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12831D LANCE MISSILE NUMBER 3306, ROUND NUMBER 323 ESL (2 NOVEM--ETC(U)
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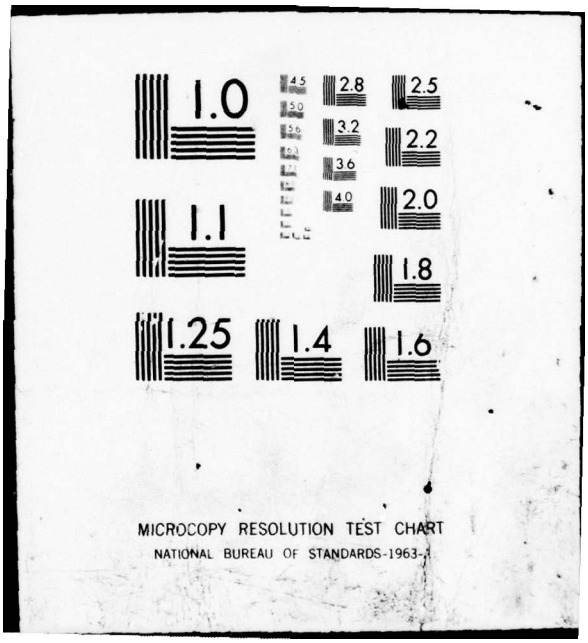
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March 1979

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LEVEL II

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METEOROLOGICAL DATA REPORT

12831D LANCE
MISSILE NO. 3306, ROUND NO. 323 ESL
(2 NOVEMBER 1978)

BY

WSMR METEOROLOGICAL TEAM

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

METEOROLOGICAL DATA GATHERED FOR THE LAUNCHING OF 12831D LANCE, MISSILE NUMBER 3306, ROUND NUMBER 323 ESL, ARE PRESENTED IN TABULAR FORM.

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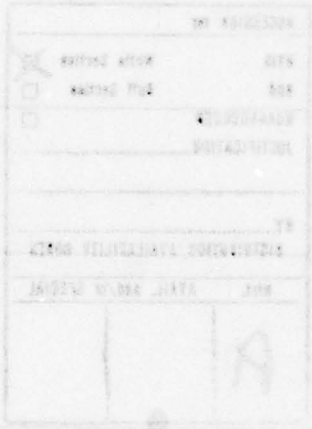

CONTENTS

TABLES PAGE

INTRODUCTION

12831D Lance, Missile Number 3306, Round Number 323 ESL, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1006 HRS MST, 2 November 1978. The scheduled launched time was 1000 HRS MST.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	3989	FEET/MSL
PRESSURE	889.2	MBS
TEMPERATURE	17.8	^{o}C
RELATIVE HUMIDITY	74	%
DEW POINT	13.1	^{o}C
DENSITY	1055	GM/M^3
WIND SPEED	CALM	MPH
WIND DIRECTION	CALM	DEGREES
CLOUD COVER	10	Sc

TABLE I. SURFACE OBSERVATION TAKEN AT LC-33
1010 HRS MST/2 NOVEMBER 1978.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	000	00
100	300	02
200	300	05
300	300	07
400	300	09
500	300	11
600	305	11
700	310	10
800	315	10
900	320	10
1000	325	10
1100	325	12
1200	325	14
1300	325	17
1400	325	19
1500	325	21
1600	324	21
1700	323	21
1800	322	21
1900	321	21
2000	320	21

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	323	20
2200	326	20
2300	329	19
2400	332	19
2500	335	19
2600	337	19
2700	339	19
2800	341	20
2900	343	21
3000	345	21
3100	BALLOON LOST	IN CLOUDS
3200		
3300		
3400		
3500		
2600		
3700		
3800		
3900		
4000		
4100		

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO.1
RELEASED FROM LC-33, AT 1000 HRS MST/2 NOVEMBER 1978
12831D LANCE, MISSILE NO. 3306, ROUND NO. 323 ESL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,302.67 Y = 185,283.13 Z = 3,989.47

APPROXIMATELY: 1 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	000	00
100	255	02
200	255	04
300	255	06
400	255	08
500	255	10
600	254	09
700	253	08
800	252	08
900	251	07
100	250	06
1100	260	06
1200	270	07
1300	280	07
1400	290	07
1500	300	08
1600	307	08
1700	314	09
1800	321	09
1900	328	10
2000	335	10

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	335	10
2200	335	09
2300	335	09
2400	335	08
2500	335	08
2600	336	08
2700	337	08
2800	338	08
2900	339	08
3000	340	08
3100	BALLOON LOST	IN CLOUDS
3200		
3300		
3400		
3500		
3600		
3700		
3800		
3900		
4000		
4100		

TABLE III. PILOT-BALLOON MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 1010 HRS MST/2 NOVEMBER 1978
12831D LANCE, MISSILE NO. 3306, ROUND NO. 323 ESL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,302.67 Y = 185,283.13 Z = 3,989,47

APPROXIMATELY: 1 MILE SHOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (SEC)	SPEED (MPH)	DIR DEG
-20		CALM
-10		CALM
-00		CALM
+10		CALM
+20		CALM
+30		CALM

TABLE IV. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 1 RELEASED FROM LC-33, AT 1010 HRS MST/2 NOVEMBER 1978 12831D LANCE/ROUND NUMBER 323 ESL

WSTM COORDINATES X = 485,874.29 Y = 185,958.90 Z = 4,018.74

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (SEC)	SPEED (MPH)	DIR DEG
-30		CALM
-20		CALM
-10		CALM
-00		CALM
+10		CALM
+20		CALM
+30		CALM

TABLE V. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 2
RELEASED FROM LC-33 AT 1010 HRS MST/2 NOVEMBER 1978
12831D LANCE/ROUND NUMBER 323 ESL

WSTM COORDINATES X = 485,874,93 Y = 186,012.00 Z = 4,033.57

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (SEC)	SPEED (MPH)	DIR DEG
-30		CALM
-20		CALM
-10		CALM
-00		CALM
+10		CALM
+20		CALM
+30		CALM

TABLE VI. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 3 RELEASED FROM LC-33, AT 1010 HRS MST/2 NOVEMBER 1978 12831D LANCE/ROUND NUMBER 323 ESL

WSTM COORDINATES X = 485,877.29 Y = 186,116.06 Z = 4,063.92

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 3989.00 FEET MSL
2 NOV. 78 0950 HRS MST
ASCENSION NO. 717

SIGNIFICANT LEVEL DATA
3960020717
WHITE SANDS
TABLE VII.

