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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/6 16/4.2
12831D LANCE MISSILE NUMBER 3298, ROUND NUMBER 304 ESL (3 DECEM--ETC(U)
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METEOROLOGICAL DATA REPORT

12831D LANCE
MISSILE NO. 3298, ROUND NO. 304 ESL
(3 December 1977)

BY

WSMR METEOROLOGICAL TEAM

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM	
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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 3298, Round Number 304 ESL, are presented in tabular form.			

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INTRODUCTION

12831D Lance, Missile Number 3298, Round Number 304 ESL, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0853 HRS MST, 3 December 1977. The scheduled launch time was 0815 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	3,987	FEET/MSL
PRESSURE	878.2	MBS
TEMPERATURE	6.0	°C
RELATIVE HUMIDITY	38	%
DEW POINT	-7.2	°C
DENSITY	1,093	GM/M ³
WIND SPEED/DIR	CALM	MPH/DEGREES
CLOUD COVER	CLEAR	

TABLE I. SURFACE OBSERVATIONS TAKEN AT LC-33,
0900 HRS MST/3 DECEMBER 1977.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	CALM		2100	310	15.5
100	340	0.5	2200	310	12.5
200	340	0.5	2300	320	13.0
300	330	0.5	2400	320	14.0
400	333	3.0	2500	320	16.5
500	302	2.0	2600	320	17.5
600	351	1.5	2700	315	20.0
700	355	1.5	2800	315	22.0
800	265	2.0	2900	305	19.5
900	250	1.5	3000	310	20.5
1000	230	2.0	3100	315	21.0
1100	295	2.0	3200	315	20.5
1200	320	2.5	3300	315	21.5
1300	335	2.5	3400	320	22.5
1400	310	3.5	3500	325	22.5
1500	290	7.0	3600	325	21.0
1600	290	10.0	3700	330	20.0
1700	310	9.0	3800	325	21.0
1800	300	12.0	3900	325	24.0
1900	300	12.0	4000	325	24.0
2000	310	13.0	4100	330	26.0

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-33, AT 0857 MST/3 DECEMBER 1977
12831D LANCE, MISSILE NO. 3298, ROUND NO. 304 ESL

PIBAL RELEASE POINT WSTM COORDINATES:

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

APPROXIMATELY: 815 FT. SSE OF LAUNCHER

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	335	29.5
4300	330	29.0
4400	330	29.0
4500	335	30.0
4600	335	27.0
4700	330	30.0
4800	330	31.0
4900	330	32.0
5000	330	30.0
5100	325	29.5
5200	320	31.0
5300	320	31.5
5400	320	29.0
5500	320	27.0
5600	315	25.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
5700	315	22.5
5800	315	24.0
5900	320	23.5
6000	310	20.5
6100	310	19.0
6200	310	20.0
6300	320	18.0
6400	310	21.0
6500	305	23.0
6600	310	24.5
6700	300	31.5
6800	300	30.0
6900	300	29.5
7000	295	28.5

TABLE II. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	CALM		2100	310	12.5
100	350	0.5	2200	315	12.0
200	350	0.5	2300	310	12.0
300	330	1.0	2400	315	14.0
400	325	1.5	2500	310	14.0
500	330	2.0	2600	310	13.5
600	330	2.5	2700	320	14.0
700	340	3.0	2800	315	27.0
800	025	2.5	2900	315	16.5
900	045	2.5	3000	315	17.5
1000	010	2.5	3100	315	19.0
1100	005	3.0	3200	315	20.5
1200	320	5.0	3300	320	22.5
1300	330	4.5	3400	320	25.0
1400	305	5.5	3500	320	19.5
1500	285	7.5	3600	320	24.0
1600	290	10.0	3700	325	25.0
1700	295	11.5	3800	325	26.0
1800	300	12.0	3900	320	25.0
1900	300	11.5	4000	325	26.5
2000	305	13.0	4100	325	25.5

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 0903 MST/3 DECEMBER 1977
12831D LANCE, MISSILE NO. 3298, ROUND NO. 304 ESL

PIBAL RELEASE POINT WSTM COORDINATES:

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

APPROXIMATELY: 815 FT. SSE OF LAUNCHER

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	325	26.5
4300	320	28.5
4400	325	27.0
4500	320	27.5
4600	320	28.0
4700	315	27.5
4800	320	27.5
4900	325	27.5
5000	325	27.5
5100	320	25.0
5200	320	24.5
5300	320	24.5
5400	320	24.5
5500	320	26.5
5600	325	24.5
5700	325	23.0
5800	320	22.0
5900	320	22.0
6000	320	22.0
6100	315	20.5
6200	315	18.5
6300	320	20.5
6400	310	21.5
6500	310	21.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6600	300	22.0
6700	300	23.0
6800	300	24.0
6900	300	27.5
7000	295	25.0
7100	295	25.5
7200	295	27.0
7300	290	28.0
7400	290	29.0
7500	290	28.5
7600	290	28.0
7700	290	34.5
7800	285	32.5
7900	290	30.0
8000	290	33.0
8100	290	31.0
8200	290	32.5
8300	290	31.5
8400	285	31.0
8500	285	34.5
8600	285	34.5
8700	290	31.0
8800	280	27.5
8900	280	27.5

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	285	27.0
9100	285	28.5
9200	290	29.0
9300	290	26.5
9400	295	26.0
9500	295	23.0
9600	295	23.0
9700	290	25.0
9800	305	24.0
9900	305	28.0
10000	295	27.5
10100	290	25.5
10200	295	25.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10300	290	29.0
10400	305	29.5
10500	300	29.0
10600	300	26.5
10700	305	22.5
10800	300	23.5
10900	305	29.0
11000	300	33.5
11100	295	31.5
11200	300	33.5
11300	300	29.0
11400	300	28.0
11500	300	29.0

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG	T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG	T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG
-30.0	CALM		-01.25	01	035	+04.50	01	039
-25.0	01	035	-01.00			+04.75		
-20.0			-00.75			+05.00		
-15.0			-00.50			+05.25		
-10.0			-00.25			+05.50		
-09.5			-00.00			+05.75		
-09.0			+00.25			+06.00		
-08.5			+00.50			+06.25		
-08.0			+00.75			+06.50		
-07.5			+01.00			+06.75		
-07.0			+01.25			+07.00		
-06.5			+01.50			+07.25	01	039
-06.0			+01.75			+07.50	01	040
-05.5			+02.00	01	035	+07.75		
-05.0			+02.25	01	036	+08.00		
-04.5			+02.50	01	037	+08.25		
-04.0			+02.75	01	038	+08.50		
-03.5			+03.00	01	039	+08.75		
-03.0			+03.25			+09.00		
-02.5			+03.50			+09.25		
-02.0			+03.75			+09.50		
-01.75			+04.00			+09.75		
-01.50	01	035	+04.25	01	039	+10.00	01	040

TABLE IV. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 1
 12831D LANCE, MISSILE NO. 3298, ROUND NO. 304 ESL
 LAUNCHED FROM LC-33, 0853 MST/3 DECEMBER 1977

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

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG	T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG	T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG
-30.0	CALM	CALM	-01.00	CALM	CALM	+05.00	CALM	CALM
-25.0			-00.75			+05.25		
-20.0			-00.50			+05.50		
-15.0			-00.25			+05.75		
-10.0			-00.00			+06.00		
-09.5			+00.25			+06.25		
-09.0			+00.50			+06.50		
-08.5			+00.75			+06.75		
-08.0			+01.00			+07.00		
-07.5			+01.25			+07.25		
-07.0			+01.50			+07.50		
-06.5			+01.75			+07.75		
-06.0			+02.00			+08.00		
-05.5			+02.25			+08.25		
-05.0			+02.50			+08.50		
-04.5			+02.75			+08.75		
-04.0			+03.00			+09.00		
-03.5			+03.25			+09.25		
-03.0			+03.50			+09.50		
-02.5			+03.75			+09.75		
-02.0			+04.00			+10.00		
-01.75			+04.25			+10.50		
-01.50			+04.50			+11.00		
-01.25	CALM	CALM	+04.75	CALM	CALM	+11.50	CALM	CALM

TABLE V. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 2
 12831D LANCE, MISSILE NO. 3298, ROUND NO. 304 ESL
 LAUNCHED FROM LC-33, 0853 MST/3 DECEMBER 1977

WSTM COORDINATES X = 485,874.93 Y = 186,012.00 Z = 4,033.57

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 4051.00 FEET MSL
 3 DEC. 77
 ASCENSION NO. 462

SIGNIFICANT LEVEL DATA
 3370030462
 JALLEN
 TABLE VI.

