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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
METEOROLOGICAL DATA REPORT. 12828F LANCE MISSILE NUMBER 2215, R--ETC(U)
OCT 77

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METEOROLOGICAL DATA REPORT

12828F LANCE
MISSILE NO. 2215, ROUND NO. 302 RSL
(6 OCTOBER 1977)

Number
BY

Number

WSMR METEOROLOGICAL TEAM

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 12828F Lance, Missile Number 2215, Round Number 302 RSL, are presented in tabular form. ↑		

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INTRODUCTION

12828F Lance, Missile Number 2215, Round Number 302 RSL, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0849 HRS MDT, 6 October 1977. The scheduled launch time was 0830 HRS MDT.

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	3,980	FEET/MSL
PRESSURE	884.9	MBS
TEMPERATURE	20.5	°C
RELATIVE HUMIDITY	86	%
DEW POINT	18.1	°C
DENSITY	1,040	GM/M ³
WIND SPEED/DIR	CALM	MPH/DEG
CLOUD COVER	10	Ac

TABLE I. SURFACE OBSERVATIONS TAKEN AT LC-33, 0845 HRS MDT/6 OCTOBER 1977.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	CALM	CALM
100	225	1.5
200	225	3.0
300	230	4.5
400	230	5.5
500	225	6.5
600	225	7.0
700	205	6.0
800	185	7.0
900	175	5.5
1000	175	5.5
1100	150	10.0
1200	160	12.0
1300	150	11.0
1400	155	11.0
1500	160	10.0
1600	170	9.0
1700	170	9.0
1800	185	8.0
1900	185	8.0
2000	170	6.5

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
2100	180	7.0
2200	185	7.5
2300	185	7.5
2400	180	5.0
2500	180	4.5
2600	170	6.5
2700	175	7.5
2800	190	11.0
2900	180	10.0
3000	155	11.0
3100	160	10.0
3200	165	12.0
3300	170	10.0
3400	170	9.0
3500	175	12.0
3600	175	13.0
3700	170	12.0
3800	170	11.0
3900	190	10.0
4000	190	11.0
4100	185	11.0

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-33, AT 0836 HRS MDT/6 OCTOBER 1977
12828F LANCE, MISSILE NO. 2215, ROUND NO. 302 RSL

PIBAL RELEASE POINT WSTM COORDINATES:

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

APPROXIMATELY: 815 FEET SE OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	190	9.0
4300	200	14.0
4400	195	14.0
4500	195	14.0
4600	185	14.0
4700	200	16.0
4800	190	13.0
4900	200	14.0
5000	205	12.0
5100	210	10.0
5200	210	9.0
5300	205	9.0
5400	200	8.0
5500	195	10.0
5600	200	8.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
5700	210	10.0
5800	220	8.0
5900	230	8.0
6000	215	8.0
6100	215	7.0
6200	210	10.0
6300	205	8.0
6400	220	8.0
6500	215	10.0
6600	220	12.0
6700	210	12.0
6800	200	11.0
6900	215	10.0
7000	210	10.0
7100	210	10.0

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	CALM	2100	186	8.0
100	204	1.0	2200	184	8.0
200	207	1.0	2300	182	8.0
300	212	2.0	2400	180	8.5
400	217	2.5	2500	180	8.5
500	200	3.0	2600	180	8.5
600	180	3.5	2700	176	9.0
700	161	5.5	2800	171	9.5
800	143	7.5	2900	166	10.0
900	143	8.5	3000	162	10.0
1000	143	10.0	3100	161	11.0
1100	145	10.5	3200	161	12.0
1200	148	11.0	3300	165	13.0
1300	148	11.0	3400	168	14.5
1400	148	11.0	3500	169	14.0
1500	156	10.0	3600	171	13.0
1600	167	9.0	3700	173	11.5
1700	174	9.0	3800	175	10.5
1800	180	8.5	3900	180	11.0
1900	184	8.0	4000	185	12.0
2000	188	7.5	4100	184	13.0

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 0849 HRS MDT/6 OCTOBER 1977
12828F LANCE, MISSILE NO. 2215, ROUND NO. 302 RSL