GEODETIC COORDINATES
32[illegible].043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
887.1	3989.0	16.1	12.1	77.0
850.0	5179.1	13.5	9.7	78.0
800.2	6849.0	12.2	8.3	77.0
768.6	7956.2	9.7	8.6	93.0
700.0	10499.7	6.5	5.3	92.0
677.0	11320.9	4.9	3.2	89.0
670.0	11679.7	5.3	.1	69.0
661.2	12034.7	4.7	-4.6	51.0
613.5	14025.7	.5	-18.2	23.0
605.1	14390.2	2.0	-26.4	10.0
590.6	15033.1	2.0	-25.3	11.0
565.4	16183.5	-.6	-25.6	13.0
500.0	19356.8	-9.5	-31.2	15.0
463.4	21272.9	-14.2	-33.8	17.0
441.4	22483.7	-15.5	-34.9	17.0
400.0	24900.7	-21.6	-36.7	24.0
372.6	26607.8	-25.6	-42.8	18.0
353.0	27892.5	-27.5	-44.4	18.0
334.0	29195.3	-30.4	-42.9	28.0
300.0	31675.4	-36.8	-49.2	26.0
250.0	35749.5	-46.2		
227.6	37783.3	-51.0		
200.0	40524.2	-55.9		
175.3	43253.1	-61.5		
150.0	46419.7	-64.0		
144.4	47187.5	-64.4		
136.6	48315.7	-61.2		
121.2	50741.8	-65.2		
111.8	52552.7	-63.3		
100.0	54623.6	-65.1		

STATION ALTITUDE 3989.00 FEET MSL
2 NOV. 78 [illegible]950 HRS MST
ASCENSION NO. 717

SIGNIFICANT LEVEL DATA
306002G717
WHITE SANDS

GEODETIC COORDINATES
32:40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
73.8	60680.2	-58.8		
70.3	61736.5	-44.7		
56.2	66159.0	-55.1		
50.0	68526.6	-62.6		
39.8	73247.5	-56.2		
35.9	79178.7	-56.8		
28.3	87806.4	-59.4		
16.9	91475.5	-46.6		

STATION ALTITUDE 3989.00 FEET MSL
2 NOV. 78 0950 HRS MST
ASCENSION NO. 717

UPPER AIR DATA
3066020717
WHITE SANDS
TABLE VIII.

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	887.1	16.1	12.1	77.0	1062.3	664.6	.0	.0	1.000301
4000.0	886.7	16.1	12.0	77.0	1061.7	664.5	153.1	.1	1.000300
4500.0	871.0	15.0	11.1	77.4	1047.0	663.2	153.1	2.8	1.000294
5000.0	855.5	13.9	10.1	77.8	1032.6	661.8	153.1	5.5	1.000287
5500.0	840.2	13.3	9.5	77.8	1016.5	661.1	153.1	8.2	1.000281
6000.0	825.1	12.9	9.0	77.5	999.7	660.6	156.2	10.6	1.000276
6500.0	810.4	12.5	8.6	77.2	983.2	660.1	161.9	12.9	1.000271
7000.0	795.8	11.9	8.4	79.2	967.6	659.4	161.9	14.3	1.000267
7500.0	781.5	10.7	8.6	86.4	953.8	658.2	158.9	15.4	1.000265
8000.0	767.4	9.6	8.6	93.0	940.1	656.9	163.2	15.2	1.000262
8500.0	753.4	9.0	7.9	92.8	925.2	656.2	170.1	15.3	1.000257
9000.0	739.7	8.4	7.3	92.6	910.5	655.4	179.5	16.3	1.000252
9500.0	726.2	7.8	6.6	92.4	896.0	654.6	186.9	17.7	1.000247
10000.0	713.0	7.1	6.0	92.2	881.8	653.8	192.6	18.9	1.000241
10500.0	700.0	6.5	5.3	92.0	867.8	653.1	197.9	20.2	1.000237
11000.0	687.1	5.5	4.0	90.2	855.1	651.8	208.0	22.2	1.000230
11500.0	674.5	5.1	1.8	79.3	841.2	651.1	216.3	24.6	1.000221
12000.0	662.1	4.8	-4.1	52.8	827.8	650.3	223.3	27.4	1.000213
12500.0	649.7	3.7	-7.2	44.5	815.8	648.9	226.6	29.9	1.000199
13000.0	637.6	2.7	-10.4	37.4	804.0	647.5	226.1	31.4	1.000193
13500.0	625.8	1.6	-13.9	30.4	792.4	646.2	224.3	31.8	1.000187
14000.0	614.1	.6	-18.0	23.4	780.9	644.8	221.9	31.5	1.000181
14500.0	602.6	2.0	-26.2	10.2	762.6	646.4	221.4	27.8	1.000173
15000.0	591.3	2.0	-25.4	10.9	748.3	646.4	221.5	27.8	1.000171
15500.0	580.2	.9	-25.4	11.8	737.1	645.1	224.8	26.4	1.000168
16000.0	569.3	-.2	-25.5	12.7	726.2	643.8	228.5	25.4	1.000166
16500.0	558.5	-1.5	-26.1	13.2	715.9	642.3	232.5	25.8	1.000163
17000.0	547.8	-2.9	-27.3	13.5	705.8	640.6	235.5	26.2	1.000161
17500.0	537.3	-4.3	-27.9	13.8	695.9	638.9	234.6	26.3	1.000158
18000.0	527.0	-5.7	-28.7	14.1	686.2	637.3	230.3	26.3	1.000156

UPPER AIR DATA
30.6340717
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
2 NOV. 78 [illegible]950 HRS MST
ASCENSION NO. 717

GEODETIC COORDINATES
32.4[illegible]343 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
18500.0	516.9	-7.1	-29.7	14.5	576.6	635.6	241.0	26.4	1.[illegible]153
19000.0	507.0	-8.5	-30.6	14.8	667.1	633.9	243.0	27.5	1.[illegible]151
19500.0	497.2	-9.8	-31.4	15.1	657.6	632.3	243.8	[illegible]	1.[illegible]149
20000.0	487.4	-11.1	-32.1	15.7	647.7	630.8	244.3	32.5	1.[illegible]147
20500.0	477.8	-12.3	-32.7	16.2	638.[illegible]	629.3	244.6	35.[illegible]	1.[illegible]144
21000.0	468.5	-13.5	-33.4	16.7	628.4	627.8	244.5	36.4	1.[illegible]142
21500.0	459.2	-14.4	-34.0	17.0	618.2	626.7	244.6	37.1	1.[illegible]140
22000.0	450.1	-15.0	-34.5	17.0	607.1	626.0	244.7	37.7	1.[illegible]137
22500.0	441.1	-15.5	-34.9	17.0	596.4	625.4	244.9	38.3	1.[illegible]135
23000.0	432.2	-16.8	-35.2	18.5	587.2	623.8	246.8	39.4	1.[illegible]133
23500.0	423.5	-18.1	-35.5	19.9	578.2	622.3	248.8	40.5	1.[illegible]131
24000.0	415.0	-19.3	-35.9	21.4	569.4	620.7	251.1	42.4	1.[illegible]128
24500.0	406.6	-20.6	-36.3	22.6	560.7	619.2	251.1	44.1	1.[illegible]126
25000.0	398.4	-21.8	-37.0	23.7	552.0	617.7	251.4	44.7	1.[illegible]124
25500.0	390.2	-23.0	-38.8	21.9	543.2	616.2	251.4	45.3	1.[illegible]122
26000.0	382.1	-24.2	-40.6	20.1	534.6	614.8	251.0	45.7	1.[illegible]120
26500.0	374.3	-25.3	-42.4	18.4	526.1	613.3	249.9	46.6	1.[illegible]118
27000.0	366.5	-26.2	-43.3	18.0	516.9	612.3	248.4	48.0	1.[illegible]116
27500.0	358.9	-26.9	-43.9	18.0	507.7	611.4	247.6	48.0	1.[illegible]114
28000.0	351.4	-27.7	-44.2	18.8	498.7	610.3	247.3	47.1	1.[illegible]112
28500.0	344.0	-28.9	-43.5	22.7	490.5	609.0	248.0	46.5	1.[illegible]110
29000.0	336.8	-30.0	-43.2	26.5	482.4	607.6	249.2	46.1	1.[illegible]108
29500.0	329.6	-31.2	-43.7	27.8	474.5	606.0	250.1	46.4	1.[illegible]106
30000.0	322.6	-32.5	-44.9	27.4	466.8	604.4	250.9	46.9	1.[illegible]105
30500.0	315.7	-33.8	-46.2	26.9	459.3	602.8	251.8	47.1	1.[illegible]103
31000.0	308.9	-35.1	-47.5	26.5	451.9	601.2	252.8	47.[illegible]	1.[illegible]101
31500.0	302.3	-36.3	-48.8	26.1	444.7	599.5	252.8	48.1	1.[illegible]
32000.0	295.7	-37.5	-50.6	23.9**	437.7	598.0	252.2	49.9	1.[illegible]98
32500.0	289.1	-38.7	-52.8	20.7**	429.6	596.5	251.8	52.1	1.[illegible]96
33000.0	282.7	-39.9	-55.1	17.5**	422.2	595.1	251.6	54.5	1.[illegible]94

