

AD-A052 189 ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 16/1
128308 LANCE MISSILE NO. 3331, ROUND NO. 307 ESL (12 JANUARY 19--ETC(U)
JAN 78

ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 16/1
12830B LANCE MISSILE NO. 3331, ROUND NO. 307 ESL (12 JANUARY 19--ETC(U)
JAN 78

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DR-959
January 1978

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METEOROLOGICAL DATA REPORT

12830B LANCE
MISSILE NO. 3331, ROUND NO. 307 ESL
(12 January 1978)

BY

WSMR METEOROLOGICAL TEAM

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

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Meteorological data rept.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) ✓ Meteorological data gathered for the launching of the 12830B Lance, Missile Number 3331, Round Number 307 ESL, are presented in tabular form. ↑		

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INTRODUCTION

12830B Lance, Missile Number 3331, Round Number 307 ESL, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1616 HRS MST, 12 January 1978. The scheduled launch time was 1530 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	3,990	FEET/MSL
PRESSURE	880.7	MBS
TEMPERATURE	14.8	°C
RELATIVE HUMIDITY	22	%
DEW POINT	-6.6	°C
DENSITY	1,062	GM/M ³
WIND SPEED	12	MPH
WIND DIRECTION	310	DEGREES
CLOUD COVER	1	Sc

TABLE I. SURFACE OBSERVATIONS TAKEN AT LC-33,
1617 HRS MST/12 JANUARY 1978.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	290	10
100	288	10
200	287	12
300	286	15
400	291	19
500	298	21
600	291	18
700	282	18
800	291	18
900	298	21
1000	290	19
1100	293	17
1200	291	21
1300	290	17
1400	292	19
1500	297	20
1600	295	20
1700	284	20
1800	290	18
1900	295	18
2000	297	18

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	296	19
2200	293	19
2300	307	17
2400	311	16
2500	315	15
2600	317	17
2700	313	20
2800	316	21
2900	317	22
3000	318	22
3100	320	23
3200	327	22
3300	322	23
3400	320	25
3500	327	25
3600	324	24
3700	318	23
3800	323	24
3900	324	25
4000	324	23

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASED FROM LC-33,
AT 1555 HRS MST/12 January 1978
12830B LANCE, MISSILE NO. 3331, ROUND NO. 307 ESL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 815 FEET SSE OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	290	10	2100	286	18
100	282	08	2200	285	16
200	275	11	2300	284	17
300	296	14	2400	288	19
400	285	15	2500	289	16
500	284	16	2600	288	17
600	280	15	2700	289	18
700	280	18	2800	283	15
800	280	18	2900	289	17
900	280	18	3000	284	18
1000	273	16	3100	285	18
1100	275	19	3200	289	15
1200	278	20	3300	294	16
1300	281	18	3400	291	15
1400	280	20	3500	290	16
1500	282	18	3600	289	16
1600	283	18	3700	287	17
1700	281	19	3800	292	18
1800	287	21	3900	295	19
1900	289	18	4000	304	18
2000	283	19	4100	298	18

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASED FROM LC-33,
AT 1605 HRS MST/12 JANUARY 1978
12830B LANCE, MISSILE NO. 3331, ROUND NO. 307 ESL

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 815 FEET SSE OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	299	22
4300	299	21
4400	305	22
4500	301	25
4600	308	24
4700	306	23
4800	308	25
4900	305	26
5000	309	25
5100	MISSING	MISSING
5200	"	"
5300	"	"
5400	"	"
5500	"	"
5600	"	"
5700	"	"
5800	"	"
5900	"	"
6000	"	"
6100	"	"
6200	"	"
6300	"	"
6400	"	"
6500	"	"

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6600	MISSING	MISSING
6700	"	"
6800	"	"
6900	"	"
7000	"	"
7100	"	"
7200	"	"
7300	"	"
7400	"	"
7500	"	"
7600	"	"
7700	"	"
7800	352	43
7900	349	44
8000	348	48
8100	344	48
8200	343	53
8300	342	53
8400	342	54
8500	341	55
8600	339	56
8700	338	58
8800	337	58
8900	337	58

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	334	64
9100	335	62
9200	336	60
9300	336	60
9400	336	60
9500	329	63
9600	330	64
9700	331	65
9800	333	65
9900	332	63
10000	331	63
10100	328	65

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10200	326	66
10300	327	66
10400	328	67
10500	327	67
10600	326	67
10700	325	67
10800	324	68
10900	325	71
11000	325	71
11100	324	71
11200	323	71

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 4051.00 FEET MSL
12 JAN. 73 1430 HRS MST
ASCENSION NO. 15

SIGNIFICANT LEVEL DATA
0120030015
JALLEN
TABLE IV.

GEODETIC COORDINATES
33.15712 LAT DEG
106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
873.4	4051.0	14.3	-5.0	25.0
867.8	4389.5	12.2	-4.6	30.0
853.0	4956.5	9.9	-6.4	31.0
729.8	9032.3	-5	-13.4	37.0
725.0	9205.0	-1.5	-14.9	35.0
720.2	9378.8	-6	-15.6	31.0
700.0	10123.5	-1.1	-18.5	25.0
663.8	11505.9	-3.4	-22.5	21.0
627.0	12974.1	-7.0	-26.7	19.0
543.0	16583.6	-16.7	-32.4	24.0
519.0	17690.3	-19.4	-34.3	24.0
500.0	18598.9	-19.6	-35.4	23.0
480.0	19588.3	-21.4	-37.3	21.0
465.4	20334.8	-21.6	-37.5	22.0
400.0	23923.1	-30.1	-43.7	25.0
378.4	25213.9	-33.3	-41.7	42.0
323.6	28763.5	-39.3	-49.3	35.0
300.0	30447.2	-42.7		
257.0	33802.0	-51.1		
250.0	34388.6	-51.8		
236.0	35605.2	-53.5		
217.2	37351.9	-53.8		
211.3	37894.7	-50.5		
200.0	39113.2	-48.4		
194.4	39721.5	-48.4		
177.0	41726.5	-52.0		
159.2	42630.4	-52.2		
156.8	44277.3	-55.8		
150.0	45193.3	-56.5		
138.8	46804.9	-57.2		

STATION ALTITUDE 4051.00 FEET MSL
 12 JAN. 73 1430 4RS MST
 ASCENSION NO. 15

SIGNIFICANT LEVEL DATA
 0120030015
 JALLEN
 TABLE IV. (CONT)

GEODETIC COORDINATES
 33.15712 LAT DEG
 106.49511 LON DEG

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM.
ALTITUDE		AIR	DEWPOINT	PERCENT
MILLIBARS	MSL FEET	DEGREES CENTIGRADE		
124.3	48977.2	-62.1		
112.0	51147.9	-64.9		
100.0	53401.2	-65.7		
82.6	57210.9	-63.8		
70.0	60507.7	-65.5		
63.2	62527.3	-67.7		
57.0	64577.0	-63.1		
53.8	65731.5	-64.9		
50.0	67195.3	-62.5		

STATION ALTITUDE 4051.00 FEET MSL
 12 JAN. 73 1430 4RS MST
 ASCENSION NO. 15

UPPER AIR DATA
 0120030015
 JAL-EEV
 TABLE V.