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
876.4	4051.0	.2	-3.9	74.0
866.1	4369.4	6.8	-4.9	43.0
850.0	4879.8	11.9	-2.7	36.0
792.8	6786.0	10.1	-4.3	36.0
769.8	7586.3	8.3	-5.2	38.0
749.8	8298.7	7.7	-6.0	37.0
710.3	9753.2	4.5	-7.9	40.0
700.0	10143.7	4.9	-8.5	37.0
640.8	12500.6	3.5	-14.6	25.0
500.0	18948.4	-8.8	-28.2	19.0
480.3	19964.1	-11.1	-30.7	18.0
400.0	24450.5	-24.1	-38.8	24.0
306.8	30586.4	-39.8	-50.1	32.0
300.0	31087.0	-40.5		
250.0	35056.0	-51.5		
227.8	37026.7	-52.4		
206.8	39056.1	-55.8		
200.0	39754.8	-54.1		
187.3	41134.5	-53.0		
150.0	45729.2	-61.1		
141.8	46863.7	-63.5		
112.8	51421.9	-66.4		
103.8	53058.1	-68.5		
100.0	53789.0	-68.0		
96.8	54428.8	-66.9		

STATION ALTITUDE 4051.00 FEET MSL
 3 DEC. 77 0645 HRS MST
 ASCENSION NO. 462

UPPER AIR DATA
 3370030462
 JALLEN
 TABLE VII.

GEODETIC COORDINATES
 33°16'12" LAT DEG
 106°49'51" LON DEG

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	
4051.0	876.4	02	-3.9	74.0	1114.7	644.7	345.0	1.0	1.000272
4500.0	862.0	01	-4.3	41.2	1065.5	654.0	316.9	2.1	1.000259
5000.0	846.3	11.8	-2.8	36.0	1032.4	658.3	308.8	3.6	1.000253
5500.0	831.0	11.3	-3.2	36.0	1015.4	657.8	305.4	5.1	1.000249
6000.0	815.9	10.8	-3.6	36.0	998.7	657.2	303.5	6.6	1.000244
6500.0	801.1	10.4	-4.0	36.0	982.3	656.7	302.4	8.1	1.000240
7000.0	786.6	9.6	-4.5	36.5	967.0	655.8	304.5	9.6	1.000236
7500.0	772.2	8.5	-5.1	37.8	953.2	654.8	312.4	10.9	1.000232
8000.0	758.1	8.0	-5.7	37.4	937.7	653.8	318.5	12.3	1.000228
8500.0	744.2	7.3	-6.3	37.4	922.8	653.0	318.9	12.6	1.000224
9000.0	730.5	6.2	-6.9	38.4	909.4	651.7	317.4	12.4	1.000220
9500.0	717.0	5.1	-7.6	39.5	896.2	650.4	315.6	12.5	1.000217
10000.0	703.8	4.8	-8.3	38.1	880.7	650.0	312.6	14.0	1.000212
10500.0	690.7	4.7	-9.4	35.2	864.6	649.9	310.2	15.6	1.000207
11000.0	677.9	4.9	-10.6	32.6	849.6	649.5	307.3	16.5	1.000203
11500.0	665.3	4.1	-11.9	30.1	834.8	649.1	303.9	17.1	1.000198
12000.0	652.9	3.8	-13.2	27.5	820.3	648.7	300.7	17.7	1.000194
12500.0	640.8	3.5	-14.6	25.0	806.0	648.4	293.9	17.7	1.000189
13000.0	628.6	2.5	-15.7	24.5	793.4	647.2	286.7	17.9	1.000186
13500.0	616.6	1.6	-16.7	24.1	781.1	646.1	279.7	18.5	1.000182
14000.0	604.9	0.6	-17.8	23.6	768.9	644.9	273.7	19.6	1.000179
14500.0	593.3	0.3	-18.8	23.1	756.9	643.8	268.3	21.0	1.000176
15000.0	582.0	0.3	-19.9	22.7	745.2	642.6	267.2	22.5	1.000172
15500.0	571.0	0.2	-20.9	22.2	733.6	641.5	267.7	23.9	1.000169
16000.0	560.1	0.2	-21.9	21.7	722.2	640.3	268.1	25.4	1.000166
16500.0	549.4	0.1	-23.0	21.3	711.0	639.2	267.1	25.7	1.000163
17000.0	538.9	0.1	-24.0	20.8	699.9	638.0	266.1	26.0	1.000161
17500.0	528.7	0.0	-25.1	20.3	689.1	636.9	264.8	26.1	1.000158
18000.0	518.6	0.0	-26.2	19.9	678.4	635.7	261.2	25.1	1.000155
18500.0	508.7	0.0	-27.2	19.4	667.9	634.6	257.4	24.2	1.000152

UPPER AIR D.T.A
 3370030462
 JALLEN

STATION ALTITUDE 4051.00 FEET MSL
 3 DEC. 77 0645 HRS MST
 ASCENSION NO. 462

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

TABLE VII. (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL.H.H.M. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
1900.0	499.0	-8.9	-28.3	18.9	657.6	633.4	254.5	23.6	1.000150
1950.0	489.2	-10.0	-29.5	18.5	647.5	632.0	253.0	23.3	1.000147
2000.0	479.6	-11.2	-30.7	18.0	637.6	630.6	251.4	23.0	1.000145
2050.0	469.9	-12.7	-31.6	18.7	628.2	628.9	251.6	23.0	1.000142
2100.0	460.4	-14.1	-32.4	19.4	619.0	627.1	253.0	23.2	1.000140
2150.0	451.1	-15.6	-33.3	20.1	609.9	625.4	254.3	23.5	1.000138
2200.0	442.0	-17.0	-34.2	20.7	601.0	623.6	255.5	23.8	1.000136
2250.0	433.1	-18.4	-35.1	21.4	592.2	621.8	256.6	24.1	1.000134
2300.0	424.4	-19.9	-36.0	22.1	583.6	620.0	257.7	24.4	1.000132
2350.0	415.8	-21.3	-37.0	22.7	575.1	618.3	256.9	24.5	1.000130
2400.0	407.4	-22.8	-38.0	23.4	566.8	616.5	256.2	24.6	1.000128
2450.0	399.1	-24.2	-38.9	24.1	558.5	614.7	255.4	24.6	1.000126
2500.0	390.6	-25.5	-39.8	24.7	549.4	613.1	254.6	24.0	1.000124
2550.0	382.3	-26.8	-40.6	25.4	540.4	611.5	253.9	23.5	1.000121
2600.0	374.1	-28.1	-41.5	26.0	531.6	609.9	253.1	23.2	1.000119
2650.0	366.1	-29.3	-42.4	26.7	523.0	608.3	252.2	23.1	1.000117
2700.0	358.3	-30.6	-43.3	27.3	514.5	606.7	251.7	23.4	1.000115
2750.0	350.6	-31.9	-44.2	28.0	506.2	605.1	252.0	24.6	1.000114
2800.0	343.1	-33.2	-45.2	28.6	498.0	603.5	252.3	25.8	1.000112
2850.0	335.8	-34.5	-46.1	29.3	490.0	601.9	253.3	26.4	1.000110
2900.0	328.6	-35.7	-47.0	29.9	482.1	600.3	254.3	27.1	1.000108
2950.0	321.6	-37.0	-48.0	30.6	474.3	598.7	255.2	26.9	1.000106
3000.0	314.7	-38.3	-48.9	31.2	466.7	597.0	256.0	25.9	1.000104
3050.0	307.9	-39.6	-49.9	31.9	459.3	595.4	256.9	25.0	1.000103
3100.0	301.2	-40.4	-64.4	50.6	450.7	594.4	256.8	24.4	1.000100
3150.0	294.4	-41.6			443.0	592.8	256.7	23.9	1.000099
3200.0	287.7	-43.0			435.5	591.0	256.6	23.5	1.000097
3250.0	281.1	-44.4			428.2	589.2	256.4	23.2	1.000095
3300.0	274.0	-45.8			421.0	587.4	256.3	22.9	1.000094
3350.0	268.5	-47.2			414.0	585.6	258.4	23.3	1.000092

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

UPPER AIR DATA
 537503J467
 JALLEN
 GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