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA
3C63020717
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
2 NOV. 78 0950 HRS MST
ASCENSION NO. 717

GEODETIC COORDINATES
32.40093 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
33500.0	276.5	-41.0	-57.7	14.4**	414.9	593.6	251.5	56.2	1.000093
34000.0	270.4	-42.2	-60.6	11.2**	407.7	592.1	251.8	56.6	1.000091
34500.0	264.4	-43.3	-64.1	8.5**	400.7	590.6	251.8	57.2	1.000089
35000.0	258.5	-44.5	-68.6	4.8**	393.8	589.1	251.1	58.1	1.000088
35500.0	252.8	-45.6	-76.7	1.6**	387.1	587.6	251.4	59.3	1.000086
36000.0	247.1	-46.8			380.3	586.1	251.4	63.2	1.000085
36500.0	241.5	-48.0			373.6	584.6	251.4	66.9	1.000083
37000.0	236.0	-49.2			367.0	583.1	251.7	68.8	1.000082
37500.0	230.6	-50.3			360.5	581.5	251.9	70.8	1.000080
38000.0	225.3	-51.4			353.9	580.1	252.3	72.3	1.000079
38500.0	220.0	-52.3			347.3	578.6	249.5	73.8	1.000077
39000.0	214.9	-53.2			340.8	577.0	248.7	74.7	1.000076
39500.0	209.9	-54.1			334.8	576.6	247.7	75.3	1.000074
40000.0	205.0	-55.0			327.3	575.5	246.7	75.2	1.000073
40500.0	200.2	-55.9			321.0	574.3	245.6	73.8	1.000071
41000.0	195.5	-56.9			314.8	572.9	244.5	72.7	1.000070
41500.0	190.8	-57.9			308.8	571.6	243.6	73.2	1.000069
42000.0	186.2	-58.9			302.9	570.2	242.7	73.8	1.000067
42500.0	181.8	-60.0			297.1	568.8	242.7	75.7	1.000066
43000.0	177.5	-61.0			291.4	567.5	243.0	77.8	1.000065
43500.0	173.2	-61.7			285.8	566.5	243.5	78.5	1.000064
44000.0	169.0	-62.1			278.9	566.0	244.4	77.9	1.000062
44500.0	164.9	-62.5			272.6	565.4	245.3	76.5	1.000061
45000.0	160.9	-62.9			266.5	564.9	246.1	71.6	1.000059
45500.0	156.9	-63.3			260.5	564.4	247.0	66.7	1.000058
46000.0	153.1	-63.7			254.7	563.9	247.1	62.6	1.000057
46500.0	149.4	-64.0			248.9	563.4	247.3	58.6	1.000055
47000.0	145.7	-64.3			243.1	563.0	246.4	55.7	1.000054
47500.0	142.2	-63.5			236.3	564.1	244.9	53.7	1.000053
48000.0	138.7	-62.1			229.6	566.0	243.3	51.9	1.000051

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA

STATION ALTITUDE 3969.00 FEET MSL
2 NOV. 78 0050 HRS MST
ASCENSION NO. 717

3060040717
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEAPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
48500.0	135.4	-61.5			222.8	566.8	241.3	5[illegible]	1.[illegible]
49000.0	132.1	-62.3			218.2	565.7	239.[illegible]	4[illegible]	1.[illegible]
49500.0	128.9	-63.2			213.8	564.6	237.2	46.1	1.[illegible]
50000.0	125.7	-64.0			209.4	563.4	236.8	43.1	1.[illegible]
50500.0	122.7	-64.8			205.1	562.3	236.4	41.1	1.[illegible]
51000.0	119.7	-64.9			201.2	562.2	238.5	37.[illegible]	1.[illegible]
51500.0	116.7	-64.4			194.8	562.9	241.9	34.[illegible]	1.[illegible]
52000.0	113.9	-63.9			189.4	563.6	245.3	31.6	1.[illegible]
52500.0	111.1	-63.4			184.5	564.3	247.6	31.3	1.[illegible]
53000.0	108.4	-63.7			180.2	563.8	250.1	29.[illegible]	1.[illegible]
53500.0	105.7	-64.1			176.2	563.2	253.2	27.9	1.[illegible]
54000.0	103.1	-64.6			172.2	562.7	248.6	26.9	1.[illegible]
54500.0	100.6	-65.[illegible]			168.4	562.1	246.9	25.8	1.[illegible]
55000.0	98.1	-65.3			164.5	561.6	244.9	25.6	1.[illegible]
55500.0	95.7	-65.6			160.7	561.2	242.9	25.4	1.[illegible]
56000.0	93.3	-65.9			156.9	560.8	241.3	25.2	1.[illegible]
56500.0	91.0	-66.2			153.2	560.4	241.0	25.1	1.[illegible]
57000.0	88.8	-66.6			149.7	560.0	241.8	25.[illegible]	1.[illegible]
57500.0	86.6	-66.9			146.2	559.6	241.5	24.4	1.[illegible]
58000.0	84.4	-67.2			142.8	559.1	243.5	23.2	1.[illegible]
58500.0	82.3	-67.5			139.4	558.7	245.6	22.1	1.[illegible]
59000.0	80.3	-67.3			136.2	558.3	243.4	21.2	1.[illegible]
59500.0	78.3	-68.1			133.[illegible]	557.9	252.1	18.[illegible]	1.[illegible]
60000.0	76.4	-68.4			129.9	557.5	256.7	16.[illegible]	1.[illegible]
60500.0	74.5	-68.7			126.9	557.1	260.8	13.4	1.[illegible]
61000.0	72.6	-67.6			123.1	558.0	266.2	10.8	1.[illegible]
61500.0	70.8	-65.6			118.9	561.2	275.0	8.3	1.[illegible]
62000.0	69.1	-64.7			115.5	562.4	293.1	7.9	1.[illegible]
62500.0	67.4	-64.8			112.7	562.4	311.1	8.4	1.[illegible]
63000.0	65.7	-64.8			109.9	562.3	325.5	9.2	1.[illegible]

UPPER AIR DATA
30600023717
WHITE SANDS

STATION ALTITUDE 39[illegible].00 FEET MSL
2 NOV. 78 [illegible]0 HRS MST
ASCENSION NO. 717