GEODETIC COORDINATES
 33.15712 LAT DEG
 106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	SOIJD KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
4251.0	878.4	14.3	-5.0	25.0	1050.3	661.7		315.0	12.0	1.000250
4500.0	864.3	11.8	-5.1	30.2	1054.9	658.2		311.4	14.0	1.000250
5000.0	846.6	9.8	-6.5	31.1	1043.1	655.9		308.5	16.3	1.000250
5500.0	832.7	3.5	-7.3	31.8	1028.5	654.3		306.3	18.5	1.000245
6000.0	817.5	7.2	-8.1	32.5	1014.1	652.8		304.7	21.0	1.000242
6500.0	802.3	5.0	-9.0	33.3	999.9	651.3		305.1	24.5	1.000233
7000.0	787.4	4.7	-9.8	34.0	986.0	649.8		307.1	28.0	1.000234
7500.0	772.7	3.1	-10.7	34.7	972.2	648.3		312.3	25.3	1.000230
8000.0	756.5	2.1	-11.5	35.5	958.7	646.8		319.3	22.4	1.000226
8500.0	741.5	.9	-12.4	36.2	945.4	645.3		327.3	23.3	1.000222
9000.0	730.7	-4	-13.3	37.0	932.3	643.7		333.6	27.4	1.000219
9500.0	715.7	-7	-16.1	30.0	915.7	643.4		358.1	31.5	1.000213
10000.0	703.3	-1.0	-18.0	26.0	899.6	642.9		341.4	36.1	1.000206
10500.0	689.7	-1.7	-19.5	23.9	884.9	642.1		343.4	40.1	1.000201
11000.0	676.8	-2.6	-21.1	22.5	870.8	641.0		344.4	43.2	1.000200
11500.0	664.0	-3.1	-22.5	21.0	855.9	640.0		345.3	46.2	1.000195
12000.0	651.2	-4.6	-23.9	20.3	844.3	638.6		345.6	48.9	1.000193
12500.0	638.7	-5.3	-25.3	19.6	831.9	637.1		345.0	51.5	1.000189
13000.0	626.4	-7.1	-26.7	19.0	819.7	635.6		344.8	54.6	1.000186
13500.0	614.0	-8.1	-27.4	19.7	807.6	634.0		342.3	57.7	1.000183
14000.0	601.9	-9.8	-28.2	20.4	795.8	632.4		341.0	61.0	1.000180
14500.0	590.0	-11.1	-29.0	21.1	784.1	630.8		337.3	62.4	1.000173
15000.0	578.4	-12.4	-29.8	21.6	772.6	629.1		334.7	64.0	1.000175
15500.0	567.0	-13.3	-30.5	22.5	761.3	627.5		332.5	55.7	1.000172
16000.0	555.8	-15.1	-31.4	23.2	750.2	625.9		332.2	67.2	1.000170
16500.0	544.3	-16.5	-32.3	23.9	739.2	624.2		332.5	59.5	1.000167
17000.0	533.3	-17.7	-33.3	24.0	727.9	622.7		333.3	73.3	1.000161
17500.0	523.1	-18.9	-34.4	24.0	716.6	621.2		332.8	76.2	1.000162
18000.0	512.5	-19.5	-35.0	23.7	705.5	620.6		330.3	78.5	1.000159
18500.0	502.0	-19.6	-35.3	23.1	689.6	620.4		329.1	80.0	1.000155

STATION ALTITUDE 4051.00 FEET MSL
 12 JAN. 73 1430 HRS MST
 ASCENSION NO. 15

JOPER AIR DATA
 0120030015
 JAL-5V
 TABLE V. (CONT)

GEODETIC COORDINATES
 33.15712 LAT DEG
 106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
19000.0	491.3	-20.3	-36.3	22.2	677.5	619.5	327.3	327.3	80.5	1.000152
19500.0	481.8	-21.2	-37.6	21.2	666.1	618.4	326.2	326.2	82.3	1.000150
20000.0	471.9	-21.5	-37.5	21.6	653.2	618.1	324.7	324.7	84.9	1.000147
20500.0	462.2	-22.0	-37.8	22.1	640.9	617.5	323.2	323.2	87.9	1.000144
21000.0	452.5	-23.2	-38.5	22.6	630.5	616.0	321.3	321.3	90.3	1.000142
21500.0	443.1	-24.4	-39.5	23.0	620.3	614.5	320.5	320.5	93.5	1.000139
22000.0	433.9	-25.5	-40.3	23.4	610.3	613.1	319.4	319.4	96.3	1.000137
22500.0	424.8	-26.7	-41.2	23.8	600.5	611.6	318.4	318.4	99.1	1.000135
23000.0	415.0	-27.9	-42.0	24.2	590.8	610.1	317.5	317.5	101.8	1.000133
23500.0	407.3	-29.1	-42.9	24.5	581.3	608.7	316.4	316.4	104.0	1.000130
24000.0	396.8	-30.3	-43.5	26.0	571.9	607.2	315.3	315.3	106.1	1.000128
24500.0	390.2	-31.5	-42.5	32.6	562.5	605.6	314.2	314.2	105.7	1.000125
25000.0	381.9	-32.8	-41.9	39.2	553.4	604.1	313.1	313.1	106.9	1.000124
25500.0	373.7	-33.3	-42.4	41.4	543.8	602.7	312.4	312.4	104.4	1.000122
26000.0	365.5	-34.7	-43.4	40.4	534.0	601.6	311.7	311.7	100.6	1.000120
26500.0	357.5	-35.7	-44.5	39.5	524.4	600.4	311.5	311.5	98.1	1.000113
27000.0	349.6	-36.6	-45.5	38.5	515.0	599.2	311.6	311.6	96.6	1.000115
27500.0	342.1	-37.5	-46.5	37.5	505.7	593.1	311.3	311.3	100.3	1.000113
28000.0	334.7	-38.4	-47.7	36.5	496.6	596.9	312.0	312.0	104.8	1.000111
28500.0	327.4	-39.3	-48.7	35.5	487.7	595.8	312.1	312.1	108.2	1.000109
29000.0	320.2	-40.2	-51.0	30.1**	478.8	594.6	312.1	312.1	110.4	1.000107
29500.0	313.1	-41.1	-55.2	19.7**	469.9	593.5	312.1	312.1	110.5	1.000105
30000.0	306.1	-41.9	-61.8	9.3**	461.2	592.4	312.2	312.2	110.7	1.000103
30500.0	299.3	-42.3			452.7	591.2	312.2	312.2	110.3	1.000101
31000.0	292.4	-44.1			444.8	589.6	312.4	312.4	111.6	1.000099
31500.0	285.3	-45.3			437.0	583.0	312.7	312.7	112.7	1.000097
32000.0	279.3	-46.6			429.4	586.4	313.4	313.4	114.9	1.000096
32500.0	272.9	-47.3			422.0	584.8	314.1	314.1	117.2	1.000094
33000.0	266.7	-49.1			414.6	583.1	314.5	314.5	123.1	1.000092
33500.0	260.5	-50.3			407.5	581.5	314.9	314.9	129.1	1.000091

