA	C03	-34.55	301.27	827 *
CALGARY, CANADA	F01	51.08	245.90	790 *
CANARIAS, CANARY ISLANDS	A02	28.48	343.72	598 *
CANARIAS, CANARY ISLANDS	A14	28.48	343.72	1105 *
CANARIAS, CANARY ISLANDS	D01	28.48	343.74	599 *
CAPE ZHELANIZA, USSR	B08	70.30		2374 *
CATARMAN, PHILIPPINES	A16	12.52	124.67	98 *
CHACALTAYA, BOLIVIA	F01	-16.35	291.87	102 *
CHACALTAYA, BOLIVIA	F03	-16.31	291.80	103 *
CHELYUSKIN, USSR	E01	77.80	104.30	877 *
CRIMEAN ASTRO OBSERVATORY, USSR	A08			2369 *
DIXON, USSR	B08	67.20		2375 *
DIXON, USSR	E01	73.50	80.40	876 *

Table 4. Stations for Which No Response or Verification Has Been Received (Contd)

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
DOLGOSCHELIE, USSR	B09	66.03	43.24	794 *
HEISS ISLAND, USSR	B08	73.80		2376 *
HEISS ISLAND, USSR	D02	80.62	58.05	839 *
HEISS ISLAND, USSR	E01	80.70	56.20	878 *
HURBANOVO, CZECHOSLOVAKIA	D01	47.87	18.18	807 *
IBADAN, NIGERIA	B01	7.40	3.90	275 *
IBADAN, NIGERIA	B06	7.40	3.90	276 *
IRKUTSK, USSR	A03	52.47	104.03	860 *
IRKUTSK, USSR	A08	52.47	104.03	859 *
IRKUTSK, USSR	C03	52.47	104.03	858 *
IZMIRAN, USSR	A03			2361 *
IZMIRAN, USSR	A04			2365 *
IZMIRAN, USSR	A08			2370 *
IZMIRAN, USSR	C01			2380 *
IZMIRAN, USSR	C03			2385 *
IZMIRAN, USSR	C04			2386 *
JICAMARCA, PERU	B03	-11.95	283.13	286 *
KALININGRAD, USSR	B01	54.70	20.62	854 *
KARAGANDA, USSR	B01	49.81	73.08	835 *
KARAVIA, ZAIRE	D01	-11.65	27.47	163 *
KASAKH ASTRONOMICAL INST., USSR	A03			2362 *
KASAKH ASTRONOMICAL INST., USSR	A04			2366 *
KASAKH ASTRONOMICAL INST., USSR	A07			2368 *
KASAKH ASTRONOMICAL INST., USSR	C01			2381 *
KASAKH ASTRONOMICAL INST., USSR	C02			2383 *
KEM, USSR	D01	65.00	34.40	785 *
KISLOVODSK, USSR	A01	44.70	42.50	320 *
KISLOVODSK, USSR	A03	44.70	42.50	972 *
KISLOVODSK, USSR	A05	44.70	42.50	974 *
KISLOVODSK, USSR	A06	44.70	42.50	975 *
KISLOVODSK, USSR	A07	44.70	42.50	976 *
KISLOVODSK, USSR	A08	44.70	42.50	977 *
KISLOVODSK, USSR	C03	44.70	42.50	978 *
LA PAZ, BOLIVIA	C03	-16.30	291.91	330 *
LAS ACACIAS, ARGENTINA	D01	-35.00	302.32	753 *

Table 4. Stations for Which No Response or Verification Has Been Received
(Contd)