STATION ALTITUDE 4051.00 FEET MSL
 3 DEC. 77 0645 HRS MST
 ASCENSION NO. 462

TABLE VII. (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
3400.0	262.4	-48.6		407.1	583.8	261.3	24.1	1.000091
3450.0	256.5	-50.0		400.3	582.0	263.9	25.0	1.000089
3500.0	250.6	-51.3		393.7	580.2	270.0	24.8	1.000088
3550.0	244.8	-51.7		395.1	579.7	276.9	24.7	1.000086
3600.0	239.1	-51.9		376.5	579.4	283.7	25.0	1.000084
3650.0	233.5	-52.2		368.1	579.1	295.5	23.8	1.000082
3700.0	228.1	-52.4		359.9	578.8	312.6	23.1	1.000080
3750.0	222.7	-53.2		352.7	577.8	329.2	24.4	1.000079
3800.0	217.5	-54.0		345.7	576.7	341.7	28.0	1.000077
3850.0	212.4	-54.9		338.9	575.6	349.0	33.4	1.000075
3900.0	207.4	-55.7		332.2	574.5	354.1	39.2	1.000074
3950.0	202.5	-54.7		322.9	575.8	356.4	43.3	1.000072
4000.0	197.7	-53.9		314.1	576.8	354.2	42.6	1.000070
4050.0	193.0	-53.5		306.2	577.4	352.0	42.0	1.000068
4100.0	188.5	-53.1		298.4	577.9	349.7	41.4	1.000066
4150.0	184.0	-53.6		292.0	577.2	342.6	36.9	1.000065
4200.0	179.6	-54.5		286.2	576.0	333.6	33.1	1.000064
4250.0	175.3	-55.4		280.5	574.9	322.7	30.4	1.000062
4300.0	171.2	-56.3		274.9	573.7	317.3	30.2	1.000061
4350.0	167.1	-57.2		269.5	572.5	315.1	30.8	1.000060
4400.0	163.1	-58.1		264.1	571.4	313.1	31.5	1.000059
4450.0	159.2	-58.9		258.9	570.2	313.5	32.3	1.000058
4500.0	155.4	-59.8		253.7	569.0	318.7	33.4	1.000057
4550.0	151.7	-60.7		248.7	567.8	323.6	34.8	1.000055
4600.0	148.0	-61.7		243.8	566.5	326.6	36.3	1.000054
4650.0	144.4	-62.7		239.0	565.1	327.3	37.5	1.000053
4700.0	140.8	-63.6		234.1	564.0	328.0	38.7	1.000052
4750.0	137.3	-63.9		228.7	563.5	328.2	39.7	1.000051
4800.0	133.9	-64.2		223.3	563.1	328.3	40.6	1.000050
4850.0	130.6	-64.5		218.1	562.7	328.2	42.8	1.000049

UPPER AIR DATA
 337J030462
 JALLEN
 TABLE VII. (CONT)

STATION ALTITUDE 1151.00 FEET MSL
 3 DEC. 77 0645 HRS MST
 ASCENSION NO. 462

GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
4900.0	127.4	-64.9	213.0	562.3	328.7	46.4	1.000047	
4950.0	124.2	-65.2	208.1	561.8	329.3	48.0	1.000046	
5000.0	121.1	-65.5	213.2	561.4	332.8	46.8	1.000045	
5050.0	118.1	-65.8	198.5	561.0	336.0	44.9	1.000044	
5100.0	115.2	-66.1	193.9	560.5	338.2	40.4	1.000043	
5150.0	112.4	-66.5	139.4	560.0	341.1	35.9	1.000042	
5200.0	109.5	-67.1	185.2	559.2			1.000041	
5250.0	106.8	-67.8	181.1	558.3			1.000040	
5300.0	104.1	-68.4	177.1	557.4			1.000039	
5350.0	101.5	-68.2	172.5	557.7			1.000038	
5400.0	98.9	-67.6	167.7	558.5			1.000037	

STATION ALTITUDE 4051.0 FEET MSL
 3 DEC. 77 0645 HRS MST
 ASCENSION NO. 462

MANDATORY LEVELS
 937 030460
 JMLIEN
 TABLE VIII.

GEODETIC COORDINATES
 33.16712 LAT DFG
 106.49511 LON DEG

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4879.	11.9	36.	310.1	3.3
800.0	6539.	10.3	36.	302.3	8.3
750.0	8291.	7.7	37.	319.5	12.7
700.0	10144.	4.9	37.	311.8	14.5
650.0	12123.	3.7	27.	299.4	17.7
600.0	14243.	.2	23.	270.9	20.3
550.0	16513.	-4.1	21.	267.1	25.8
500.0	19958.	-8.8	19.	254.6	23.6
450.0	24662.	-15.7	20.	254.6	23.6
400.0	29469.	-24.1	24.	255.4	24.6
350.0	34614.	-32.0	28.	252.1	24.9
300.0	39120.	-40.5		256.8	24.2
250.0	43100.	-51.5		272.2	24.7
200.0	46814.	-51.1		354.7	42.8
175.0	42627.	-55.5		318.5	29.8
150.0	45810.	-61.1		326.5	36.1
125.0	49480.	-65.1		330.0	47.8
100.0	53905.	-68.1			

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

STATION ALTITUDE 4940.0 FEET MSL
 3 DEC. 77 0835 HRS MST
 ASCENSION NO. 201

SIGNIFICANT LEVEL DATA
 J370040201
 STATION
 TABLE IX.

GEODETIC COORDINATES
 33.81920 LAT DEG
 106.66501 LON DEG

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM.
ALTITUDE	AIR	DEWPOINT	PERCENT	
MILLIBARS MSL FEET	DEGREES	CENTIGRADE		
850.0	4940.0	2.7	-9.5	40.0
832.8	5493.5	9.9	-5.2	34.0
819.8	5921.3	8.7	-6.3	34.0
734.8	8880.9	6.7	-7.5	35.0
700.0	10188.9	7.2	-8.8	31.0
599.8	14292.6	-0.9	-19.9	22.0
582.8	15344.0	-1.4	-19.3	24.0
500.0	18979.4	-10.1	-27.2	23.0
458.8	21127.6	-15.7	-30.7	26.0
443.8	21947.2	-16.8	-31.3	27.0
400.0	24466.1	-24.2	-37.8	27.0
346.8	27819.3	-32.3	-43.4	32.0
300.0	31104.6	-41.1	-49.6	39.0
259.8	34246.2	-49.5		
250.0	35067.6	-50.9		
224.8	37312.1	-54.4		
219.8	37783.4	-54.4		
209.8	38766.1	-51.2		
200.0	39782.5	-51.4		
188.8	41006.0	-51.5		
160.8	44352.6	-59.3		
153.3	45329.2	-59.8		
150.0	45772.4	-61.0		
138.8	47334.6	-64.6		
131.6	48366.9	-64.6		
122.8	49764.0	-68.6		
112.8	51125.0	-68.9		
107.3	52406.7	-66.8		
104.3	52966.8	-66.5		
100.0	53797.9	-67.0		

STATION ALTITUDE 4940.00 FEET MSL
 3 DEC 77 0835 HRS MST
 ASCENSION NO. 261

SIGNIFICANT LEVEL DATA

3370040.261
 STALLION

TABLE IX. (CONT)

GEODETIC COORDINATES
 33.81920 LAT DEG
 106.66501 LON DEG

GEOMETR. ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
81.3 57850.1	-19.9	
75.8 59235.2	-62.7	
70.0 60628.4	-64.8	
67.3 61608.3	-36.6	
50.6 67500.4	-64.6	
44.8 59687.6	-64.6	
39.8 72070.0	-60.0	
30.0 77807.2	-61.0	
23.8 82498.1	-60.5	
20.0 86051.3	-57.4	
11.8 96989.5	-53.6	

UPPER AIR DATA
 3370040261
 STATION
 TABLE X.