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

STATION ALTITUDE 4001.00 FEET MSL
12 JAN. 78 1430 HRS MST
ASCENSION NO. 15

UPPER AIR DATA
J120030015
JALLEN
TABLE V. (CONT)

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA		INDEX OF REFRACTION
					DIRECTION DEGREES(TN)	SPEED KNOTS	
34000.0	254.6	-51.3		399.9	301.9	134.1	1.000089
34500.0	248.7	-52.0		391.7	290.3	145.5	1.000097
35000.0	242.9	-52.7		383.7			1.000085
35500.0	237.2	-53.4		375.9			1.000081
36000.0	231.6	-53.6		367.5			1.000082
36500.0	226.2	-53.7		359.0			1.000083
37000.0	220.9	-53.7		350.7			1.000078
37500.0	215.7	-52.9		341.1			1.000075
38000.0	210.7	-50.3		329.3			1.000073
38500.0	205.8	-47.4		320.5			1.000071
39000.0	201.1	-48.6		311.9			1.000069
39500.0	196.4	-43.4		304.5			1.000063
40000.0	191.9	-48.9		298.1			1.000066
40500.0	187.5	-49.3		292.4			1.000065
41000.0	183.1	-50.7		286.8			1.000064
41500.0	178.9	-51.5		281.3			1.000063
42000.0	174.7	-52.1		275.3			1.000061
42500.0	170.5	-52.2		269.0			1.000060
43000.0	166.6	-52.9		263.6			1.000059
43500.0	162.7	-54.0		258.7			1.000053
44000.0	158.9	-55.2		253.9			1.000057
44500.0	155.1	-55.0		248.8			1.000055
45000.0	151.4	-55.3		243.3			1.000054
45500.0	147.8	-56.6		237.8			1.000053
46000.0	144.3	-55.3		232.4			1.000052
46500.0	140.9	-57.1		227.1			1.000051
47000.0	137.5	-57.5		222.2			1.000049
47500.0	134.2	-58.8		218.0			1.000049
48000.0	130.9	-59.9		213.9			1.000043
48500.0	127.7	-61.0		209.8			1.000047

XX WIND DATA INVALID DUE TO MISSING RAD AZIMUTH AND ELEVATION ANGLES.

UPPER AIR DATA
0120030015
JALLEN
TABLE V. (CONT)

STATION ALTITUDE 4051.00 FEET MSL
12 JAN. 73 1430 IRS MST
ASCENSION NO. 15

GEOMETRIC ALTITUDE 4051.00 FEET MSL
12 JAN. 73 1430 IRS MST
ASCENSION NO. 15

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF WIND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
49000.0	124.7	-52.1		205.3	565.9			1.000045
49500.0	121.6	-62.8		201.3	565.1			1.000045
50000.0	118.5	-63.4		197.0	564.2			1.000044
50500.0	115.7	-64.1		192.7	563.3			1.000043
51000.0	112.3	-64.7		189.6	562.5			1.000042
51500.0	110.0	-65.0		184.2	562.0			1.000041
52000.0	107.3	-65.2		179.8	561.8			1.000040
52500.0	104.6	-65.4		175.4	561.5			1.000039
53000.0	102.0	-65.5		171.2	561.3			1.000038
53500.0	99.5	-65.7		167.1	561.2			1.000037
54000.0	97.0	-65.4		162.7	561.5			1.000036
54500.0	94.5	-65.2		158.5	561.9			1.000035
55000.0	92.3	-64.9		154.4	562.2			1.000034
55500.0	90.0	-64.7		150.4	562.5			1.000033
56000.0	87.6	-64.4		146.5	562.9			1.000033
56500.0	85.5	-64.2		142.7	563.2			1.000032
57000.0	83.5	-63.9		139.0	563.5			1.000031
57500.0	81.4	-63.7		135.5	563.2			1.000030
58000.0	79.4	-64.2		132.4	563.1			1.000029
58500.0	77.4	-64.5		129.3	562.8			1.000029
59000.0	75.5	-64.7		126.2	562.4			1.000026
59500.0	73.5	-65.0		123.2	562.1			1.000024
60000.0	71.8	-65.2		120.3	561.7			1.000027
60500.0	70.0	-65.5		117.5	561.4	251.1	29.2	1.000025
61000.0	68.3	-66.0		114.9	560.7	258.7	23.2	1.000026
61500.0	66.5	-65.5		112.3	559.9	254.7	17.3	1.000025
62000.0	64.9	-67.1		109.8	559.2	250.9	13.6	1.000024
62500.0	63.3	-67.7		107.3	558.4	198.5	13.5	1.000024
63000.0	61.7	-66.6		104.1	559.8	180.2	15.1	1.000023
63500.0	60.2	-65.5		101.0	561.4	173.2	15.1	1.000022

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4051.00 FEET MSL
 12 JAN. 76
 ASCENSION NO. 15

UPPER AIR DATA
 0120030015
 JALLEN
 TABLE V. (CONT)

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
64000.0	58.7	-64.4			97.9	562.9		166.2	15.3	1.000022
64500.0	57.2	-63.3			95.0	564.4		151.7	13.3	1.000021
65000.0	55.6	-63.8			92.8	563.7		156.7	12.5	1.000021
65500.0	54.4	-64.5			90.9	562.7				1.000020
66000.0	53.1	-64.5			88.6	562.8				1.000020
66500.0	51.3	-63.7			86.1	563.5				1.000019
67000.0	50.5	-62.9			83.7	564.9				1.000019

STATION ALTITUDE 4051.00 FEET MSL
 12 JAN. 73 1430 IRS MST
 ASCENSION NO. 15

MANDATORY LEVELS
 0120030015
 JALLEN
 TABLE VI.