PIBAL RELEASE POINT WSTM COORDINATES:

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

APPROXIMATELY: 815 FEET SE OF LAUNCHER

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	182	13.0	6600	189	9.0
4300	184	12.5	6700	194	9.0
4400	185	12.0	6800	198	9.5
4500	188	11.5	6900	200	10.0
4600	190	11.0	7000	203	10.5
4700	195	11.0	7100	202	11.0
4800	200	11.5	7200	202	11.0
4900	199	11.0	7300	201	11.5
5000	199	10.5	7400	200	11.5
5100	194	9.5	7500	202	12.0
5200	180	9.0	7600	203	13.0
5300	180	8.0	7700	206	14.0
5400	180	7.0	7800	208	14.5
5500	190	8.0	7900	211	15.5
5600	201	8.5	8000	213	16.5
5700	207	8.0	8100	215	17.0
5800	212	7.5	8200	217	17.5
5900	212	7.5	8300	220	18.5
6000	212	7.5	8400	224	19.5
6100	211	8.0	8500	228	20.0
6200	210	8.0	8600	231	20.5
6300	207	8.0	8700	231	20.5
6400	204	8.5	8800	231	20.5
6500	196	9.0	8900	229	20.5

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	227	20.5
9100	226	20.0
9200	224	20.0
9300	225	20.5
9400	227	20.5
9500	229	21.5
9600	231	22.0
9700	231	22.0
9800	231	22.5
9900	233	22.5
10000	234	23.0
10100	236	23.5
10200	238	23.5
10300	238	24.0
10400	238	25.0
10500	238	25.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10600	238	24.5
10700	235	26.0
10800	233	27.5
10900	232	27.0
11000	231	27.0
11100	230	26.0
11200	230	25.5
11300	229	26.5
11400	229	27.5
11500	230	28.0
11600	230	28.0
11700	229	28.0
11800	228	28.5
11900	227	28.5
12000	226	28.5

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 3951.40 FEET MSL
 6 OCT. 77
 ASCENSION NO. 100

SIGNIFICANT LEVEL DATA
 270050105
 APACHE
 TABLE IV.

GEODETIC COORDINATES
 32.02700 LAT DEG
 106.39352 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
885.2	3951.4	17.2	16.2	94.0
871.8	4364.8	18.0	15.8	87.0
850.0	5098.2	17.6	14.3	81.0
775.8	7650.9	13.7	12.1	90.0
756.3	8350.0	13.0	8.7	75.0
746.3	8723.7	12.6	8.5	76.0
700.0	10478.9	9.0	1.9	61.0
605.3	14361.5	1.9	-2.2	74.0
588.3	15134.1	.6	-6.0	61.0
554.8	16663.4	-3.1	-5.9	81.0
544.8	17140.8	-3.6	-4.4	94.0
520.8	18304.4	-5.9	-9.8	74.0
500.0	19348.3	-7.9	-8.3	97.0
472.8	20708.4	-10.4	-12.1	87.0
406.0	24917.1	-19.4	-22.0	80.0
377.8	26299.0	-22.5	-42.6	14.0
333.8	29243.8	-27.8	-49.9	10.0
308.3	31097.4	-31.9		
300.0	31727.6	-32.6		
250.0	35841.5	-42.8		
200.0	40639.2	-54.6		
159.8	45196.3	-67.5		
150.0	46434.2	-70.1		
140.8	47655.8	-72.9		

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STATION ALTITUDE 3951.40 FEET MSL
 6 OCT. 77 0730 HRS MDT
 ASCENSION NO. 103

UPPER AIR DATA
 2790050105
 APACHE
 TABLE V.