STATION ALTITUDE 4940.00 FEET MSL
 3 DEC. 77 0835 HRS MST
 ASCENSION NO. 201

GEODETIC COORDINATES
 33.81920 LAT DEG
 106.66501 LON 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		INDEX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	
4940.0	850.0	2.7	-9.5	40.0	1072.0	647.5	63.0	1.9	1.000254
5000.0	848.1	3.5	-9.0	39.3	1066.6	648.4			1.000253
5500.0	837.6	9.9	-5.2	34.0	1022.9	656.0			1.000247
6000.0	817.4	8.7	-6.3	34.7	1008.7	654.6			1.000243
6500.0	802.4	8.3	-6.5	34.2	991.3	654.2			1.000239
7000.0	787.7	8.0	-6.7	34.4	974.2	653.9			1.000235
7500.0	773.3	7.7	-6.9	34.5	957.4	653.5			1.000231
8000.0	759.1	7.4	-7.1	34.7	940.8	653.2			1.000227
8500.0	745.2	7.1	-7.3	34.9	924.6	652.8			1.000223
9000.0	731.6	6.9	-7.6	34.6	908.3	652.6			1.000219
9500.0	718.1	7.0	-8.1	33.1	891.3	652.7	326.3	21.7	1.000215
10000.0	704.9	7.2	-8.6	31.6	874.6	652.8	323.3	24.7	1.000210
10500.0	691.8	6.6	-9.6	30.3	860.2	652.1	317.2	25.1	1.000206
11000.0	678.9	5.6	-10.9	29.2	847.3	650.9	309.9	24.9	1.000202
11500.0	656.3	4.6	-12.2	28.1	834.5	649.7	299.3	23.9	1.000198
12000.0	633.9	3.6	-13.6	27.0	822.0	648.5	292.6	23.7	1.000194
12500.0	641.7	2.6	-14.9	25.9	809.6	647.3	288.5	23.9	1.000190
13000.0	629.7	1.7	-16.3	24.8	797.5	646.1	290.3	23.4	1.000186
13500.0	618.0	.7	-17.7	23.7	785.5	644.9	291.8	23.2	1.000183
14000.0	606.4	-.3	-19.1	22.6	773.7	643.8	290.6	23.9	1.000179
14500.0	595.1	-1.0	-19.7	22.6	761.2	642.9	289.0	24.5	1.000176
15000.0	583.8	-1.4	-19.3	23.9	747.7	642.5	286.6	24.9	1.000173
15500.0	572.5	-2.4	-20.2	23.9	736.1	641.3	285.1	24.6	1.000170
16000.0	561.5	-3.5	-21.2	23.8	724.9	640.0	284.4	24.2	1.000167
16500.0	550.7	-4.6	-22.2	23.6	713.9	638.6	284.7	25.9	1.000164
17000.0	540.1	-5.7	-23.2	23.5	703.1	637.3	286.1	26.8	1.000162
17500.0	529.6	-6.8	-24.2	23.4	692.4	636.0	288.6	26.8	1.000159
18000.0	519.4	-7.9	-25.2	23.2	681.9	634.6	287.3	24.6	1.000156
18500.0	509.4	-9.0	-26.3	23.1	671.6	633.3	264.4	22.4	1.000153
19000.0	499.6	-10.2	-27.3	23.0	661.4	631.9	278.7	21.3	1.000151

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

UPPER AIR DATA
 J370040261
 STATION
 TABLE X. (CONT)

STATION ALTITUDE 4940.0 FEET MSL
 3 DEC. 77 0935 HRS MST
 ASCENSION NO. 761

GEODETIC COORDINATES
 33.81920 LAT DEG
 106.66501 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	M. DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
19500.0	489.7	-11.5	-28.0	23.7	651.6	630.4	277.6	20.8	1.000148
20000.0	487.5	-12.8	-28.9	24.1	641.9	628.8	279.9	20.7	1.000146
20500.0	470.5	-14.1	-29.7	25.1	632.3	627.2	283.4	21.9	1.000144
21000.0	461.2	-15.4	-30.5	25.0	623.0	625.6	285.4	22.4	1.000141
21500.0	451.9	-16.2	-31.0	26.5	612.5	624.6	285.5	21.7	1.000139
22000.0	442.8	-17.0	-31.4	27.0	601.9	623.7	282.4	19.8	1.000137
22500.0	433.8	-18.4	-32.7	27.0	593.1	621.9	277.3	17.6	1.000134
23000.0	424.9	-19.9	-34.0	27.0	584.3	620.1	273.7	16.5	1.000132
23500.0	416.3	-21.4	-35.3	27.0	575.8	618.3	269.8	15.4	1.000130
24000.0	407.8	-22.8	-36.6	27.0	567.3	616.4	265.7	14.3	1.000128
24500.0	399.4	-24.3	-37.8	27.1	559.0	614.6	260.2	12.5	1.000126
25000.0	391.1	-25.5	-38.6	27.8	549.9	613.2	253.6	11.0	1.000124
25500.0	382.8	-26.7	-39.4	28.5	541.0	611.6	243.5	10.6	1.000122
26000.0	374.7	-27.9	-40.3	29.5	532.2	610.1	244.9	11.8	1.000120
26500.0	366.8	-29.1	-41.1	30.0	523.6	608.0	243.4	13.6	1.000118
27000.0	359.1	-31.3	-41.9	30.8	515.1	607.1	247.5	15.1	1.000116
27500.0	351.5	-31.5	-42.8	31.5	506.8	605.6	252.9	16.1	1.000114
28000.0	344.0	-32.8	-43.7	32.4	498.5	604.0	259.5	16.8	1.000112
28500.0	336.5	-34.1	-44.6	33.5	490.4	602.3	261.2	17.5	1.000110
29000.0	329.2	-35.5	-45.5	34.5	482.4	600.7	261.8	18.2	1.000108
29500.0	322.0	-36.8	-46.5	35.0	474.6	599.0	261.1	19.0	1.000106
30000.0	315.0	-38.1	-47.4	36.6	466.9	597.3	259.9	19.6	1.000105
30500.0	308.1	-39.5	-48.4	37.7	459.3	595.5	258.2	19.9	1.000103
31000.0	301.4	-40.8	-49.4	38.0	451.9	593.8	257.2	21.4	1.000101
31500.0	294.0	-42.2	-51.7	34.1.0	444.3	592.1	258.3	23.1	1.000099
32000.0	287.9	-43.5	-54.5	27.9.0	436.8	590.4	263.7	25.1	1.000098
32500.0	281.4	-44.8	-57.7	21.7.0	429.4	588.7	267.5	26.1	1.000096
33000.0	275.1	-46.2	-61.5	15.5.0	422.1	586.9	270.5	25.8	1.000094
33500.0	268.8	-47.5	-66.3	9.3.0	415.0	585.2	273.8	24.8	1.000092
34000.0	262.7	-48.8	-74.9	3.1.0	408.1	583.5	277.4	23.4	1.000091

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

UPPER AIR DATA
 3370000261
 STATION
 33°81'20" LAT DEG
 106°66'50" LON DEG

STATION ALTITUDE 4940.00 FEET MSL
 3 DEC 77
 0835 HRS MST
 ASCENSION NO. 201

TABLE X. (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIHARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3450.0	256.7	-49.9		400.7	582.0	280.7	22.2	1.000089
3500.0	250.8	-50.8		392.9	540.9	284.0	20.5	1.000088
3550.0	244.9	-51.6		385.1	579.9	287.0	17.1	1.000086
3600.0	239.2	-52.4		377.4	578.9	301.0	14.5	1.000084
3650.0	233.6	-53.1		369.9	577.9	324.6	14.3	1.000082
3700.0	228.1	-53.9		362.5	576.8	341.1	20.5	1.000081
3750.0	222.8	-54.4		354.8	576.2	348.4	28.9	1.000079
3800.0	217.6	-53.7		345.3	577.1	349.6	37.4	1.000077
3850.0	212.5	-52.1		334.8	579.3	349.9	46.0	1.000075
3900.0	207.5	-51.2		325.8	580.3	350.3	49.6	1.000073
3950.0	202.7	-51.3		318.3	580.2	350.6	52.4	1.000071
4000.0	198.0	-51.4		311.0	580.1	348.8	49.1	1.000069
4050.0	193.4	-51.5		303.8	580.1	346.5	44.8	1.000068
4100.0	188.9	-51.5		296.8	580.0	342.5	39.0	1.000066
4150.0	184.4	-52.7		291.3	578.5	337.0	33.2	1.000065
4200.0	180.0	-53.8		285.9	577.0	328.1	29.3	1.000064
4250.0	175.7	-55.0		280.6	575.4	316.6	27.0	1.000062
4300.0	171.6	-56.1		275.4	573.9	305.3	29.0	1.000061
4350.0	167.5	-57.3		270.4	572.3	297.8	34.7	1.000060
4400.0	163.5	-58.5		265.4	570.8	295.7	39.6	1.000059
4450.0	159.6	-59.4		260.2	569.6	298.3	43.1	1.000058
4500.0	155.8	-59.6		254.2	569.3	301.7	44.2	1.000057
4550.0	152.0	-60.3		248.8	568.4	307.6	41.0	1.000055
4600.0	148.3	-61.5		244.1	566.7	315.1	38.2	1.000054
4650.0	144.7	-62.7		239.5	565.2	324.8	36.0	1.000053
4700.0	141.1	-63.8		234.9	563.6	331.0	34.6	1.000052
4750.0	137.7	-64.6		230.0	562.6	333.5	33.3	1.000051
4800.0	134.2	-64.7		224.4	562.4	330.6	33.2	1.000050
4850.0	130.9	-65.2		219.3	561.8	325.1	33.8	1.000049
4900.0	127.6	-66.5		215.2	560.0	323.2	37.3	1.000048