GEODETIC COORDINATES
 33.15712 LAT DEG
 106.49511 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4956.	9.9	-6.4	31.	308.7	16.1
800.0	6595.	5.8	-9.1	33.	305.3	25.2
750.0	8314.	1.4	-12.1	36.	324.6	22.6
700.0	10124.	-1.1	-18.6	25.	342.1	37.3
650.0	12051.	-4.7	-24.0	20.	345.7	49.2
600.0	14097.	-10.0	-28.3	21.	340.3	51.3
550.0	16273.	-15.8	-31.9	24.	332.1	68.1
500.0	18607.	-19.6	-35.4	23.	328.7	80.2
450.0	21156.	-23.5	-38.9	23.	321.4	91.8
400.0	23945.	-30.1	-43.7	25.	315.3	106.0
350.0	27020.	-36.5	-45.5	39.	311.6	97.1
300.0	30479.	-42.7			312.2	110.8
250.0	34431.	-51.8			290.5	145.1
200.0	39170.	-48.4			9999.0	9999.0XX
175.0	42034.	-52.1			9999.0	9999.0XX
150.0	45277.	-56.5			9999.0	9999.0XX
125.0	49039.	-62.0			9999.0	9999.0XX
100.0	53515.	-65.7			9999.0	9999.0XX
80.0	57987.	-64.1			9999.0	9999.0XX
70.0	60660.	-65.5			259.6	25.2
60.0	63720.	-65.4			167.4	15.3
50.0	67385.	-62.5				

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

XX WIND DATA INVALID DUE TO MISSING RAJ AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 4395.50 FEET MSL
12 JAN. 78
ASCENSION NO. 1

SIGNIFICANT LEVEL DATA
0120230001
SW PO
TABLE VII.

GEODETIC COORDINATES
33.36888 LAT NFG
106.40406 LON NFG

PRESSURE GEOMETRIC		TEMPERATURE		REF. HUM.
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
867.0	4395.5	13.6	-7.7	22.0
850.0	4943.3	11.1	-6.2	29.0
716.3	9449.5	.5	-16.3	27.0
700.0	10127.0	-5.6	-18.0	24.0
643.6	12301.3	-5.0	-24.4	20.0
526.3	17372.8	-17.2	-32.9	24.0
500.0	18628.0	-19.0	-34.4	24.0
479.3	19654.5	-21.4	-36.5	24.0
465.8	20344.4	-21.7	-36.8	24.0
423.3	22634.1	-25.8	-40.3	24.0
400.0	23967.8	-29.4	-42.0	28.0
389.3	24599.6	-31.1	-42.0	33.0
381.1	25093.1	-31.9	-39.0	49.0
340.3	27692.5	-35.7	-45.3	36.0
328.8	28471.0	-39.3	-47.7	36.0
317.8	29234.6	-30.0	-49.2	36.0
300.0	30516.0	-42.6		
250.0	34470.2	-51.1		
239.8	35354.3	-52.2		
221.3	37047.3	-53.9		
204.3	38752.8	-52.1		
200.0	39185.4	-40.9		
191.3	40141.3	-47.6		
176.3	41901.0	-48.6		
152.2	45023.7	-53.0		

GEODETIC COORDINATES
33.3688A LAT NFG
106.40406 LON NFG

UPPER AIR DATA
0120230001
SW 70
TABLE VIII.

STATION ALTITUDE 4395.50 FEET MSL
12 JAN. 78 1550 HRS MST
ASCENSION NO. 1

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE					DIRECTION DEGREES (TN)	SPEED KNOTS	
4395.5	867.0	13.6	-7.7	22.0	1051.7	440.2	360.0		22.0	1.000250
4500.0	863.7	13.1	-7.3	23.3	1049.5	449.7	357.2		21.5	1.000250
5000.0	848.2	10.9	-6.4	29.0	1038.3	457.2	342.1		20.0	1.000249
5500.0	832.6	9.6	-7.4	29.4	1024.2	455.6	326.0		20.1	1.000245
6000.0	817.2	8.2	-8.4	29.8	1010.2	454.0	311.2		21.6	1.000241
6500.0	802.1	6.9	-9.4	30.2	996.4	452.4	302.6		24.2	1.000236
7000.0	787.3	5.5	-10.4	30.6	982.9	450.8	308.3		26.3	1.000232
7500.0	772.8	4.2	-11.4	31.0	969.0	449.2	314.4		28.7	1.000229
8000.0	758.5	2.8	-12.5	31.4	956.4	447.6	325.0		31.4	1.000225
8500.0	744.5	1.5	-13.5	31.8	943.5	445.9	333.4		34.9	1.000221
9000.0	730.7	.6	-14.8	30.4	928.8	444.9	337.8		38.7	1.000217
9500.0	716.9	.4	-16.5	26.8	912.1	444.6	341.5		42.7	1.000212
10000.0	703.4	-.4	-18.2	24.6	897.7	443.7	342.9		47.2	1.000207
10500.0	690.0	-1.4	-19.6	23.3	883.8	442.5	343.7		51.8	1.000203
11000.0	676.9	-2.4	-20.9	22.4	870.2	441.3	343.9		56.5	1.000200
11500.0	664.0	-3.4	-22.3	21.5	856.9	440.1	342.5		61.5	1.000196
12000.0	651.3	-4.4	-23.6	20.6	843.8	438.8	341.2		66.4	1.000193
12500.0	638.7	-5.5	-24.7	20.2	830.9	437.5	339.8		70.9	1.000189
13000.0	626.2	-6.7	-25.5	20.6	818.2	436.1	338.1		74.8	1.000186
13500.0	613.9	-7.9	-26.3	20.9	805.8	434.6	336.5		78.7	1.000183
14000.0	601.8	-9.1	-27.2	21.3	793.6	433.2	335.2		81.1	1.000180
14500.0	589.9	-10.3	-28.0	21.7	781.5	431.7	334.0		83.3	1.000177
15000.0	578.3	-11.5	-28.8	22.1	769.7	430.3	333.0		87.0	1.000175
15500.0	567.0	-12.7	-29.7	22.5	758.1	428.8	332.2		93.1	1.000172
16000.0	555.8	-13.9	-30.5	22.9	746.0	427.4	331.5		99.3	1.000169
16500.0	544.9	-15.1	-31.4	23.3	735.4	425.9	330.5		105.6	1.000166
17000.0	534.2	-16.3	-32.2	23.7	724.3	424.4	329.5		112.1	1.000164
17500.0	523.6	-17.4	-33.0	24.0	712.9	423.1	328.4		117.1	1.000161
18000.0	513.0	-18.1	-33.6	24.0	700.5	422.2	327.0		120.8	1.000158
18500.0	502.6	-18.8	-34.3	24.0	688.3	421.4	325.7		124.5	1.000155