GEODETIC COORDINATES
32[illegible]943 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	64.1	-64.9			107.3	562.3	336.1	7.8	1.[illegible]024
64000.0	62.6	-64.9			104.6	562.2	352.8	6.7	1.[illegible]023
64500.0	61.0	-64.9			102.1	562.1	8.2	5.8	1.[illegible]023
65000.0	59.5	-65.0			99.6	562.1	22.5	4.2	1.[illegible]022
65500.0	58.1	-65.0			97.2	562.0	63.8	4.[illegible]	1.[illegible]022
66000.0	56.6	-65.1			94.8	561.9	82.[illegible]	4.3	1.[illegible]021
66500.0	55.3	-64.7			92.4	562.4	73.9	3.8	1.[illegible]021
67000.0	53.9	-64.2			89.9	563.1	62.5	3.4	1.[illegible]020
67500.0	52.6	-63.7			87.5	563.8	57.3	3.7	1.[illegible]019
68000.0	51.3	-63.2			85.1	564.5	41.7	4.4	1.[illegible]019
68500.0	50.1	-62.6			82.8	565.3	35.6	5.2	1.[illegible]018
69000.0	48.9	-62.0			80.6	566.2	20.8	5.9	1.[illegible]018
69500.0	47.7	-61.3			78.4	567.1	23.2	6.6	1.[illegible]017
70000.0	46.6	-60.6			76.3	568.0	18.9	7.3	1.[illegible]017
70500.0	45.5	-59.9			74.3	568.9	17.5	7.8	1.[illegible]017
71000.0	44.4	-59.2			72.3	569.8	16.2	8.3	1.[illegible]016
71500.0	43.3	-58.6			70.3	570.7	12.5	8.7	1.[illegible]016
72000.0	42.3	-57.9			68.4	571.6	3.5	8.3	1.[illegible]015
72500.0	41.3	-57.2			66.6	572.5	355.1	9.1	1.[illegible]015
73000.0	40.3	-56.5			64.8	573.4	352.3	9.4	1.[illegible]014
73500.0	39.3	-56.2			63.2	573.8	353.9	9.5	1.[illegible]014
74000.0	38.4	-56.3			61.7	573.7	355.4	9.6	1.[illegible]014
74500.0	37.5	-56.3			60.2	573.7	354.6	9.5	1.[illegible]013
75000.0	36.6	-56.4			58.8	573.6	349.4	9.2	1.[illegible]013
75500.0	35.7	-56.4			57.5	573.5	343.9	9.[illegible]	1.[illegible]013
76000.0	34.9	-56.5			56.1	573.5	338.2	8.9	1.[illegible]012
76500.0	34.1	-56.5			54.8	573.4	333.2	9.5	1.[illegible]012
77000.0	33.3	-56.6			53.5	573.3	322.2	10.6	1.[illegible]012
77500.0	32.5	-56.6			52.3	573.3	315.8	12.[illegible]	1.[illegible]012
78000.0	31.7	-56.7			51.1	573.2	31[illegible].8	13.4	1.[illegible]011

UPPER AIR DATA
3060220717
WHITE SANDS

STATION ALTITUDE 3999.00 FEET MSL
2 NOV. 78 -950 HRS MST
ASCENSION NO. 717

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
78500.0	31.0	-56.7			49.9	573.1	309.3	12.9	1.000011
79000.0	30.3	-56.8			48.7	573.0	307.5	12.1	1.000011
79500.0	29.6	-56.6			47.5	573.3	305.9	11.2	1.000011
80000.0	28.9	-56.2			46.3	573.8	304.6	10.3	1.000012
80500.0	28.2	-55.9			45.2	574.3	303.8	9.3	1.000013
81000.0	27.5	-55.4			44.1	574.8	303.6	8.2	1.000013
81500.0	26.9	-55.1			43.0	575.3	303.4	7.1	1.000013
82000.0	26.3	-54.7			41.9	575.8	304.3	6.0	1.000014
82500.0	25.7	-54.3			40.9	576.3	311.9	4.6	1.000009
83000.0	25.1	-54.0			39.8	576.8	325.9	3.3	1.000009
83500.0	24.5	-53.6			38.9	577.3	353.0	2.4	1.000009
84000.0	23.9	-53.2			37.9	577.7	344.9	2.1	1.000008
84500.0	23.4	-52.9			36.9	578.2	299.0	3.1	1.000008
85000.0	22.8	-52.5			36.0	578.7	262.0	5.1	1.000008
85500.0	22.3	-52.1			35.1	579.2	274.7	7.2	1.000008
86000.0	21.8	-51.7			34.3	579.7	285.3	8.6	1.000008
86500.0	21.3	-51.4			33.4	580.2	286.9	10.0	1.000007
87000.0	20.8	-51.0			32.6	580.7	289.8	11.4	1.000007
87500.0	20.3	-50.6			31.8	581.1	292.4	11.7	1.000007
88000.0	19.8	-50.2			31.0	581.7	294.5	12.0	1.000007
88500.0	19.4	-49.7			30.2	582.4	297.4	6.4	1.000007
89000.0	19.9	-49.2			29.4	583.0	301.7	6.8	1.000007
89500.0	18.5	-48.6			28.7	583.7			1.000006
90000.0	18.1	-48.1			28.0	584.4			1.000006
90500.0	17.7	-47.6			27.3	585.1			1.000006
91000.0	17.3	-47.1			26.6	585.7			1.000006

MRN SIGNIFICANT LEVEL DATA

STATION ALTITUDE 39[illegible].00 FEET MSL
2 NOV. 78 [illegible]950 HRS MST
ASCENSION NO. 717

3[illegible]2717
WHITE SANDS
TABLE IX.

GEODETIC COORDINATES
32.[illegible]943 LAT DEG
10[illegible].37333 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
2775.	9999.**	9999.**	-9999.**	-9999.**	99	-46.6	1.69[illegible]+1
2664.	294.	5.	-2.	5.	99	-50.4	2.[illegible]+1
2403.	307.	6.	-4.	5.	99	-56.8	3.[illegible]+1
2224.	353.	5.	-5.	1.	99	-56.2	3.98[illegible]+1
2081.	35.	3.	-2.	-2.	99	-62.6	5.[illegible]+1
2009.	80.	2.	-0.	-2.	99	-65.1	5.62[illegible]+1
1875.	283.	4.	-1.	4.	99	-64.7	7.[illegible]+1
1843.	262.	6.	1.	6.	99	-68.8	7.38[illegible]+1
1662.	246.	13.	5.	12.	99	-65.1	1.[illegible]+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3989.00 FEET MSL
2 NOV. 78 0950 HRS MST
ASCENSION NO. 717

MANDATORY LEVELS
3660020717
WHITE SANDS
TABLE X.

GEODETIC COORDINATES
32.4[illegible]043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5175.	13.6	9.7	78.	153.1	6.4
800.0	6850.	12.2	8.3	77.	162.9	14.1
750.0	8618.	8.9	7.8	93.	172.[illegible]	15.4
700.0	10489.	5.5	5.3	92.	197.7	20.2
650.0	12478.	3.7	-7.2	45.	226.4	29.8
600.0	14597.	2.[illegible]	-26.3	10.	221.4	29.4
550.0	16884.	-2.[illegible]	-26.8	13.	235.3	26.2
500.0	19331.	-9.5	-31.2	15.	243.6	29.3
450.0	21970.	-15.[illegible]	-34.5	17.	244.7	37.7
400.0	24859.	-21.[illegible]	-36.7	24.	251.3	44.5
350.0	28043.	-27.9	-44.1	20.	247.3	46.9
300.0	31612.	-36.8	-49.2	20.	252.6	48.7
250.0	35671.	-45.9			251.4	61.1
200.0	40426.	-55.9			246.6	73.7
175.0	43177.	-61.5			243.1	78.9
150.0	46294.	-64.[illegible]			247.[illegible]	59.6
125.0	49975.	-64.2			236.5	42.5
100.0	54454.	-65.1			246.6	25.8
80.0	58986.	-67.8			248.8	20.0
70.0	61523.	-64.7			282.2	8.3
60.0	64609.	-65.[illegible]			21.4	4.7
50.0	68268.	-62.6			35.7	5.2
40.0	72350.	-56.3			352.0	9.4
30.0	78940.	-56.8			317.1	11.8
25.0	82656.	-53.9			325.3	3.3
20.0	87395.	-50.4			293.4	10.8

•• AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

MRN MANDATORY LEVELS
3066020717
WHITE SANDS
TABLE XI.