UPPER AIR DATA
 337004J261
 STATION
 33.81920 LAT DEG
 106.66501 LON DEG

STATION ALTITUDE 4947.0 J FEET MSL
 3 DEC. 77 0835 HRS MST
 ASCENSION NO. 261

TABLE X. (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
4950.0	124.5	-67.9	211.2	558.2	322.6	322.6	41.8	1.000047
5000.0	121.3	-68.6	206.7	557.1	322.5	322.5	45.8	1.000046
5050.0	118.3	-68.7	201.5	557.0	324.9	324.9	49.7	1.000045
5100.0	115.3	-68.8	196.5	556.9	328.0	328.0	47.2	1.000044
5150.0	112.4	-68.7	191.5	557.0	331.5	331.5	44.0	1.000043
5200.0	109.5	-67.7	185.7	558.4	336.1	336.1	39.2	1.000041
5250.0	106.8	-66.8	180.2	559.7	336.6	336.6	34.3	1.000040
5300.0	104.1	-66.5	175.5	560.0	334.9	334.9	31.8	1.000039
5350.0	101.5	-66.8	171.4	559.6	332.8	332.8	29.7	1.000037
5400.0	99.0	-67.1	167.4	559.2	333.4	333.4	29.8	1.000036
5450.0	96.5	-67.5	163.4	558.7	335.5	335.5	29.3	1.000036
5500.0	94.0	-67.9	159.6	558.2	337.9	337.9	28.1	1.000035
5550.0	91.7	-68.2	155.8	557.7	341.0	341.0	26.5	1.000034
5600.0	89.4	-68.6	152.2	557.2	344.2	344.2	24.2	1.000033
5650.0	87.1	-68.9	148.6	556.7	344.2	344.2	22.1	1.000032
5700.0	84.9	-69.3	145.1	556.2	345.0	345.0	21.2	1.000032
5750.0	82.8	-69.6	141.7	555.7	343.7	343.7	20.2	1.000031
5800.0	80.7	-69.1	137.8	556.5	341.1	341.1	16.7	1.000030
5850.0	78.7	-66.5	132.6	560.0	339.0	339.0	12.6	1.000028
5900.0	76.7	-63.9	127.7	563.5	338.1	338.1	8.9	1.000028
5950.0	74.8	-63.0	124.0	564.7	336.3	336.3	5.4	1.000027
6000.0	73.0	-63.7	121.4	563.8	346.6	346.6	2.1	1.000026
6050.0	71.2	-64.4	118.7	562.9	359.8	359.8	1.9	1.000025
6100.0	69.4	-65.2	116.3	561.8	23.5	23.5	1.4	1.000025
6150.0	67.7	-66.4	114.0	560.7	65.8	65.8	1.3	1.000024
6200.0	66.0	-66.5	111.2	560.1	98.3	98.3	1.9	1.000024
6250.0	64.3	-66.3	108.4	560.3	111.6	111.6	3.0	1.000023
6300.0	62.7	-66.1	105.6	560.5	117.7	117.7	4.2	1.000022
6350.0	61.2	-66.0	102.9	560.8				
6400.0	59.7	-65.8	100.2	561.0				

UPPER AIR DATA
 337042261
 SIALLION
 TABLE X. (CONT)

STATION ALTITUDE 1940.00 FEET MSL
 3 DEC. 77 0835 HRS MST
 ASCENSION NO. 261

GEODETIC COORDINATES
 33.81920 LAT DEG
 106.66501 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
64500.0	58.2	-65.6	97.6	561.2	122.6	5.4	1.000022	
65000.0	56.7	-65.4	95.1	561.5	125.7	6.6	1.000021	
65500.0	55.3	-65.3	92.7	561.7	126.4	7.0	1.000021	
66000.0	53.9	-65.1	90.3	561.9	126.9	7.4	1.000020	
66500.0	52.6	-64.9	88.0	562.1	124.3	7.1	1.000020	
67000.0	51.3	-64.8	85.7	562.4	119.7	6.5	1.000019	
67500.0	50.0	-64.6	83.5	562.6	113.3	5.5	1.000019	
68000.0	48.8	-64.6	81.5	562.6	102.0	4.2	1.000018	
68500.0	47.6	-64.6	79.4	562.6	81.2	3.1	1.000018	
69000.0	46.4	-64.6	77.5	562.6	43.5	2.8	1.000017	
69500.0	45.2	-64.6	75.5	562.6	11.9	3.7	1.000017	
70000.0	44.1	-64.0	73.5	563.4	23.2	5.2	1.000016	
70500.0	43.0	-63.0	71.3	564.7	32.2	7.0	1.000016	
71000.0	42.0	-62.1	69.3	566.0	42.6	8.6	1.000015	
71500.0	40.9	-61.1	67.3	567.3	53.9	10.4	1.000015	
72000.0	39.9	-60.1	65.3	568.6	61.0	12.1	1.000015	
72500.0	39.0	-60.1	63.7	568.7	63.2	12.3	1.000014	
73000.0	38.0	-60.2	62.2	568.6	65.4	12.5	1.000014	
73500.0	37.1	-60.2	60.7	568.4	63.1	12.2	1.000014	
74000.0	36.2	-60.3	59.7	568.3	59.1	11.9	1.000013	
74500.0	35.3	-60.4	57.8	568.2	55.1	11.6	1.000013	
75000.0	34.4	-60.5	56.4	568.1	54.2	11.5	1.000013	
75500.0	33.6	-60.6	55.7	568.0	53.2	11.4	1.000012	
76000.0	32.8	-60.7	53.8	567.9	51.1	11.9	1.000012	
76500.0	32.0	-60.8	52.5	567.7	47.6	13.4	1.000012	
77000.0	31.2	-60.9	51.2	567.6	44.8	14.9	1.000011	
77500.0	30.5	-60.9	50.0	567.5	44.7	15.7	1.000011	
78000.0	29.7	-61.0	48.9	567.5	46.1	15.8	1.000011	
78500.0	29.0	-60.9	47.6	567.5	47.5	16.0	1.000011	
79000.0	28.3	-60.9	46.4	567.6	50.2	15.6	1.000010	

UPPER AIR DATA
 3370040261
 STATION ALTITUDE 4940.00 FEET MSL
 3 DEC. 77 0035 HRS MST
 ASCENSION NO. 261

GEODETIC COORDINATES
 33.81920 LAT DEG
 106.66501 LON DEG

TABLE X. (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEPT. CENTIGRADE	REL. HUMID. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
7950.0	27.6	-60.8			45.3	567.7	66.0	15.6	1.000010
8000.0	26.9	-60.8			44.2	567.7	73.8	16.0	1.000010
8050.0	26.3	-60.7			43.1	567.8	72.9	16.4	1.000010
8100.0	25.6	-60.7			42.0	567.9	72.1	16.8	1.000009
8150.0	25.0	-60.6			41.0	568.0	70.7	17.1	1.000009
8200.0	24.4	-60.6			40.0	568.0	68.4	17.1	1.000009
8250.0	23.8	-60.5			39.0	568.1	66.1	17.2	1.000009
8300.0	23.2	-60.1			38.0	568.7	64.5	16.9	1.000008
8350.0	22.7	-59.6			37.0	569.3	63.7	16.1	1.000008
8400.0	22.1	-59.2			36.0	569.9	62.8	15.3	1.000008
8450.0	21.6	-58.8			35.1	570.4	63.1	14.2	1.000008
8500.0	21.1	-58.3			34.1	571.0	65.0	12.8	1.000008
8550.0	20.5	-57.9			33.3	571.6	67.5	11.4	1.000007
8600.0	20.1	-57.4			32.4	572.2	70.2	11.1	1.000007
8650.0	19.6	-57.3			31.6	572.4	72.3	12.1	1.000007
8700.0	19.1	-57.1			30.8	572.6	74.0	13.1	1.000007
8750.0	18.7	-56.9			30.0	572.9	73.6	14.8	1.000007
8800.0	18.2	-56.8			29.3	573.1	71.6	17.2	1.000007
8850.0	17.8	-56.6			28.6	573.3	70.1	19.7	1.000006
8900.0	17.3	-56.4			27.9	573.5	70.9	21.4	1.000006
8950.0	16.9	-56.3			27.2	573.7	73.8	22.2	1.000006
9000.0	16.5	-56.1			26.5	574.0	76.6	23.1	1.000006
9050.0	16.1	-55.9			25.9	574.2	78.8	23.3	1.000006
9100.0	15.8	-55.8			25.2	574.4	80.7	22.8	1.000006
9150.0	15.4	-55.6			24.6	574.6	82.7	22.4	1.000005
9200.0	15.0	-55.4			24.0	574.8	83.6	22.4	1.000005
9250.0	14.7	-55.3			23.4	575.0	83.1	22.9	1.000005
9300.0	14.3	-55.1			22.9	575.3	82.5	23.4	1.000005
9350.0	14.0	-54.9			22.3	575.5	81.5	23.3	1.000005
9400.0	13.6	-54.8			21.7	575.7	79.7	22.3	1.000005