GEODETIC COORDINATES
33.3638 LAT NFG
106.40406 LON NFG

WIND DATA
0120230001
SR 70
TABLE VIII. (CONT)

STATION ALTITUDE 4095.50 FEET MSL
12 JAN. 78
1550 HRS MST
ASCENSION NO. 1

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY G/CM ³ ALTER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION DEGREES (TN)	SPED KNOTS	INDEX OF REFRACTION
19000.0	492.4	-19.9	24.0	677.1	620.1	324.3	125.9	1.000153
19500.0	482.4	-21.0	24.0	656.4	618.6	323.0	127.3	1.000150
20000.0	472.5	-21.6	24.0	654.1	618.0	321.6	126.9	1.000147
20500.0	462.8	-22.0	24.0	641.7	617.5	320.2	124.8	1.000144
21000.0	453.2	-22.9	24.0	630.7	616.4	319.0	124.1	1.000142
21500.0	443.8	-23.0	24.0	619.9	615.5	318.0	124.2	1.000139
22000.0	434.7	-24.7	24.0	609.5	614.2	317.0	127.1	1.000137
22500.0	425.7	-25.6	24.0	598.8	613.1	316.0	131.7	1.000135
23000.0	416.5	-26.8	25.1	589.2	611.5			1.000132
23500.0	408.0	-28.1	25.6	580.1	609.8			1.000130
24000.0	399.4	-29.5	28.3	571.0	608.2			1.000128
24500.0	391.0	-30.6	32.2	562.0	606.5			1.000126
25000.0	382.6	-31.7	46.0	552.1	605.3			1.000124
25500.0	374.4	-32.5	47.0	541.9	604.4			1.000122
26000.0	366.3	-33.2	44.5	531.6	603.5			1.000120
26500.0	358.4	-34.0	42.0	522.0	602.6			1.000117
27000.0	350.7	-34.7	39.5	512.5	601.6			1.000115
27500.0	343.2	-35.4	37.0	502.5	600.7			1.000113
28000.0	335.7	-36.7	36.0	494.0	609.0			1.000111
28500.0	328.4	-38.4	36.0	487.2	607.0			1.000109
29000.0	321.1	-39.4	36.0	478.9	605.6			1.000107
29500.0	314.0	-40.5	28.5**	470.1	604.3			1.000105
30000.0	307.0	-41.5	14.5**	461.0	602.9			1.000103
30500.0	300.2	-42.6	.4**	453.6	601.6			1.000101
31000.0	293.4	-43.6		445.3	600.2			1.000099
31500.0	286.7	-44.7		437.2	598.8			1.000097
32000.0	280.2	-45.3		429.3	597.4			1.000096
32500.0	273.6	-46.3		421.5	596.0			1.000094
33000.0	267.5	-47.9		413.8	594.6			1.000092
33500.0	261.4	-49.0		406.3	593.2			1.000091

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

GEODETIC COORDINATES
33.3688A LAT NFG
166.40406 LON NFG

UPPLER AIR DATA
0120230001
SW 70
TABLE VIII. (CONT)

STATION ALTITUDE +335.50 FEET MSL
12 JAN. 78
ASCENSION NO. 1
1550 HRS MSL

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
34000.0	255.5	-50.1		399.0	441.8			1.000029
34500.0	249.6	-51.1		391.7	440.5			1.000027
35000.0	243.8	-51.9		383.7	439.7			1.000025
35500.0	238.1	-52.3		375.7	438.9			1.000024
36000.0	232.6	-52.8		367.6	438.2			1.000022
36500.0	227.1	-53.4		360.0	437.6			1.000020
37000.0	221.9	-53.9		352.3	436.9			1.000018
37500.0	216.6	-53.4		343.4	437.5			1.000016
38000.0	211.5	-52.9		334.5	436.2			1.000015
38500.0	206.6	-52.3		325.9	438.9			1.000013
39000.0	201.8	-50.8		316.1	440.9			1.000010
39500.0	197.1	-49.1		306.5	443.1			1.000008
40000.0	192.6	-47.9		297.9	444.8			1.000006
40500.0	188.1	-47.4		290.9	444.8			1.000005
41000.0	183.3	-46.1		284.3	444.4			1.000003
41500.0	179.6	-45.4		278.4	444.1			1.000002
42000.0	175.5	-43.8		272.4	443.6			1.000001
42500.0	171.4	-49.0		267.1	442.5			1.000009
43000.0	167.4	-50.3		261.9	441.4			1.000008
43500.0	163.5	-51.3		256.8	440.2			1.000007
44000.0	159.7	-52.2		251.8	439.1			1.000006
44500.0	156.0	-53.0		246.9	438.0			1.000005
45000.0	152.4	-53.9		242.1	436.9			1.000004

STATION ALTITUDE 4395.50 FEET MSL
12 JAN. 78
ASCENSION I.O. 1

MANDATORY LEVELS
0120230001
SW 70
TABLE IX.

GEODETIC COORDINATES
33.36988 LAT NFG
106.40406 LON NFG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
550.0	4942.	11.1	-6.2	29.	343.9	20.1	
600.0	5500.	0.7	-9.0	30.	303.7	24.6	
750.0	8911.	2.0	-13.1	32.	320.0	33.5	
700.0	10120.	-0.6	-18.0	24.	343.2	48.4	
650.0	12050.	-4.5	-23.7	20.	341.1	67.0	
600.0	14105.	-9.3	-27.3	21.	334.9	61.6	
550.0	16291.	-14.5	-31.0	23.	330.9	103.1	
500.0	18637.	-19.0	-34.4	24.	325.3	125.0	
450.0	21187.	-23.2	-38.0	24.	318.0	124.1	
400.0	23936.	-29.4	-42.0	26.			
350.0	27075.	-34.5	-43.7	39.			
300.0	30543.	-42.6					
250.0	34513.	-51.1					
200.0	39240.	-49.9					
175.0	42120.	-45.9					

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

GEODETIC COORDINATES
32.43343 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA
0120020029
WHITE SANDS
TABLE X.