STATION ALTITUDE 3969.00 FEET MSL
2 NOV. 78 [illegible] HRS MST
ASCENSION NO. 717

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	TEMPERATURE DEW PT DEP DEG C	AIR DEG C	PRESSURE MILLIBARS
2664.	293.	6.	-2.	5.	99	-50.4	2.[illegible]+1
2519.	325.	2.	-1.	1.	99	-53.9	2.[illegible]+1
2403.	307.	6.	-4.	5.	99	-56.8	3.[illegible]+1
2281.	353.	5.	-5.	1.	99	-56.3	4.[illegible]+1
2081.	36.	3.	-2.	-2.	99	-62.6	5.[illegible]+1
1969.	21.	2.	-2.	-1.	99	-65.[illegible]	6.[illegible]+1
1875.	282.	4.	-1.	4.	99	-64.7	7.[illegible]+1
1795.	249.	10.	4.	12.	99	-67.8	8.[illegible]+1
1663.	247.	13.	5.	12.	99	-65.1	1.[illegible]+2
1523.	237.	22.	12.	18.	99	-64.2	1.25[illegible]+2
1411.	247.	31.	12.	28.	99	-64.[illegible]	1.5[illegible]+2
1316.	243.	41.	18.	36.	99	-61.5	1.75[illegible]+2
1232.	246.	38.	16.	35.	99	-55.9	2.[illegible]+2
1087.	250.	31.	11.	30.	99	-46.2	2.5[illegible]+2
964.	253.	25.	7.	24.	12	-36.8	3.[illegible]+2
855.	247.	24.	9.	22.	16	-27.9	3.5[illegible]+2
758.	251.	23.	7.	22.	15	-21.6	4.[illegible]+2
670.	245.	19.	8.	18.	19	-15.[illegible]	4.5[illegible]+2
589.	244.	15.	7.	13.	22	-9.5	5.[illegible]+2
515.	235.	13.	8.	11.	24	-2.6	5.5[illegible]+2
445.	221.	15.	11.	10.	28	2.[illegible]	6.[illegible]+2
381.	227.	15.	11.	11.	11	3.7	6.5[illegible]+2
320.	198.	10.	10.	3.	31	6.5	7.[illegible]+2
263.	172.	8.	8.	-1.	31	8.9	7.5[illegible]+2
209.	163.	7.	7.	-2.	34	12.2	8.[illegible]+2
158.	153.	3.	3.	-1.	34	13.5	8.5[illegible]+2

STATION ALTITUDE 4395.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

SIGNIFICANT LEVEL DATA
3060230007
SW 70
TABLE XII.

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
873.9	4395.5	19.2	12.7	66.0
850.0	6175.5	15.9	10.7	71.0
819.8	6161.9	13.0	9.1	77.0
779.3	7581.1	11.9	7.4	74.0
711.6	10062.6	6.6	5.2	91.0
700.0	10506.8	6.2	3.9	85.0
656.7	12217.2	2.0	-.9	81.0
640.3	12869.5	2.8	-12.2	32.0
623.3	13607.5	4.5	-14.3	24.0
598.8	14677.1	2.7	-15.3	25.0
500.0	19359.4	-10.2	-23.3	33.0
446.8	22178.1	-16.2	-28.7	33.0
400.0	24861.9	-23.1	-32.1	43.0
375.8	26375.9	-26.6	-31.0	66.0
367.8	26866.0	-28.0	-35.0	51.0
362.5	27268.4	-29.0	-34.8	57.0
345.3	28369.0	-30.6	-41.5	33.0
300.0	31605.3	-38.4	-48.8	32.0
250.0	35657.0	-47.1		
219.3	38469.6	-54.2		
200.0	40400.6	-57.7		
150.0	46312.0	-62.9		
136.8	48169.0	-61.4		
123.3	50303.7	-63.5		
117.8	51233.4	-61.0		
100.0	54554.4	-65.7		
74.3	60461.5	-69.2		
70.0	61649.1	-65.1		
50.0	65440.7	-63.9		
43.8	71150.1	-59.5		

STATION ALTITUDE 4395.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

SIGNIFICANT LEVEL DATA
3060230007
SW 70

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT	REL.HUM. PERCENT
33.8	76512.5	-59.4		
30.0	79002.5	-55.8		
20.0	87637.2	-51.0		
12.3	98251.6	-45.1		
10.5	101744.0	-46.4		
10.0	102823.3	-44.2		
7.3	109873.2	-40.8		

STATION ALTITUDE 4395.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

UPPER AIR DATA
3060230007
SW 70
TABLE XIII.

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4395.5	873.9	19.2	12.7	66.0	1034.7	666.2	40.0	9.9	1.000296
4500.0	870.7	18.8	12.4	66.7	1032.5	667.7	45.6	8.6	1.000294
5000.0	855.3	16.6	11.1	69.9	1022.2	665.1	108.1	5.2	1.000288
5500.0	840.1	15.0	10.2	72.9	1010.2	663.1	157.6	10.0	1.000282
6000.0	825.2	13.5	9.4	75.9	997.3	661.4	171.1	17.1	1.000277
6500.0	810.4	12.7	8.7	76.3	982.3	660.5	176.5	24.5	1.000271
7000.0	795.9	12.4	8.1	75.2	966.1	660.0	177.1	25.5	1.000266
7500.0	781.6	12.0	7.5	74.2	950.2	659.5	176.3	23.5	1.000260
8000.0	767.4	11.0	7.1	76.9	936.2	658.3	179.6	22.4	1.000256
8500.0	753.5	9.9	6.7	80.3	922.7	657.1	186.5	22.1	1.000252
9000.0	739.8	8.9	6.3	83.7	909.4	655.8	194.0	22.4	1.000248
9500.0	726.4	7.8	5.8	87.1	896.4	654.6	201.9	23.8	1.000244
10000.0	713.2	6.7	5.3	90.6	883.5	653.3	207.7	25.7	1.000240
10500.0	700.2	6.2	3.9	85.1	869.3	652.6	210.2	28.1	1.000233
11000.0	687.2	5.0	2.5	83.8	857.3	651.0	211.8	30.8	1.000227
11500.0	674.5	3.8	1.1	82.7	845.4	649.5	212.1	33.6	1.000221
12000.0	662.0	2.5	-.3	81.5	833.7	648.0	213.5	36.0	1.000216
12500.0	649.8	2.3	-4.5	60.4	819.6	647.4	215.5	37.8	1.000204
13000.0	637.7	3.1	-12.5	30.8	803.1	647.9	217.5	39.0	1.000191
13500.0	625.8	4.2	-13.9	25.2	784.9	649.3	218.6	39.6	1.000185
14000.0	614.2	3.8	-14.7	24.4	771.5	648.8	220.3	39.8	1.000182
14500.0	602.8	3.0	-15.1	24.8	759.5	647.8	221.8	38.6	1.000179
15000.0	591.4	1.8	-15.8	25.6	746.4	646.4	223.3	37.4	1.000176
15500.0	580.1	.4	-16.6	26.4	737.9	644.7	225.2	35.5	1.000173
16000.0	569.1	-.9	-17.4	27.3	727.5	643.1	227.4	33.5	1.000170
16500.0	558.2	-2.3	-18.3	28.1	717.3	641.4	229.8	31.9	1.000167
17000.0	547.6	-3.7	-19.1	29.0	707.3	639.8	232.4	31.2	1.000165
17500.0	537.1	-5.1	-20.0	29.8	697.4	638.1	234.9	30.9	1.000162
18000.0	526.9	-6.5	-20.9	30.7	687.6	636.5	236.3	32.6	1.000159
18500.0	516.8	-7.8	-21.8	31.5	678.1	634.8	237.6	34.4	1.000157