STATION ALTITUDE 4940.00 FEET MSL
 3 DEC 77 0035 HRS MST
 ASCENSION NO. 261

UPPER AIR DATA
 J370040261
 STATION

GEODETIC COORDINATES
 33°81'20" LAT DEG
 106°66'50" LON DEG

TABLE X. (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		SFL. H. M. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT DEGREES				DIRECTION DEGREES(TN)	SPEED KNOTS	
9450.0	13.3	-54.6		21.2	575.9	77.7	21.4	1.000005	
9500.0	13.0	-54.5		20.7	576.1			1.000005	
9550.0	12.7	-54.3		20.2	576.3			1.000004	
9600.0	12.4	-54.1		19.7	576.6			1.000004	
9650.0	12.1	-54.0		19.2	576.8			1.000004	

STATION ALTITUDE 1940.00 FEET MSL
 3 DEC. 77
 ASCENSION NO. 251

LABORATORY LEVELS
 JJ37074L261
 STATION
 TABLE XI.

GEODETIC COORDINATES
 33.81920 LAT DEG
 116.66501 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TN)	SPEED KNOTS
800.0	6584.	8.3	34.	9999.0	9999.0XX
750.0	6329.	7.2	35.	9999.0	9999.0XX
700.0	6110.	7.2	31.	320.9	24.8
650.0	5917.	3.3	27.	291.1	23.8
600.0	5724.	-0.9	22.	290.0	24.3
550.0	5531.	-4.7	24.	284.7	26.2
500.0	5338.	-10.1	23.	278.5	21.3
450.0	5145.	-16.3	27.	285.5	21.4
400.0	4952.	-24.2	27.	260.0	12.4
350.0	4759.	-31.8	32.	255.2	16.3
300.0	4566.	-41.1	39.	256.9	22.0
250.0	4373.	-50.9		284.9	19.3
200.0	4180.	-51.4		349.2	49.7
175.0	4037.	-55.2		309.9	26.6
150.0	3894.	-61.0		314.3	38.5
125.0	3751.	-67.6		322.5	42.9
100.0	3608.	-67.0		333.5	29.7
80.0	3465.	-68.2		343.8	16.9
70.0	3322.	-64.8		350.6	2.0
60.0	3179.	-65.8		120.5	4.8
50.0	3036.	-64.6		104.4	4.4
40.0	2893.	-60.2		63.0	12.3
30.0	2750.	-61.0		47.1	16.0
25.0	2607.	-60.6		67.9	17.1
20.0	2464.	-57.4		73.1	12.6
15.0	2321.	-55.4		82.8	23.2

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

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

SIGNIFICANT LEVEL DATA
 3370020860
 WHITE SANDS
 TABLE XII.

GEODETTIC COORDINATES
 32.40043 LAT DEG
 176.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
890.0	3989.0	3.1	36.0
875.3	4135.4	3.4	39.0
860.3	4602.3	11.6	31.0
850.0	4932.9	12.3	31.0
818.8	5962.7	13.3	31.0
718.3	9529.9	6.4	37.0
700.0	10224.3	6.6	30.0
642.3	12533.0	5.2	23.0
553.3	16455.6	-4.2	23.0
500.0	19050.0	-8.7	18.0
400.0	24569.0	-22.2	23.0
315.3	30123.5	-37.3	23.0
300.0	31241.0	-40.3	25.0
271.8	33417.2	-46.0	
250.0	35224.7	-49.1	
232.3	36801.0	-49.1	
209.8	38963.7	-54.0	
200.0	39970.1	-53.0	
188.3	41242.8	-52.4	
150.0	45943.5	-62.1	
119.3	50513.9	-67.1	
100.0	53985.7	-67.9	
94.0	55194.1	-70.0	
83.3	57573.6	-64.5	
70.0	61004.3	-69.2	
66.3	62064.2	-68.7	
58.3	64615.2	-62.4	
50.0	67683.2	-65.7	
42.3	71028.6	-61.7	
30.0	77960.7	-61.9	

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

SIGNIFICANT LEVEL DATA
 3370020860
 WHITE SANDS
 TABLE XII. (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

20.0 86208.7
 11.3 98069.7

PRECIPITATION NO. 860
 3 DEC. 77 0840 HRS MST
 STATION ALTITUDE 3989.00 FEET MSL

PRECIPITATION NO. 860
 3 DEC. 77 0840 HRS MST
 STATION ALTITUDE 3989.00 FEET MSL

UPPER AIR DATA
 3370020860
 WHITE SANDS
 TABLE XIII.

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LUN DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDFX OF REFRACTION
3989.0	860.0	3.1	-10.5	36.0	1178.4	647.9	.0	1.000261	
4000.0	879.6	3.1	-10.6	35.7	1107.9	647.9	310.3	1.000260	
4500.0	863.6	9.8	-6.4	31.2	1061.4	655.9	310.3	1.000254	
5000.0	847.9	12.4	-4.3	31.0	1032.5	658.9	310.3	1.000251	
5500.0	832.7	12.9	-3.8	31.0	1012.1	659.5	310.3	1.000247	
6000.0	817.7	13.2	-3.5	31.0	992.5	660.0	314.3	1.000243	
6500.0	802.8	12.3	-4.3	31.2	977.8	658.8	320.0	1.000239	
7000.0	788.2	11.3	-5.1	31.3	963.4	657.7	319.5	1.000234	
7500.0	773.9	10.3	-5.9	31.4	949.2	656.6	315.4	1.000230	
8000.0	759.8	9.4	-6.6	31.6	935.2	655.4	312.2	1.000226	
8500.0	746.0	8.4	-7.4	31.7	921.4	654.3	309.7	1.000222	
9000.0	732.4	7.4	-8.2	31.9	907.8	653.1	303.9	1.000218	
9500.0	719.1	6.5	-9.0	32.0	894.5	652.0	297.7	1.000214	
10000.0	705.9	6.5	-9.5	30.6	877.8	652.0	291.6	1.000210	
10500.0	692.8	6.4	-10.2	29.2	862.0	651.9	285.9	1.000206	
11000.0	680.1	6.1	-11.1	27.6	847.1	651.5	281.4	1.000201	
11500.0	667.5	5.8	-12.1	26.1	832.4	651.1	278.5	1.000197	
12000.0	655.2	5.5	-13.1	24.6	818.0	650.8	280.1	1.000193	
12500.0	643.1	5.2	-14.1	23.1	803.8	650.4	283.0	1.000189	
13000.0	631.0	4.1	-15.1	23.0	792.0	649.0	288.7	1.000186	
13500.0	619.1	2.9	-16.2	23.0	780.5	647.6	293.2	1.000182	
14000.0	607.5	1.7	-17.2	23.0	769.2	646.2	294.2	1.000179	
14500.0	596.0	.5	-18.2	23.0	758.1	644.7	294.5	1.000176	
15000.0	584.8	-.7	-19.2	23.0	747.1	643.3	293.0	1.000173	
15500.0	573.8	-1.9	-20.2	23.0	736.3	641.9	290.9	1.000170	
16000.0	563.0	-3.1	-21.3	23.0	725.7	640.4	288.1	1.000167	
16500.0	552.3	-4.3	-22.3	22.9	715.1	639.0	283.3	1.000165	
17000.0	541.7	-5.1	-23.5	22.0	703.6	638.0	277.5	1.000162	
17500.0	531.2	-6.0	-24.7	21.0	692.3	636.9	269.9	1.000159	
18000.0	520.9	-6.9	-26.0	20.0	681.2	635.9	262.5	1.000156	