GEODETIC COORDINATES
 32.02700 LAT DEG
 106.59352 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	
3951.4	885.2	17.2	16.2	94.0	1055.7	660.5	.0	175.4	1.000318
4000.0	885.7	17.5	16.2	93.2	1051.0	666.6	.3	175.4	1.000317
4500.0	868.2	17.9	15.9	86.0	1031.1	667.2	3.5	175.4	1.000309
5000.0	855.0	17.7	14.5	81.8	1014.5	666.8	6.7	175.4	1.000300
5500.0	837.9	17.0	14.0	82.4	998.8	666.0	10.0	175.4	1.000295
6000.0	825.0	16.2	13.5	84.2	983.7	665.1	12.9	175.2	1.000290
6500.0	808.4	15.5	13.1	85.9	968.9	664.2	13.9	173.9	1.000285
7000.0	794.1	14.7	12.7	87.7	954.3	663.3	14.3	173.2	1.000280
7500.0	780.0	13.9	12.2	89.5	940.0	662.4	13.1	173.2	1.000275
8000.0	766.1	13.4	10.5	82.6	925.7	661.5	11.2	174.5	1.000265
8500.0	752.4	12.8	8.6	75.4	911.3	660.7	8.4	178.9	1.000255
9000.0	738.8	12.0	7.5	73.6	897.7	659.6	6.8	184.0	1.000248
9500.0	725.5	11.0	5.6	69.4	885.2	658.3	6.5	187.1	1.000240
10000.0	712.5	10.0	3.7	65.1	872.7	656.9	6.9	189.2	1.000232
10500.0	699.4	9.0	1.9	61.1	860.4	655.6	7.7	190.6	1.000225
11000.0	686.5	8.1	1.4	62.7	847.4	654.5	8.3	201.6	1.000221
11500.0	673.9	7.1	.9	64.4	834.5	653.4	9.3	212.2	1.000217
12000.0	661.4	6.2	.4	66.1	821.8	652.3	10.9	223.1	1.000214
12500.0	649.2	5.3	-.1	67.7	809.3	651.3	12.8	228.0	1.000210
13000.0	637.5	4.4	-.7	69.4	797.1	650.2	14.6	229.3	1.000206
13500.0	625.5	3.5	-1.2	71.1	785.0	649.1	16.0	226.7	1.000203
14000.0	614.0	2.6	-1.8	72.7	773.1	648.0	17.3	223.5	1.000199
14500.0	602.8	1.7	-2.8	72.0	761.4	646.9	17.2	221.2	1.000195
15000.0	591.5	.8	-5.3	63.3	749.8	645.7	17.3	218.8	1.000188
15500.0	580.1	-.3	-5.9	65.8	738.7	644.4	17.7	216.5	1.000185
16000.0	569.2	-1.5	-5.8	72.3	727.9	643.0	18.6	218.7	1.000183
16500.0	559.4	-2.7	-5.8	78.8	717.5	641.5	19.5	232.5	1.000180
17000.0	547.8	-3.5	-4.8	90.1	705.4	640.7	19.8	233.2	1.000179
17500.0	537.5	-4.5	-6.0	87.8	694.5	639.6	20.1	241.2	1.000175
18000.0	527.0	-5.5	-8.3	79.2	683.8	638.3	20.5	250.5	1.000170

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GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LONG DEG

UPPER AIR DATA
 2790050105
 APACHE
 TABLE V. (CONT)