STATION ALTITUDE 3989.00 FEET MSL
12 JAN. 73
ASCENSION NO. 29

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM.
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
883.8	3989.0	14.0	-0.2	24.0
850.0	4972.2	11.2	-4.5	33.0
700.0	10154.1	-2.8	-12.3	46.0
684.0	10753.2	-4.6	-15.8	41.0
665.4	11465.3	-3.5	-22.1	22.0
618.6	13342.9	-7.2	-24.7	23.0
543.9	16732.9	-13.9	-30.5	23.0
500.0	18668.8	-18.3	-34.2	23.0
468.8	20232.9	-22.2	-37.2	24.0
446.2	21418.7	-24.0	-38.7	24.0
430.0	22301.3	-24.9	-31.9	52.0
415.8	23100.2	-25.6	-34.7	42.0
400.0	24015.0	-28.0	-38.1	37.0
347.2	27294.7	-35.4	-45.3	35.0
309.0	29925.2	-43.2	-50.7	31.0
300.0	30582.8	-42.0		
250.0	34532.1	-52.5		
214.2	37744.7	-60.1		
200.0	39149.9	-58.5		
186.8	40563.7	-55.4		
174.2	42039.4	-49.5		
150.0	45192.0	-56.4		
113.8	50835.7	-62.8		
100.0	53420.2	-65.7		
86.6	56258.1	-58.1		
70.0	60414.8	-69.6		
62.2	62704.2	-71.2		
50.0	66995.4	-63.7		
30.0	77291.7	-60.4		
20.0	85613.6	-55.6		

STATION ALTITUDE 3989.00 FEET MSL
 12 JAN. 73 1645 HRS MST
 ASCENSION NO. 29

SIGNIFICANT LEVEL DATA
 0120020029
 WHITE SANDS
 TABLE X. (CONT)

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
17.8 88037.0	-54.5	

UPPER AIR DATA
J120020029
WHITE SANDS
TABLE XI.

STATION ALTITUDE 3939.00 FEET MSL
12 JAN. 78 1645 HRS MST
ASCENSION NO. 29

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3989.0	680.8	14.0	-6.2	24.0	1066.8	660.7	300.0	9.9	1.000255
4000.0	880.4	14.0	-6.2	24.1	1066.5	660.7	299.9	9.9	1.000255
4500.0	864.7	12.5	-5.1	28.7	1052.4	659.1	294.8	11.9	1.000254
5000.0	849.1	11.1	-4.5	33.1	1039.5	657.5	291.3	13.9	1.000252
5500.0	833.4	9.3	-5.2	34.3	1024.2	655.9	288.5	15.0	1.000243
6000.0	817.9	8.4	-5.9	35.6	1010.1	654.3	289.8	15.7	1.000244
6500.0	802.7	7.1	-5.7	36.8	996.2	652.7	294.1	14.0	1.000240
7000.0	787.8	5.7	-7.4	38.1	982.5	651.1	299.2	12.9	1.000236
7500.0	773.2	4.4	-8.2	39.3	969.0	649.5	304.4	12.7	1.000232
8000.0	758.8	3.0	-9.0	40.6	955.7	647.9	309.7	12.8	1.000228
8500.0	744.3	1.7	-9.9	41.9	942.7	646.3	314.3	13.2	1.000224
9000.0	730.9	.3	-10.7	43.1	929.8	644.7	320.6	14.3	1.000221
9500.0	717.4	-1.0	-11.5	44.4	917.2	643.1	327.5	16.7	1.000217
10000.0	704.1	-2.4	-12.5	45.6	904.7	641.5	334.0	21.5	1.000214
10500.0	690.7	-3.8	-14.5	43.1	892.5	639.7	338.3	28.8	1.000209
11000.0	677.5	-4.2	-17.5	34.4	876.9	639.1	340.8	36.6	1.000203
11500.0	664.5	-3.5	-22.1	22.0	853.2	639.8	341.7	44.5	1.000197
12000.0	651.7	-4.6	-22.8	22.3	844.8	638.7	340.4	48.5	1.000193
12500.0	639.2	-5.5	-23.5	22.6	831.6	637.5	339.1	51.9	1.000190
13000.0	626.9	-6.5	-24.3	22.8	818.7	636.3	337.4	54.2	1.000187
13500.0	614.8	-7.5	-25.0	23.0	805.8	635.1	335.3	56.7	1.000184
14000.0	602.7	-8.5	-25.8	23.0	793.0	633.9	334.0	59.6	1.000181
14500.0	590.9	-9.5	-25.7	23.0	780.3	632.7	332.1	62.4	1.000173
15000.0	579.3	-10.5	-27.5	23.0	767.9	631.5	330.0	64.2	1.000175
15500.0	567.9	-11.5	-28.4	23.0	755.7	630.3	328.0	66.2	1.000172
16000.0	556.7	-12.5	-29.2	23.0	743.7	629.1	325.7	67.2	1.000169
16500.0	545.3	-13.4	-30.1	23.0	731.9	627.9	323.4	68.3	1.000165
17000.0	535.0	-14.5	-31.0	23.0	720.3	626.6	322.2	68.4	1.000163
17500.0	524.3	-15.6	-32.0	23.0	709.0	625.2	321.4	68.2	1.000160
18000.0	513.7	-16.3	-32.9	23.0	697.9	623.9	321.4	68.4	1.000153

STATION ALTITUDE 3937.00 FEET MSL
 12 JAN. 78
 ASCENSION NO. 29

UPPER AIR DATA
 0120020029
 WHITE SANDS
 TABLE XI. (CONT)

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37733 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA		INDEX OF REFRACTION
					DIRECTION DEGREES (TN)	SPEED KNOTS	
16500.0	503.4	-17.9	23.0	687.0	321.8	68.8	1.000155
19000.0	493.2	-17.1	23.2	676.2	321.5	69.7	1.000152
19500.0	483.2	-20.4	23.5	665.7	320.9	70.7	1.000150
20000.0	473.3	-21.5	23.9	655.4	319.1	71.7	1.000148
20500.0	463.6	-22.6	24.0	644.5	317.2	73.0	1.000145
21000.0	454.1	-23.4	24.0	633.1	314.9	75.5	1.000142
21500.0	444.7	-24.1	26.6	621.8	313.0	77.8	1.000140
22000.0	435.5	-24.5	42.4	610.1	311.7	79.4	1.000138
22500.0	426.4	-25.1	49.5	598.6	311.0	80.1	1.000136
23000.0	417.5	-25.5	43.3	587.2	310.5	80.4	1.000133
23500.0	408.8	-26.6	39.8	577.6	310.6	81.8	1.000130
24000.0	400.3	-28.0	37.1	563.6	310.3	83.7	1.000128
24500.0	391.7	-29.1	36.7	559.0	310.8	85.6	1.000126
25000.0	383.4	-30.2	36.4	549.7	310.8	87.5	1.000124
25500.0	375.2	-31.3	35.1	540.4	311.1	88.1	1.000121
26000.0	367.2	-32.5	35.8	531.4	311.4	88.2	1.000119
26500.0	359.3	-33.5	35.5	522.5	312.2	88.3	1.000117
27000.0	351.6	-34.7	35.2	513.8	313.1	88.3	1.000115
27500.0	344.1	-35.3	34.7	504.9	313.3	89.7	1.000113
28000.0	336.5	-36.7	33.9	495.7	314.5	92.1	1.000111
28500.0	329.1	-37.5	33.2	486.7	314.3	96.8	1.000109
29000.0	321.9	-38.5	32.4	477.9	315.1	101.6	1.000107
29500.0	314.9	-39.4	31.6	469.3	315.0	106.3	1.000105
30000.0	308.0	-40.4	27.5**	460.9	314.8	108.7	1.000103
30500.0	301.1	-41.3	3.9**	453.4	314.2	106.0	1.000101
31000.0	294.3	-43.1		445.6	313.7	102.1	1.000099
31500.0	287.5	-44.4		437.9	313.4	95.9	1.000097
32000.0	281.0	-45.7		430.4	313.4	91.1	1.000096
32500.0	274.5	-47.0		423.0	313.9	87.8	1.000094
33000.0	268.3	-48.3		415.7	314.1	84.7	1.000093