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
LENINGRAD, USSR	E03	59.95	30.70	787 *
LUANDA, ANGOLA	A02	-8.79	13.31	362 *
MAGADAN, USSR	F01	60.10	151.00	2389 *
MAGADAN, USSR	F03	60.10	151.00	2397 *
MIRNY, ANTARCTICA	B08	-76.80		2377 *
MIRNY, ANTARCTICA	E01	-66.60	93.00	879 *
MOLODEZHNA YA, ANTARCTICA	B08	-67.60		2378 *
MOUNT SAYAN OBSERVATORY, USSR	A01			2359 *
MOUNT SAYAN OBSERVATORY, USSR	A03			2364 *
MOUNT SAYAN OBSERVATORY, USSR	A04			2367 *
MOUNT SAYAN OBSERVATORY, USSR	C01			2382 *
MOUNT SAYAN OBSERVATORY, USSR	C02			2384 *
MULEMBA, ANGOLA	A01	-8.79	13.31	993 *
NORILSK, USSR	B01	69.00	88.00	863 *
NORILSK, USSR	B08	69.00	88.00	864 *
NORILSK, USSR	F01	69.00	88.00	874 *
NOVOKAZALINSK, USSR	B01	45.76	62.12	833 *
NOVOLAZAREVSKAYA, ANTARCTICA	B08	-66.20		2379 *
NOVOLAZAREVSKAYA, ANTARCTICA	D02	-70.77	11.82	840 *
NOVOLAZAREVSKAYA, ANTARCTICA	E01	-70.80	11.80	880 *
NOVOST'IRSK, USSR	F01	54.80	83.00	2390 *
NOVOS'IRSK, USSR	F03	54.80	83.00	2398 *
NYDA, USSR	D01	66.60	73.00	2387 *
OKTYOMTSY, USSR	F01			2391 *
OKTYOMTSY, USSR	F03			2399 *
ONDREJOV, CZECHOSLOVAKIA	B14	49.92	14.98	804 *
OVEJUVO, BOLIVIA	B01	-16.00	291.00	454 *
PANSKA VES, CZECHOSLOVAKIA	B09	50.53	14.57	822 *
PARATUNKA, USSR	E03	52.58	158.14	788 *
PENN STATE U, USA	C03	40.82	282.13	775 *
PORT AUX FRANCAIS, KERGUELEN ISLANDS	D02	-49.44	70.42	306 *
PRUHONICE, CZECHOSLOVAKIA	B01	50.00	14.60	821 *

Table 4. Stations for Which No Response or Verification Has Been Received
(Contd)

STATION NAME	SUB DISC	GEOGRAPHIC		ITEM NO.
		LAT	LONG EAST	
SABHAWALA, INDIA	D01	30.37	77.80	493 *
SEOUL, REPUBLIC OF KOREA	B01	37.23	126.57	549 *
SEOUL, REPUBLIC OF KOREA	D01	37.23	126.57	550 *
SOGRA, USSR	B13	62.80	46.25	791 *
SVERDLOVSK, USSR	B01	56.43	58.57	2371 *
SVERDLOVSK, USSR	D01	56.43	58.57	866 *
SVERDLOVSK, USSR	F01	58.34	56.20	2392 *
SVERDLOVSK, USSR	F01	56.73	61.07	2393 *
SYOWA, ANTARCTICA	B06	-69.00	39.60	1142 *
TAIPEI, TAIWAN, CHINA	B11	25.20	121.50	1053 *
TASHKENT, USSR	A01			2360 *
TASHKENT, USSR	F01	41.33	69.61	594 *
TBILISI, USSR	F01	41.72	44.80	2395 *
TERRE ADELIE, ANTARCTICA	B08	-66.66	140.02	602 *
THULE, GREENLAND	D02	76.60	291.20	609 *
TRELEW, ARGENTINA	D01	-43.25	294.68	754 *
TSIMLJANSK, USSR	G01	47.70	42.00	1161 *
UGUT, USSR	D01	60.50	74.00	2388 *
UPICE, CZECHOSLOVAKIA	B14	50.30	16.01	799 *
VICTORIAS, PHILIPPINES	A16	10.90	123.07	661 *
VOSTOK, ANTARCTICA	E01	-78.40	106.90	881 *
ZVENIGOROD, USSR	G01	55.70	36.80	1162 *

ITEM:

DATE:

DISCIPLINE -----
STATION LATITUDE -----
STATION LONGITUDE -----
ALTERNATE NAMES -----

DATES OF OPERATION -----
OBSERVING SCHEDULE -----

INSTRUMENT DESCRIPTION -----

RAW DATA -----

DATA REDUCTION PRACTICE -----
REGULAR REDUCED DATA AVAILABLE AFTER -----
FORM OF REDUCED DATA -----

DATA ROUTINELY PUBLISHED -----

DATA SENT TO WDC-A -----
DATA SENT TO WDC-B -----
DATA SENT TO WDC-C -----

DATA AVAILABLE ON REQUEST -----
ADDRESS FOR INFORMATION ABOUT STATION -----

ADDRESS FOR INFORMATION ABOUT DATA -----

ADDITIONAL COMMENTS -----

Please return completed forms to: M. A. Shea
AFGL/PHP
Hanscom AFB, MA 01731
USA

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AFGL/PHP
Hanscom AFB, MA 01731
USA

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