UPPER AIR DATA
 3370020860
 #HITE SANDS
 TABLE XIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

GEODETIC COORDINATES
 32.40743 LAT DEG
 106.37333 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
18500.0	510.9	-7.7	-27.2	19.1	670.2	634.8	256.9	29.2	1.000153
19000.0	501.0	-8.6	-28.5	18.1	659.4	633.8	251.9	30.5	1.000150
19500.0	491.0	-9.8	-29.3	18.4	649.2	632.3	250.1	30.7	1.000148
20000.0	481.2	-11.0	-30.1	18.9	639.2	630.9	248.6	30.8	1.000145
20500.0	471.5	-12.2	-30.9	19.3	629.4	629.4	248.7	30.3	1.000143
21000.0	462.1	-13.5	-31.7	19.8	619.7	627.9	249.3	29.7	1.000140
21500.0	452.8	-14.7	-32.5	20.2	610.2	626.4	251.1	29.0	1.000138
22000.0	443.8	-15.9	-33.3	20.7	600.8	624.9	252.8	28.4	1.000136
22500.0	434.9	-17.1	-34.1	21.1	591.6	623.4	254.3	28.2	1.000134
23000.0	426.2	-18.4	-34.9	21.6	582.6	621.9	255.0	28.1	1.000132
23500.0	417.7	-19.6	-35.8	22.0	573.7	620.4	254.9	28.2	1.000129
24000.0	409.3	-20.8	-36.6	22.5	564.9	618.9	254.7	28.2	1.000127
24500.0	401.1	-22.0	-37.5	22.9	556.3	617.4	254.4	27.9	1.000125
25000.0	392.7	-23.4	-38.6	23.2	547.6	615.8	254.5	27.5	1.000123
25500.0	384.4	-24.7	-39.7	23.3	538.9	614.1	255.1	26.8	1.000121
26000.0	376.2	-26.1	-40.8	23.5	530.4	612.4	256.1	26.2	1.000119
26500.0	368.2	-27.4	-41.9	23.7	522.0	610.7	257.9	25.8	1.000117
27000.0	360.4	-28.8	-43.0	23.9	513.8	609.0	259.3	25.5	1.000115
27500.0	352.8	-30.2	-44.1	24.1	505.8	607.3	259.6	25.5	1.000113
28000.0	345.3	-31.5	-45.2	24.2	497.8	605.6	260.0	25.5	1.000112
28500.0	338.0	-32.9	-46.3	24.4	490.0	603.9	262.0	25.4	1.000110
29000.0	330.8	-34.2	-47.4	24.6	482.4	602.2	264.0	25.4	1.000108
29500.0	323.8	-35.6	-48.6	24.8	474.9	600.5	265.6	25.2	1.000106
30000.0	317.0	-37.0	-49.7	25.0	467.5	598.7	267.1	24.9	1.000105
30500.0	310.1	-38.3	-54.3	16.6**	459.9	597.0	268.6	24.6	1.000103
31000.0	303.2	-39.7	-64.1	5.4**	452.4	595.3	270.1	24.2	1.000101
31500.0	296.5	-41.0			444.9	593.6	271.6	23.7	1.000099
32000.0	289.8	-42.3			437.4	591.9	274.3	23.7	1.000097
32500.0	283.3	-43.6			430.0	590.2	277.1	23.8	1.000096
33000.0	277.0	-44.9			422.8	588.6	279.2	23.7	1.000094

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

UPPER AIR DATA
 3370020R60
 WHITE SANDS
 TABLE XIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE	PRESSURE	TEMPERATURE	REL. HUM.	DENSITY	SPEED OF	WIND DATA	INDEX
MSL FEET	MILLIBARS	AIR DEGREE	PERCENT	GM/CUBIC	SOUND	DIRECTION	OF
		DEGREES		METER	KNOTS	DEGREES(TN)	REFRACTION
		CENTIGRADE					
33500.0	270.8	-46.1		415.5	587.0	280.8	1.000093
34000.0	264.6	-47.0		407.5	585.9	281.8	1.000091
34500.0	258.5	-47.9		399.7	584.7	281.3	1.000089
35000.0	252.6	-48.7		392.1	583.6	280.5	1.000087
35500.0	246.8	-49.1		383.8	583.1	278.5	1.000085
36000.0	241.1	-49.1		374.9	583.1	276.3	1.000084
36500.0	235.6	-49.1		366.3	583.1	272.7	1.000082
37000.0	230.1	-49.6		358.5	582.5	270.6	1.000080
37500.0	224.8	-50.7		352.0	581.1	275.6	1.000078
38000.0	219.5	-51.8		345.5	579.6	293.0	1.000077
38500.0	214.4	-52.9		339.2	578.1	324.0	1.000076
39000.0	209.4	-54.0		332.9	576.8	341.8	1.000074
39500.0	204.5	-53.5		324.3	577.4	350.4	1.000072
40000.0	199.7	-53.0		316.0	578.1	355.6	1.000070
40500.0	195.0	-52.8		308.3	578.4	355.1	1.000069
41000.0	190.5	-52.5		300.7	578.7	353.8	1.000067
41500.0	186.0	-52.9		294.2	578.1	350.3	1.000066
42000.0	181.5	-54.0		288.5	576.8	343.5	1.000064
42500.0	177.2	-55.0		282.9	575.4	333.6	1.000063
43000.0	173.0	-56.0		277.5	574.0	320.0	1.000062
43500.0	168.8	-57.1		272.2	572.7	305.8	1.000061
44000.0	164.8	-58.1		266.9	571.3	302.8	1.000059
44500.0	160.8	-59.1		261.8	569.9	300.8	1.000058
45000.0	157.0	-60.2		256.8	568.6	304.8	1.000057
45500.0	153.3	-61.2		251.9	567.2	309.8	1.000056
46000.0	149.6	-62.2		247.0	565.9	314.7	1.000055
46500.0	145.9	-62.7		241.5	565.1	320.3	1.000054
47000.0	142.3	-63.3		236.1	564.4	325.1	1.000053
47500.0	138.7	-63.8		230.9	563.7	328.6	1.000051
48000.0	135.3	-64.3		225.8	562.9	332.4	1.000050

UPPER AIR DATA
 3370020860
 WHITE SANDS
 TABLE XIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
48500.0	132.0	-64.9		220.8	562.2	332.8	36.9	1.000049
49000.0	128.7	-65.4		215.9	561.5	335.1	38.0	1.000048
49500.0	125.5	-66.0		211.1	560.7	338.1	39.8	1.000047
50000.0	122.4	-66.5		206.4	560.0	341.5	42.2	1.000046
50500.0	119.4	-67.1		201.8	559.2	344.4	44.1	1.000045
51000.0	116.4	-67.2		196.9	559.1	346.8	43.5	1.000044
51500.0	113.5	-67.3		192.0	558.9	349.3	43.1	1.000043
52000.0	110.6	-67.4		187.3	558.8	350.5	41.4	1.000042
52500.0	107.8	-67.6		182.7	558.6	351.0	38.9	1.000041
53000.0	105.1	-67.7		178.2	558.4	351.8	36.6	1.000040
53500.0	102.5	-67.8		173.9	558.3	354.1	34.9	1.000039
54000.0	99.9	-67.9		169.6	558.1	356.5	33.3	1.000038
54500.0	97.4	-68.8		166.0	556.9	356.7	33.4	1.000037
55000.0	94.9	-69.7		162.5	555.7	356.1	34.2	1.000036
55500.0	92.6	-69.3		158.2	556.2	356.5	32.8	1.000035
56000.0	90.2	-68.1		153.3	557.8	359.0	27.8	1.000034
56500.0	88.0	-67.0		148.6	559.4	2.7	22.9	1.000033
57000.0	85.8	-65.8		144.1	560.9	8.9	15.9	1.000032
57500.0	83.6	-64.7		139.7	562.5	26.8	8.4	1.000031
58000.0	81.5	-65.1		136.5	561.9	98.3	5.2	1.000030
58500.0	79.5	-65.8		133.5	561.0	128.5	5.2	1.000030
59000.0	77.5	-66.5		130.6	560.1	150.6	5.6	1.000029
59500.0	75.5	-67.1		127.8	559.2	166.1	6.2	1.000028
60000.0	73.7	-67.8		125.0	558.2	170.9	4.8	1.000028
60500.0	71.8	-68.5		122.2	557.3	179.7	3.4	1.000027
61000.0	70.0	-69.2		119.6	556.4	282.9	1.3	1.000027
61500.0	68.2	-69.0		116.4	556.7	330.9	5.8	1.000026
62000.0	66.5	-68.7		113.4	557.0	339.1	9.9	1.000025
62500.0	64.9	-67.6		109.9	558.5	350.8	11.9	1.000024
63000.0	63.2	-66.4		106.6	560.2	358.9	14.3	1.000024