UPPER AIR DATA
3060230007
SW 70

STATION ALTITUDE 4395.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
19000.0	507.0	-9.2	-22.7	32.4	668.6	635.1	237.1	38.9	1.000154
19500.0	497.2	-10.5	-23.6	33.0	659.0	631.6	236.7	43.3	1.000152
20000.0	487.4	-11.6	-24.6	33.0	648.6	630.3	236.7	45.2	1.000149
20500.0	477.7	-12.6	-25.5	33.0	638.5	629.0	240.5	47.0	1.000146
21000.0	468.3	-13.7	-26.4	33.0	628.4	627.7	245.1	47.8	1.000144
21500.0	459.1	-14.8	-27.4	33.0	618.6	626.4	249.5	49.0	1.000141
22000.0	450.0	-15.8	-28.3	33.0	608.9	625.1	252.1	50.9	1.000139
22500.0	441.0	-17.0	-29.0	34.2	599.5	623.8	254.5	52.9	1.000137
23000.0	432.0	-18.3	-29.6	36.0	590.3	622.1	254.2	56.8	1.000135
23500.0	423.3	-19.6	-30.2	37.9	581.2	620.5	253.8	60.8	1.000132
24000.0	414.7	-20.8	-30.9	39.7	572.4	618.9	250.8	65.5	1.000130
24500.0	406.3	-22.1	-31.6	41.6	563.8	617.4	248.2	70.3	1.000128
25000.0	398.0	-23.4	-32.0	44.8	554.9	615.8	246.9	71.2	1.000126
25500.0	389.8	-24.5	-31.4	52.5	546.0	614.4	245.8	71.5	1.000124
26000.0	381.7	-25.7	-31.1	60.2	537.2	612.9	245.7	72.1	1.000122
26500.0	373.8	-26.9	-31.9	62.4	528.7	611.4	246.1	72.8	1.000120
27000.0	366.0	-28.3	-34.9	53.0	520.7	609.7	245.8	73.7	1.000118
27500.0	358.3	-29.4	-36.2	51.3	511.9	608.3	243.1	74.8	1.000116
28000.0	350.8	-30.1	-39.1	40.8	502.6	607.4	241.1	74.6	1.000113
28500.0	343.3	-30.9	-41.8	33.0	493.7	606.4	238.9	73.5	1.000111
29000.0	336.0	-32.1	-43.0	32.8	485.5	604.9	237.5	73.1	1.000109
29500.0	328.7	-33.3	-44.1	32.7	477.5	603.4	237.1	73.1	1.000107
30000.0	321.7	-34.5	-45.2	32.5	469.6	601.8	236.9	74.0	1.000105
30500.0	314.8	-35.7	-46.3	32.3	461.8	600.3	237.0	76.0	1.000103
31000.0	308.0	-36.9	-47.5	32.2	454.2	598.8	237.2	78.1	1.000102
31500.0	301.4	-38.1	-48.6	32.0	446.7	597.2	237.5	80.2	1.000100
32000.0	294.7	-39.2	-50.5	28.9**	439.9	595.8	237.6	82.3	1.000098
32500.0	288.2	-40.3	-52.6	24.9**	431.1	594.5	238.2	84.0	1.000096
33000.0	281.8	-41.4	-55.0	21.0**	423.5	593.1	238.9	85.9	1.000095
33500.0	275.5	-42.5	-57.6	17.0**	416.0	591.7	240.1	88.5	1.000093

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA

STATION ALTITUDE 4095.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

3060230007
SW 70

GEODETIC COORDINATES
33.56888 LAT DEG
106.40406 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
34000.0	269.4	-43.5	-60.5	13.1**	408.7	590.3	241.2	91.7	1.000091
34500.0	263.4	-44.6	-64.1	9.1**	401.4	588.9	242.9	98.6	1.000089
35000.0	257.5	-45.7	-69.0	5.2**	394.4	587.6	244.4	105.6	1.000088
35500.0	251.8	-46.8	-79.1	1.2**	387.4	586.2	245.8	114.2	1.000086
36000.0	246.0	-48.0			380.6	584.6	247.2	123.1	1.000085
36500.0	240.4	-49.2			374.0	583.0	248.1	127.8	1.000083
37000.0	234.8	-50.5			367.4	581.3	248.9	128.3	1.000082
37500.0	229.4	-51.8			361.0	579.7	249.6	128.2	1.000080
38000.0	224.2	-53.0			354.7	578.0	249.8	125.0	1.000079
38500.0	219.0	-54.3			348.5	576.4	249.9	122.4	1.000078
39000.0	213.8	-55.2			341.7	575.2	249.4	126.6	1.000076
39500.0	208.8	-56.1			335.0	574.0	248.9	130.7	1.000075
40000.0	203.9	-57.0			328.5	572.8	248.5	134.3	1.000073
40500.0	199.0	-57.8			322.0	571.7	248.2	137.9	1.000072
41000.0	194.2	-58.2			314.9	571.1	247.7	137.7	1.000070
41500.0	189.6	-58.7			307.9	570.5	247.2	136.6	1.000069
42000.0	185.0	-59.1			301.1	570.0	246.8	134.1	1.000067
42500.0	180.6	-59.5			294.5	569.4	246.4	130.3	1.000066
43000.0	176.2	-60.0			288.0	568.8	246.0	126.3	1.000064
43500.0	172.0	-60.4			281.7	568.2	245.3	119.8	1.000063
44000.0	167.9	-60.9			275.5	567.6	244.6	113.3	1.000061
44500.0	163.8	-61.3			269.4	567.0	243.8	106.6	1.000060
45000.0	159.9	-61.7			263.5	566.4	242.3	99.8	1.000059
45500.0	156.0	-62.2			257.7	565.8	240.9	93.5	1.000057
46000.0	152.3	-62.6			252.0	565.3	240.1	89.0	1.000056
46500.0	148.6	-62.7			246.1	565.1	239.2	84.6	1.000055
47000.0	145.0	-62.4			239.7	565.6	238.6	82.5	1.000053
47500.0	141.5	-62.0			233.4	566.2	237.9	81.4	1.000052
48000.0	138.1	-61.6			227.3	566.7	237.7	80.7	1.000051
48500.0	134.7	-61.7			222.0	566.5	238.4	81.2	1.000049