STATION ALTITUDE 5551.40 FEET MSL
 6 OCT. 77
 0730 HRS MDT
 ASCENSION NO. 105

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC MLTER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
18000.0	516.6	-6.3	78.3	073.2	637.1	255.9	22.1	1.000166
19000.0	506.8	-7.2	39.3	062.4	636.0	259.3	23.8	1.000165
19500.0	497.0	-8.2	95.9	051.8	634.9	258.9	25.0	1.000162
20000.0	487.3	-9.0	92.4	041.4	633.8	258.0	25.4	1.000158
20500.0	477.8	-9.9	38.9	031.1	632.7	250.4	25.0	1.000155
21000.0	468.4	-10.9	06.6	021.1	631.5	254.3	24.6	1.000151
21500.0	459.1	-12.0	35.8	011.3	630.1	251.8	24.2	1.000148
22000.0	449.9	-13.1	34.9	001.7	628.8	247.3	24.2	1.000145
22500.0	440.9	-14.2	84.1	592.2	627.4	243.8	24.6	1.000142
23000.0	432.1	-15.2	83.2	582.9	626.1	241.3	25.5	1.000139
23500.0	423.5	-16.3	82.4	573.7	624.7	243.2	26.9	1.000136
24000.0	415.1	-17.4	81.5	564.7	623.4	246.4	28.7	1.000133
24500.0	406.9	-18.5	80.7	555.9	622.0	250.4	32.0	1.000131
25000.0	398.0	-19.6	76.0	547.2	620.6	253.9	35.7	1.000128
25500.0	390.3	-20.7	52.2	538.5	619.2	255.9	36.7	1.000124
26000.0	382.5	-21.8	28.3	530.0	617.7	257.7	36.2	1.000120
26500.0	374.0	-22.9	13.7	521.3	616.4	259.6	34.3	1.000117
27000.0	366.8	-23.8	13.0	512.4	615.3	261.6	35.9	1.000115
27500.0	359.2	-24.7	12.4	503.5	614.1	262.6	38.0	1.000113
28000.0	351.7	-25.6	11.7	494.8	613.0	262.5	40.4	1.000111
28500.0	344.4	-26.5	11.0	486.3	611.9	262.2	42.6	1.000109
29000.0	337.2	-27.4	10.3	477.9	610.8	262.5	44.5	1.000107
29500.0	330.2	-28.4	8.0**	469.8	609.5	263.4	46.2	1.000105
30000.0	323.2	-29.5	5.9**	462.0	608.1	263.7	46.0	1.000103
30500.0	316.3	-30.6	3.2**	454.2	606.8	264.1	45.6	1.000101
31000.0	309.0	-31.7	.5**	446.0	605.4	264.7	45.1	1.000099
31500.0	303.0	-32.3		438.3	604.5	264.7	46.2	1.000098
32000.0	296.4	-33.3		430.5	603.4	264.5	48.0	1.000096
32500.0	289.9	-34.5		423.2	601.8	263.6	50.3	1.000094
33000.0	283.0	-35.8		416.1	600.2	262.9	51.8	1.000093

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

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STATION ALTITUDE 3951.40 FEET MSL
 6 OCT. 77 0730 HRS MDT
 ASCENSION NO. 103

UPPER AIR DATA
 279050103
 APACHE
 TABLE V. (CONT)

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 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	
3300.0	277.0	-37.0		409.1	598.7	262.1	51.9	1.000091
3400.0	271.0	-38.2		402.5	597.1	262.0	52.4	1.000090
3450.0	269.0	-39.5		395.5	595.5	262.4	53.3	1.000088
3500.0	259.0	-40.7		388.9	593.9	263.6	56.1	1.000087
3550.0	253.8	-42.0		382.4	592.4	264.7	59.2	1.000085
3600.0	248.2	-43.2		375.9	590.8	265.5	62.8	1.000084
3650.0	242.0	-44.4		369.3	589.2	266.3	63.5	1.000082
3700.0	236.9	-45.6		362.7	587.6	266.9	62.8	1.000081
3750.0	231.4	-46.9		356.3	586.0	266.7	60.6	1.000079
3800.0	226.1	-48.1		350.0	584.4	266.4	59.7	1.000078
3850.0	220.9	-49.3		343.9	582.8	266.2	59.9	1.000077
3900.0	215.8	-50.6		337.8	581.2	266.4	63.0	1.000075
3950.0	210.9	-51.8		331.9	579.6	266.0	66.5	1.000074
4000.0	206.0	-53.0		326.1	578.0	264.7	70.7	1.000073
4050.0	201.3	-54.3		320.4	576.4	263.6	73.0	1.000071
4100.0	196.0	-55.6		314.7	574.8	262.7	73.5	1.000070
4150.0	191.7	-57.0		309.0	572.7	263.3	72.2	1.000069
4200.0	187.0	-58.3		303.5	570.8	264.1	70.0	1.000068
4250.0	182.0	-59.9		298.1	568.9	264.7	66.3	1.000066
4300.0	178.1	-61.3		292.8	567.1	265.0	65.0	1.000065
4350.0	173.7	-62.7		287.6	565.2	265.1	64.9	1.000064
4400.0	169.0	-64.1		282.5	563.3	266.1	67.2	1.000063
4450.0	165.4	-65.5		277.5	561.5	267.3	69.0	1.000062
4500.0	161.4	-66.9		272.6	559.4	269.2	69.8	1.000061
4550.0	157.3	-68.1		267.4	557.8	270.4	70.8	1.000060
4600.0	153.4	-69.2		261.9	556.4	271.1	71.9	1.000058
4650.0	149.0	-70.3		256.7	554.9			1.000057
4700.0	145.7	-71.4		251.5	553.4			1.000056
4750.0	141.9	-72.5		246.5	551.8			1.000055