UPPER AIR DATA
 3370020863
 #WHITE SANDS
 TABLE XIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON 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
63500.0	61.7	-65.2		103.3	563.2	36.9	12.6	1.000022
64000.0	60.1	-63.9		97.1	565.2	55.0	10.1	1.000021
64500.0	58.6	-62.7		94.7	565.0	76.2	7.8	1.000021
65000.0	57.2	-62.8		92.6	564.3	106.8	7.2	1.000020
65500.0	55.8	-63.4		90.6	563.6	128.3	7.4	1.000020
66000.0	54.4	-63.9		88.5	562.8	134.6	5.5	1.000019
66500.0	53.1	-64.4		86.6	562.1	147.0	3.8	1.000019
67000.0	51.7	-65.0		84.7	561.4	136.3	2.0	1.000018
67500.0	50.5	-65.5		82.5	561.6	56.5	1.9	1.000018
68000.0	49.2	-65.3		80.2	562.4	27.0	4.0	1.000017
68500.0	48.0	-64.7		78.0	563.2	30.1	5.1	1.000017
69000.0	46.8	-64.1		75.9	564.0	36.6	5.8	1.000016
69500.0	45.7	-63.5		73.8	564.8	41.8	6.5	1.000016
70000.0	44.5	-62.9		71.8	565.7	55.8	7.1	1.000016
70500.0	43.4	-62.3		69.8	566.5	68.3	8.1	1.000015
71000.0	42.4	-61.7		68.1	566.5	77.8	9.4	1.000015
71500.0	41.3	-61.7		66.4	566.5	85.3	9.9	1.000014
72000.0	40.3	-61.7		64.8	566.4	91.9	10.5	1.000014
72500.0	39.3	-61.7		63.2	566.4	97.5	11.2	1.000014
73000.0	38.4	-61.8		61.7	566.4	100.8	11.1	1.000013
73500.0	37.4	-61.8		60.2	566.4	104.0	11.0	1.000013
74000.0	36.5	-61.8		58.7	566.4	107.0	10.9	1.000013
74500.0	35.6	-61.8		57.3	566.3	99.5	8.8	1.000012
75000.0	34.7	-61.8		55.9	566.3	87.7	6.9	1.000012
75500.0	33.9	-61.8		54.5	566.3	68.5	5.5	1.000012
76000.0	33.1	-61.8		53.2	566.3	38.3	6.1	1.000012
76500.0	32.3	-61.9		51.9	566.3	18.4	8.3	1.000011
77000.0	31.5	-61.9		50.6	566.2	7.4	11.0	1.000011
77500.0	30.7	-61.9		49.4	566.3	9.7	12.4	1.000011
78000.0	29.9	-61.9						

UPPER AIR DATA
 337020860
 WHITE SANDS
 TABLE XIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 86D

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
78500.0	28.3	-61.4		48.4	566.6	28.1	13.8	1.888815
79000.0	27.8	-61.2		45.7	567.2	31.6	14.3	1.000010
79500.0	27.1	-60.9		44.5	567.6	36.1	14.0	1.000010
80500.0	26.5	-60.7		43.4	567.9	40.9	13.8	1.000010
81000.0	25.8	-60.4		42.3	568.2	45.1	13.7	1.000009
81500.0	25.2	-60.2		41.2	568.5	44.6	13.2	1.000009
82000.0	24.6	-59.9		40.2	568.9	44.1	12.8	1.000009
82500.0	24.0	-59.7		39.2	569.2	43.5	12.3	1.000009
83000.0	23.4	-59.5		38.2	569.5	43.6	12.2	1.000008
83500.0	22.8	-59.2		37.2	569.8	43.9	12.1	1.000008
84000.0	22.3	-59.0		36.3	570.1	44.1	12.0	1.000008
84500.0	21.8	-58.7		35.3	570.5	44.6	11.9	1.000008
85000.0	21.2	-58.5		34.4	570.8	46.1	11.8	1.000008
85500.0	20.7	-58.2		33.6	571.1	47.7	11.7	1.000007
86000.0	20.2	-58.0		32.7	571.4	49.2	11.7	1.000007
86500.0	19.7	-57.8		31.9	571.7	49.8	11.6	1.000007
87000.0	19.3	-57.5		31.1	572.1	49.3	11.5	1.000007
87500.0	18.8	-57.3		30.3	572.4	48.9	11.4	1.000007
88000.0	18.3	-57.1		29.6	572.7	48.5	11.3	1.000007
88500.0	17.9	-56.8		28.8	573.0	46.6	11.1	1.000006
89000.0	17.5	-56.6		28.1	573.3	44.3	11.0	1.000006
89500.0	17.1	-56.4		27.4	573.6	42.0	10.8	1.000006
90000.0	16.7	-56.1		26.8	573.9	40.9	10.7	1.000006
90500.0	16.3	-55.9		26.1	574.2	47.8	11.0	1.000006
91000.0	15.9	-55.7		25.4	574.5	54.3	11.4	1.000006
91500.0	15.5	-55.4		24.8	574.8	60.2	12.0	1.000006
92000.0	15.1	-55.2		24.2	575.1	66.8	12.5	1.000005
92500.0	14.8	-55.0		23.6	575.4	74.6	12.8	1.000005
93000.0	14.4	-54.8		23.0	575.7	81.9	13.4	1.000005

UPPER AIR DATA
 3370020860
 WHITE SANDS
 TABLE XIII. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDFX OF REFRACTION
93500.0	14.1	-54.5	22.4	576.0	88.9	14.1	1.000005	
94000.0	13.7	-54.3	21.9	576.3	88.7	13.3	1.000005	
94500.0	13.4	-54.1	21.3	576.6	86.4	12.0	1.000005	
95000.0	13.1	-53.8	20.8	577.0	83.5	10.6	1.000005	
95500.0	12.8	-53.6	20.3	577.3			1.000005	
96000.0	12.5	-53.4	19.8	577.6			1.000004	
96500.0	12.2	-53.1	19.3	577.9			1.000004	
97000.0	11.9	-52.9	18.8	578.2			1.000004	
97500.0	11.6	-52.7	18.4	578.5			1.000004	
98000.0	11.3	-52.4	17.9	578.8			1.000004	

STATION ALTITUDE 3989.00 FEET MST
 3 DEC. 77 0840 HRS MST
 ASCENSION NO. 860

MANDATORY LEVELS
 337002086C
 #WHITE SANDS
 TABLE XIV.

GEODETIC COORDINATES
 32.40043 LAT DEG
 196.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4932.	12.3	-4.3	31.	310.3	7.2	
800.0	6601.	12.1	-4.4	31.	320.8	23.1	
750.0	8363.	8.7	-7.2	32.	310.4	21.1	
700.0	10224.	6.6	-9.7	30.	288.9	22.4	
650.0	12215.	5.4	-13.5	24.	280.8	22.3	
600.0	14344.	.9	-17.8	23.	295.0	22.9	
550.0	16615.	-4.5	-22.6	23.	281.8	25.5	
500.0	19058.	-8.7	-28.7	18.	251.6	30.6	
450.0	21704.	-15.1	-32.7	20.	252.0	28.7	
400.0	24586.	-22.2	-37.6	23.	254.4	27.9	
350.0	27752.	-30.7	-44.5	24.	259.8	25.5	
300.0	31272.	-40.3			271.0	23.9	
250.0	35267.	-49.1			279.2	23.1	
200.0	40027.	-53.0			356.1	33.7	
175.0	42847.	-55.5			321.8	22.2	
150.0	46022.	-62.1			316.0	41.9	
125.0	49685.	-66.1			340.2	41.2	
100.0	54099.	-67.9			357.0	33.0	
80.0	58513.	-65.6			136.6	5.3	
70.0	61153.	-69.2			326.4	4.2	
60.0	64204.	-63.8			50.5	10.2	
50.0	67870.	-65.7			47.2	2.3	
40.0	72372.	-61.7			93.4	10.7	
30.0	78215.	-61.9			18.2	13.0	
25.0	81937.	-60.1			43.8	12.6	
20.0	86574.	-57.9			49.4	11.5	
15.0	92513.	-55.1			80.9	13.3	

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