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA
3060230007
SW 70

STATION ALTITUDE 4395.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

GEODETIC COORDINATES
33.30888 LAT DEG
106.40406 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
49000.0	131.5	-62.2			217.1	565.8	239.1	81.7	1.000048
49500.0	128.3	-62.7			212.3	565.2	241.5	78.1	1.000047
50000.0	125.2	-63.2			207.7	564.5	244.4	73.5	1.000046
50500.0	122.1	-63.0			202.4	564.8	247.6	68.7	1.000045
51000.0	119.2	-61.6			196.2	566.6	250.2	60.7	1.000044
51500.0	116.3	-61.4			191.2	566.9	253.6	52.9	1.000043
52000.0	113.4	-62.1			187.2	565.0	256.0	46.0	1.000042
52500.0	110.7	-62.8			183.3	565.0	256.1	39.8	1.000041
53000.0	108.0	-63.5			179.4	564.1	256.5	33.6	1.000040
53500.0	105.3	-64.2			175.6	563.1	255.0	29.6	1.000039
54000.0	102.8	-64.9			171.9	562.2	252.8	26.5	1.000038
54500.0	100.3	-65.6			168.3	561.2	249.9	23.6	1.000037
55000.0	97.8	-66.0			164.4	560.8	247.6	22.6	1.000037
55500.0	95.4	-66.3			160.6	560.4	245.6	21.6	1.000036
56000.0	93.0	-66.6			156.8	560.0	242.3	20.7	1.000035
56500.0	90.7	-66.9			153.1	559.6	240.3	18.6	1.000034
57000.0	88.4	-67.1			149.5	559.2	238.0	16.3	1.000033
57500.0	86.2	-67.4			146.0	558.8	234.9	14.1	1.000033
58000.0	84.1	-67.7			142.6	558.5	234.6	10.6	1.000032
58500.0	82.0	-68.0			139.3	557.9	236.6	6.5	1.000031
59000.0	80.0	-68.3			136.0	557.5	245.4	2.4	1.000030
59500.0	78.0	-68.6			132.8	557.1	26.8	2.6	1.000030
60000.0	76.0	-68.9			129.7	556.7	38.1	7.5	1.000029
60500.0	74.2	-69.1			126.6	556.5	40.4	12.5	1.000028
61000.0	72.3	-67.3			122.4	556.9	42.9	15.9	1.000027
61500.0	70.5	-65.6			118.4	561.2	44.6	19.2	1.000026
62000.0	68.8	-65.0			115.2	562.0	45.6	22.4	1.000026
62500.0	67.1	-64.9			112.3	562.1	46.4	23.2	1.000025
63000.0	65.5	-64.9			109.5	562.2	50.7	24.1	1.000024
63500.0	63.9	-64.8			106.8	562.4	52.9	24.8	1.000024

UPPER AIR DATA
3060230007
SW 70

STATION ALTITUDE 4595.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

GEODETIC COORDINATES
33.36688 LAT DEG
106.40406 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	62.3	-64.7			104.1	562.5	54.9	24.6	1.000023
64500.0	60.8	-64.6			101.5	562.6	56.9	24.5	1.000023
65000.0	59.3	-64.5			99.0	562.7	57.9	24.2	1.000022
65500.0	57.8	-64.4			96.5	562.8	57.0	23.4	1.000022
66000.0	56.4	-64.3			94.1	563.0	56.1	22.7	1.000021
66500.0	55.0	-64.2			91.6	563.1	54.6	21.7	1.000020
67000.0	53.7	-64.2			89.5	563.2	52.3	20.6	1.000020
67500.0	52.4	-64.1			87.3	563.3	49.8	19.5	1.000019
68000.0	51.1	-64.0			85.1	563.4	47.5	17.9	1.000019
68500.0	49.9	-63.8			83.0	563.7	45.1	15.9	1.000018
69000.0	48.7	-63.0			80.6	564.6	41.9	14.0	1.000018
69500.0	47.5	-62.2			78.4	565.9	38.3	13.1	1.000017
70000.0	46.3	-61.4			76.2	566.9	34.7	12.8	1.000017
70500.0	45.2	-60.6			74.1	568.0	31.0	12.6	1.000016
71000.0	44.1	-59.7			72.0	569.1	29.7	13.5	1.000016
71500.0	43.1	-59.5			70.2	569.4	29.8	14.9	1.000016
72000.0	42.0	-59.5			68.5	569.5	29.9	16.3	1.000015
72500.0	41.0	-59.5			66.9	569.5	30.5	17.1	1.000015
73000.0	40.1	-59.5			65.3	569.5	31.4	17.5	1.000015
73500.0	39.1	-59.5			63.7	569.5	32.2	17.9	1.000014
74000.0	38.2	-59.4			62.2	569.5	33.0	18.0	1.000014
74500.0	37.3	-59.4			60.7	569.5	33.7	17.3	1.000014
75000.0	36.4	-59.4			59.3	569.5	34.4	16.6	1.000013
75500.0	35.5	-59.4			57.9	569.5	35.2	15.9	1.000013
76000.0	34.6	-59.4			56.5	569.6	35.1	14.9	1.000013
76500.0	33.8	-59.4			55.1	569.6	34.6	13.7	1.000012
77000.0	33.0	-53.7			53.6	570.5	34.0	12.5	1.000012
77500.0	32.2	-58.0			52.2	571.5	33.5	11.7	1.000012
78000.0	31.5	-57.2			50.8	572.4	33.3	11.3	1.000011
78500.0	30.7	-56.5			49.4	573.4	33.1	10.9	1.000011

UPPER AIR DATA

STATION ALTITUDE 4595.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

3060230007
SW 70

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
79000.0	30.0	-55.8			48.1	574.3	32.9	10.5	1.000011
79500.0	29.3	-55.5			46.9	574.7	37.8	11.2	1.000010
80000.0	28.6	-55.2			45.8	575.1	42.4	12.0	1.000010
80500.0	28.0	-55.0			44.6	575.4	46.3	12.9	1.000010
81000.0	27.3	-54.7			43.6	575.8	49.8	13.3	1.000010
81500.0	26.7	-54.4			42.5	576.2	53.1	13.4	1.000009
82000.0	26.1	-54.1			41.5	576.5	56.4	13.6	1.000009
82500.0	25.5	-53.9			40.4	576.9	59.1	13.9	1.000009
83000.0	24.9	-53.6			39.5	577.3	63.0	14.2	1.000009
83500.0	24.3	-53.3			38.5	577.6	50.6	14.5	1.000009
84000.0	23.7	-53.0			37.5	578.0	36.6	14.3	1.000008
84500.0	23.2	-52.7			36.6	578.4	23.1	15.0	1.000008
85000.0	22.6	-52.5			35.7	578.7	12.2	15.7	1.000008
85500.0	22.1	-52.2			34.9	579.1	4.3	14.2	1.000008
86000.0	21.6	-51.9			34.0	579.5	354.8	13.0	1.000008
86500.0	21.1	-51.6			33.2	579.8	346.4	11.3	1.000007
87000.0	20.6	-51.4			32.4	580.2	339.4	8.5	1.000007
87500.0	20.1	-51.1			31.6	580.6	326.1	5.9	1.000007
88000.0	19.7	-50.8			30.8	580.9	323.2	4.9	1.000007
88500.0	19.2	-50.5			30.1	581.3	335.3	4.8	1.000007
89000.0	18.8	-50.2			29.4	581.6	347.1	4.9	1.000007
89500.0	18.4	-50.0			28.7	582.0	12.2	6.2	1.000006
90000.0	17.9	-49.7			28.0	582.4	29.9	8.8	1.000006
90500.0	17.5	-49.4			27.3	582.7	39.1	11.8	1.000006
91000.0	17.1	-49.1			26.7	583.1	45.4	13.6	1.000006
91500.0	16.8	-48.9			26.0	583.5	50.6	15.2	1.000006
92000.0	16.4	-48.6			25.4	583.8	54.7	16.9	1.000006
92500.0	16.0	-48.3			24.8	584.2	62.5	12.8	1.000006
93000.0	15.6	-48.0			24.2	584.5	78.7	8.7	1.000005
93500.0	15.3	-47.7			23.6	584.9	113.3	6.2	1.000005