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

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
0120020029
WHITE SANDS
TABLE XI. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
12 JAN. 73
ASCENSION NO. 29 1645 HRS MST

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOJN KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
33500.0	262.2	-49.5		403.5	582.5	314.1	81.9	1.0000391
34000.0	256.2	-50.9		401.5	580.5	313.7	77.9	1.0000389
34500.0	250.4	-52.2		394.8	579.1	313.2	73.6	1.0000388
35000.0	244.4	-53.4		387.6	577.5	312.4	71.3	1.0000385
35500.0	238.6	-54.6		380.5	575.9	311.5	68.5	1.0000385
36000.0	233.0	-55.9		373.5	574.3	309.9	73.5	1.0000383
36500.0	227.4	-57.1		366.7	572.7	308.4	79.1	1.0000382
37000.0	222.0	-58.3		360.0	571.0	306.5	89.1	1.0000380
37500.0	216.7	-59.5		353.4	569.4	305.0	99.7	1.0000379
38000.0	211.5	-59.3		345.4	569.0	303.4	106.7	1.0000377
38500.0	206.4	-59.2		336.2	569.8	301.9	113.0	1.0000375
39000.0	201.5	-53.7		327.2	570.5	300.4	115.2	1.0000373
39500.0	196.6	-57.7		318.0	571.8	298.8	115.6	1.0000371
40000.0	192.0	-55.5		303.8	573.2	297.5	116.4	1.0000369
40500.0	187.4	-55.5		300.0	574.7	296.3	117.5	1.0000367
41000.0	183.0	-53.7		293.5	577.1	297.3	123.5	1.0000365
41500.0	178.7	-51.7		281.1	579.7	298.5	129.2	1.0000363
42000.0	174.5	-49.3		272.2	582.3	300.2	128.7	1.0000361
42500.0	170.4	-50.6		266.8	581.2	301.5	123.3	1.0000359
43000.0	165.4	-51.7		261.3	579.8	302.3	106.7	1.0000353
43500.0	162.5	-52.8		256.9	578.4	303.1	90.4	1.0000357
44000.0	158.7	-53.3		252.1	576.9	303.5	74.8	1.0000355
44500.0	155.0	-54.9		247.4	575.5	303.8	61.5	1.0000355
45000.0	151.4	-55.0		242.8	574.1	302.5	56.1	1.0000354
45500.0	147.8	-56.7		237.9	573.1	300.9	51.3	1.0000353
46000.0	144.2	-57.3		232.7	572.3	298.3	50.3	1.0000352
46500.0	140.7	-57.9		227.7	571.6	295.6	49.5	1.0000351
47000.0	137.3	-58.4		222.8	570.8	295.5	53.0	1.0000350
47500.0	134.0	-59.0		218.0	570.1	295.7	56.5	1.0000349
48000.0	130.7	-59.6		213.3	569.3	296.7	64.4	1.0000347

J22R AIR DATA

STATION ALTITUDE 3989.00 FEET MSL
12 JAN. 73
ASCENSION NO. 29

GEODETIC COORDINATES
32.40043 LAT 225
106.37033 LON DEG

0120020029
WHITE SANDS
TABLE XI. (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOJND		WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS				
48500.0	127.5	-53.2			203.7	563.5		297.5	71.7		1.0000315
49000.0	124.5	-60.7			204.2	567.8		297.6	76.2		1.0000345
49500.0	121.5	-61.3			197.8	567.1		298.1	78.3		1.0000314
50000.0	118.6	-61.9			195.5	566.3		298.9	79.5		1.0000344
50500.0	115.7	-62.4			191.2	565.5		299.3	78.5		1.0000313
51000.0	112.9	-63.0			187.1	564.8		300.9	77.2		1.0000342
51500.0	110.1	-63.5			183.0	564.0		301.1	72.4		1.0000311
52000.0	107.4	-64.1			178.9	563.3		301.1	66.5		1.0000340
52500.0	104.7	-64.7			175.0	562.5		300.5	63.5		1.0000339
53000.0	102.1	-65.2			171.1	561.8		300.0	61.5		1.0000336
53500.0	99.5	-65.3			167.3	561.0		298.5	59.9		1.0000337
54000.0	97.1	-66.2			163.4	560.5		297.1	58.5		1.0000336
54500.0	94.7	-65.5			159.7	559.9		294.3	55.1		1.0000335
55000.0	92.3	-67.0			156.0	559.3		291.8	51.2		1.0000335
55500.0	90.0	-67.2			152.4	558.7		291.3	52.0		1.0000334
56000.0	87.7	-67.9			143.7	558.2		292.4	55.9		1.0000333
56500.0	85.5	-68.2			145.4	557.7		295.1	59.5		1.0000332
57000.0	83.1	-63.4			141.8	557.5		299.1	63.2		1.0000332
57500.0	81.3	-68.5			138.4	557.3		300.5	49.4		1.0000331
58000.0	79.2	-63.7			135.0	557.0		301.1	27.2		1.0000330
58500.0	77.2	-68.9			131.7	556.8		235.4	4.0		1.0000329
59000.0	75.3	-69.1			128.5	556.5		140.4	23.8		1.0000329
59500.0	73.4	-69.3			125.3	556.3		148.2	24.3		1.0000328
60000.0	71.5	-69.5			122.3	556.0		157.4	22.9		1.0000327
60500.0	69.7	-69.7			119.3	555.7		178.9	16.7		1.0000327
61000.0	67.9	-70.0			116.5	555.3		213.4	14.7		1.0000325
61500.0	66.2	-70.4			113.7	554.8		243.8	16.3		1.0000325
62000.0	64.5	-70.7			111.0	554.3		264.2	21.3		1.0000325
62500.0	62.9	-71.1			108.4	553.8		276.6	26.0		1.0000324
63000.0	61.3	-70.7			105.4	554.3		285.5	30.7		1.0000323