UPPER AIR DATA

STATION ALTITUDE 4595.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

3060230007
SW 70

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
94000.0	14.9	-47.5			23.1	585.3	164.4	6.3	1.000005
94500.0	14.6	-47.2			22.5	585.6	193.5	10.0	1.000005
95000.0	14.3	-46.9			22.0	586.0	205.5	14.8	1.000005
95500.0	14.0	-46.6			21.5	586.3	212.3	17.0	1.000005
96000.0	13.6	-46.4			20.9	586.7	218.6	17.7	1.000005
96500.0	13.3	-46.1			20.4	587.1	224.4	18.6	1.000005
97000.0	13.0	-45.8			20.0	587.4	229.9	19.4	1.000004
97500.0	12.7	-45.5			19.5	587.8	235.3	19.6	1.000004
98000.0	12.4	-45.2			19.0	588.1	242.5	20.1	1.000004
98500.0	12.2	-45.2			18.6	588.2	248.3	20.8	1.000004
99000.0	11.9	-45.4			18.2	588.0	253.1	19.8	1.000004
99500.0	11.6	-45.6			17.8	587.7	258.4	18.5	1.000004
100000.0	11.4	-45.8			17.4	587.5	264.4	17.4	1.000004
100500.0	11.1	-45.9			17.0	587.2	270.1	16.4	1.000004
101000.0	10.9	-46.1			16.7	587.0	274.9	15.6	1.000004
101500.0	10.6	-46.3			16.3	586.8	280.3	14.8	1.000004
102000.0	10.4	-45.9			15.9	587.3	286.1	14.2	1.000004
102500.0	10.1	-44.9			15.5	588.6	277.4	14.9	1.000003
103000.0	9.9	-44.1			15.1	589.6	283.9	16.1	1.000003
103500.0	9.7	-43.9			14.7	589.9	281.7	17.6	1.000003
104000.0	9.5	-43.6			14.4	590.2	286.3	18.6	1.000003
104500.0	9.3	-43.4			14.1	590.5	251.6	18.9	1.000003
105000.0	9.1	-43.2			13.7	590.8	247.4	19.4	1.000003
105500.0	8.9	-42.9			13.4	591.1	243.3	19.9	1.000003
106000.0	8.7	-42.7			13.1	591.4	247.3	19.6	1.000003
106500.0	8.5	-42.4			12.8	591.8	251.4	19.8	1.000003
107000.0	8.3	-42.2			12.5	592.1	255.5	19.9	1.000003
107500.0	8.1	-41.9			12.2	592.4			1.000003
108000.0	7.9	-41.7			11.9	592.7			1.000003
108500.0	7.8	-41.5			11.7	593.0			1.000003

UPPER AIR DATA

STATION ALTITUDE 4595.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

3060230007
SW 70

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
109000.0	7.6	-41.2			11.4	595.3			1.000003
109500.0	7.4	-41.0			11.1	595.6			1.000002

MRN SIGNIFICANT LEVEL DATA

STATION ALTITUDE 4395.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

3060230007
SW 70
TABLE XIV.

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
3330.	9999.**	9999.**	-9999.**	-9999.**	99	-40.8	7.300+0
3117.	272.	8.	-0.	8.	99	-44.2	1.000+1
3085.	283.	7.	-2.	7.	99	-46.4	1.050+1
2979.	245.	11.	4.	10.	99	-45.1	1.230+1
2859.	320.	3.	-2.	2.	99	-51.0	2.000+1
2798.	33.	5.	-5.	-3.	99	-55.8	3.000+1
2323.	35.	7.	-6.	-4.	99	-59.4	3.380+1
2160.	30.	7.	-6.	-4.	99	-59.5	4.380+1
2076.	45.	8.	-6.	-6.	99	-63.9	5.000+1
1873.	45.	10.	-7.	-7.	99	-65.1	7.000+1
1837.	40.	6.	-5.	-4.	99	-69.2	7.430+1
1658.	250.	12.	4.	11.	99	-65.7	1.000+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4395.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

MANDATORY LEVELS
3060230007
SW 70
TABLE XV.

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5172.	15.9	10.7	71.	133.1	6.2
800.0	6853.	12.5	8.3	7o.	177.3	26.0
750.0	8620.	9.7	6.6	8i.	1o8.3	22.1
700.0	10497.	6.2	3.9	8o.	210.2	28.2
650.0	12477.	2.3	-4.4	61.	215.4	37.7
600.0	14606.	2.8	-15.3	2o.	222.1	38.3
550.0	16892.	-3.4	-18.9	29.	231.9	31.3
500.0	19336.	-10.2	-23.3	3o.	236.8	42.0
450.0	21969.	-15.8	-28.3	33.	252.1	50.9
400.0	24842.	-23.1	-32.1	4o.	247.2	71.1
350.0	28005.	-30.2	-39.4	4o.	240.9	74.5
300.0	31544.	-3o.4	-48.6	3z.	237.3	80.6
250.0	35581.	-47.1			246.2	11o.7
200.0	40306.	-57.7			248.2	137.1
175.0	43055.	-60.1			245.8	124.4
150.0	46190.	-62.9			239.6	86.4
125.0	49686.	-63.2			244.4	73.5
100.0	54389.	-65.7			249.8	23.5
80.0	58810.	-66.3			244.3	2.6
70.0	61442.	-65.1			44.9	20.0
60.0	64526.	-64.6			57.8	24.5
50.0	68180.	-63.9			45.5	16.3
40.0	72742.	-59.5			31.4	17.5
30.0	78671.	-55.8			32.9	10.6
25.0	82499.	-53.6			53.7	14.1
20.0	87234.	-51.0			322.0	5.5
15.0	93424.	-47.5			149.1	5.8
10.0	102276.	-44.2			272.5	15.6

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

MRN MANDATORY LEVELS
3060230007
SW 70
TABLE XVI.

STATION ALTITUDE 4595.50 FEET MSL
2 NOV. 78 1130 HRS MST
ASCENSION NO. 7

GEODETIC COORDINATES
33.36888 LAT DEG
106.40406 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	WIND DATA DIRECTION DEG (TN)	SPEED MPS	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
3117.	273.	8.	-0.	8.	99	-44.2	1.000+1
2848.	149.	3.	3.	-2.	99	-47.5	1.500+1
2659.	322.	3.	-2.	2.	99	-51.0	2.000+1
2515.	54.	7.	-4.	-6.	99	-53.6	2.500+1
2398.	33.	5.	-5.	-3.	99	-55.8	3.000+1
2217.	31.	9.	-6.	-5.	99	-59.5	4.000+1
2078.	46.	8.	-6.	-6.	99	-63.9	5.000+1
1967.	58.	15.	-7.	-11.	99	-64.6	6.000+1
1873.	45.	10.	-7.	-7.	99	-65.1	7.000+1
1793.	244.	1.	1.	1.	99	-68.3	8.000+1
1658.	250.	12.	4.	11.	99	-65.7	1.000+2
1521.	244.	38.	16.	34.	99	-63.2	1.250+2
1408.	240.	44.	22.	38.	99	-62.9	1.500+2
1312.	246.	64.	26.	58.	99	-60.1	1.750+2
1229.	248.	71.	26.	65.	99	-57.7	2.000+2
1085.	246.	60.	24.	55.	99	-47.1	2.500+2
961.	237.	41.	22.	35.	10	-36.4	3.000+2
854.	241.	36.	19.	34.	09	-30.2	3.500+2
757.	247.	37.	14.	34.	09	-23.1	4.000+2
670.	252.	26.	8.	25.	13	-15.8	4.500+2
589.	237.	22.	12.	18.	13	-10.2	5.000+2
515.	232.	16.	10.	13.	16	-3.4	5.500+2
445.	222.	20.	15.	13.	18	2.8	6.000+2
380.	215.	19.	16.	11.	07	2.3	6.500+2
320.	210.	14.	13.	7.	02	6.2	7.000+2
263.	186.	11.	11.	2.	03	9.7	7.500+2
209.	177.	13.	13.	-1.	04	12.5	8.000+2
156.	133.	3.	2.	-2.	05	15.9	8.500+2