STATION ALTITUDE 3939.00 FEET MSL
12 JAN. 78 1645 HRS MST
ASCENSION NO. 29

UPPER AIR DATA
J120J20J29
WHITE SANDS
TABLE XI. (CONT)

GEOMETRIC COORDINATES
32.40043 LAT DEG
105.37033 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA		INDEX OF REFRACTION
					DIRECTION DEGREES(TN)	SPEED KNOTS	
63500.0	59.7	-69.8		102.3	555.5	292.2	1.000023
64000.0	58.2	-53.9		99.3	555.7	298.5	1.000022
64500.0	56.8	-68.1		96.4	557.9	304.0	1.000021
65000.0	55.3	-57.2		93.5	559.1	308.4	1.000021
65500.0	54.0	-66.3		90.9	560.3	312.9	1.000020
66000.0	52.5	-65.4		88.2	561.5	317.1	1.000020
66500.0	51.3	-64.5		85.6	562.5	321.5	1.000019
67000.0	50.0	-63.7		83.1	563.8	328.1	1.000019
67500.0	48.3	-63.5		81.0	564.0	333.1	1.000018
68000.0	47.6	-63.4		79.0	564.2	340.5	1.000018
68500.0	46.4	-63.2		77.0	564.5	353.5	1.000017
69000.0	45.3	-63.1		75.1	564.7	24.1	1.000017
69500.0	44.2	-62.9		73.2	564.9	73.2	1.000016
70000.0	43.1	-62.7		71.3	565.1	96.1	1.000016
70500.0	42.0	-62.5		69.5	565.3	108.3	1.000015
71000.0	41.0	-62.4		67.8	565.5	108.9	1.000015
71500.0	40.0	-62.3		65.1	565.8	92.4	1.000015
72000.0	39.0	-62.1		64.4	566.0	42.0	1.000014
72500.0	38.1	-61.9		62.8	565.2	350.5	1.000014
73000.0	37.1	-61.8		61.2	566.4	334.4	1.000014
73500.0	36.2	-61.5		59.6	565.6	333.1	1.000013
74000.0	35.3	-61.5		58.1	566.8	335.1	1.000013
74500.0	34.5	-61.3		55.7	567.0	338.1	1.000013
75000.0	33.6	-61.1		55.2	567.3	344.3	1.000012
75500.0	32.8	-61.0		53.8	567.5	350.3	1.000012
76000.0	32.0	-60.8		52.5	567.7	357.5	1.000012
76500.0	31.2	-60.7		51.2	567.9	4.5	1.000011
77000.0	30.4	-60.5		49.9	568.1	11.5	1.000011
77500.0	29.7	-60.3		48.5	569.4	18.7	1.000011
78000.0	29.0	-60.0		47.4	568.8	26.2	1.000011

STATION ALTITUDE 3937.00 FEET MSL
12 JAN. 78
ASCENSION NO. 29

DEEPER AIR DATA
J120020029
WHITE SANDS
TABLE XI. (CONT)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
78500.0	28.3	-59.7		46.2	569.2	34.8	12.7	1.000010
79000.0	27.5	-59.4		45.0	569.6	45.0	11.8	1.000010
79500.0	26.9	-59.1		43.8	569.9	57.0	10.9	1.000010
80000.0	26.3	-58.3		42.7	570.3	70.3	10.4	1.000010
80500.0	25.7	-58.5		41.7	570.7	81.7	12.1	1.000009
81000.0	25.0	-58.3		40.6	571.1	88.7	14.5	1.000009
81500.0	24.4	-58.0		39.6	571.5	90.2	17.5	1.000009
82000.0	23.9	-57.7		38.6	571.9	90.3	20.5	1.000009
82500.0	23.3	-57.4		37.6	572.2	84.4	21.5	1.000008
83000.0	22.7	-57.1		36.6	572.6	76.3	21.9	1.000008
83500.0	22.2	-56.8		35.7	573.0	77.8	24.3	1.000008
84000.0	21.6	-56.5		34.8	573.4	82.3	27.5	1.000008
84500.0	21.1	-56.2		33.9	573.8	92.3	31.8	1.000008
85000.0	20.5	-55.0		33.1	574.1	102.3	37.5	1.000007
85500.0	20.1	-55.7		32.2	574.5	106.8	38.2	1.000007
86000.0	19.6	-55.4		31.4	574.8	109.3	35.9	1.000007
86500.0	19.2	-55.2		30.6	575.1			1.000007
87000.0	18.7	-55.0		29.9	575.4			1.000007
87500.0	18.3	-54.7		29.1	575.7			1.000006
88000.0	17.8	-54.5		28.4	576.0			1.000006

STATION ALTITUDE 3989.00 FEET MSL
12 JAN. 73
ASCENSION NO. 29

MANDATORY LEVELS
0120020029
WHITE SANDS
TABLE XII.

GEODETIC COORDINATES
32.43343 LAT DEG
106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4971.	11.2	-4.0	33.	291.4	13.8
800.0	6618.	6.8	-6.8	37.	295.2	13.6
750.0	8343.	2.2	-9.5	41.	313.3	13.1
700.0	10154.	-2.8	-12.6	46.	335.6	23.8
650.0	12073.	-4.7	-22.9	22.	340.2	49.1
600.0	14123.	-8.7	-26.0	23.	333.5	60.4
550.0	16317.	-13.1	-29.3	23.	324.2	67.9
500.0	18676.	-18.3	-34.2	23.	321.8	69.0
450.0	21227.	-23.7	-38.5	24.	313.8	76.9
400.0	24032.	-28.0	-38.1	37.	310.8	83.9
350.0	27133.	-35.0	-44.9	35.	313.3	88.8
300.0	30613.	-42.0			314.0	105.2
250.0	34572.	-52.3			313.1	72.9
200.0	39204.	-58.5			299.5	115.4
175.0	42005.	-50.0			300.5	128.5
150.0	45268.	-56.4			301.5	52.3
125.0	49029.	-60.5			297.6	77.5
100.0	53531.	-65.7			298.1	59.4
80.0	57943.	-68.7			300.3	22.3
70.0	60561.	-69.6			194.2	15.1
60.0	63564.	-70.0			295.5	36.0
50.0	67178.	-63.7			331.9	21.5
40.0	71685.	-62.3			21.7	5.0
30.0	77541.	-60.4			23.6	14.1
25.0	81288.	-58.2			90.2	18.2
20.0	85925.	-55.6				

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