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STATION ALTITUDE 3951.40 FEET MSL
 6 OCT. 77
 ASCENSION NO. 100

MANDATORY LEVELS
 2790050105
 APACHE
 TABLE VI.

GEOGETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREE	DEWPOINT	PERCENT	DIRECTION	SPEED	
		DEGREES	CENTIGRADE		DEGREES(TN)	KNOTS	
650.0	5097.	17.6	14.3	61.	175.4	7.4	
800.0	6790.	15.0	12.9	87.	175.3	14.6	
750.0	8587.	12.7	8.6	70.	180.0	7.9	
700.0	10479.	9.0	1.9	61.	190.5	7.7	
650.0	12453.	5.4	-1	68.	228.0	12.8	
600.0	14618.	1.5	-3.4	70.	220.6	17.2	
550.0	16900.	-3.3	-5.2	87.	230.6	19.7	
500.0	19357.	-7.9	-8.3	97.	259.0	24.7	
450.0	22025.	-13.1	-15.0	85.	248.9	24.2	
400.0	24935.	-19.4	-22.0	80.	253.7	35.5	
350.0	28149.	-25.8	-47.0	12.	262.4	41.2	
300.0	31761.	-32.6			264.6	47.3	
250.0	35886.	-42.8			265.5	62.4	
200.0	40699.	-54.6			263.1	73.2	
175.0	43455.	-62.3			265.2	65.1	
150.0	46510.	-70.1					

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STATION ALTITUDE +126.59 FEET MSL
 6 OCT. 77 0820 HRS MDT
 ASCENSION NO. 704

SIGNIFICANT LEVEL DATA
 2790010704
 HOLLOWAN
 TABLE VII.

GEODETIC COORDINATES
 32.86865 LAT DEG
 106.09965 LON DEG

PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM. PERCENT
MILLIBARS MSL FEET	ALTITUDE	AIR DEGREE	DEWPOINT CENTIGRADE	
880.1	4126.6	15.0	11.8	81.0
868.8	4492.5	17.9	15.5	86.0
850.0	5111.2	19.9	15.5	76.0
741.8	8909.9	10.5	9.6	94.0
723.3	9601.5	10.1	7.3	83.0
713.8	9962.7	9.8	2.6	61.0
700.0	10494.4	8.9	1.6	60.0
660.8	12055.3	6.8	.0	62.0
584.8	15311.2	.3	-5.9	63.0
549.9	16919.6	-3.5	-5.2	88.0
525.9	18073.0	-5.5	-11.0	65.0
500.0	19365.6	-8.4	-11.7	77.0
477.8	20520.5	-8.8	-15.5	58.0
414.3	24079.6	-17.8	-22.8	65.0
411.7	24234.1	-17.2	-27.0	42.0
400.0	24940.2	-18.7	-27.6	45.0
389.3	25601.0	-19.7	-27.6	49.0
387.5	25713.6	-19.9	-32.3	32.0
383.3	25978.3	-20.1	-36.7	21.0
311.3	30920.5	-30.8	-48.8	15.0
300.0	31776.0	-32.7		
250.0	35895.0	-42.1		
200.0	40711.8	-53.5		
174.8	43492.8	-61.5		
150.0	46539.4	-68.8		
142.3	47566.0	-70.4		
125.3	50048.4	-68.1		
106.3	53251.4	-71.0		
100.0	54435.6	-70.0		
82.8	58072.4	-73.3		

BEST AVAILABLE COPY

STATION ALTITUDE +126.59 FEET MSL
 6 OCT. 77 0820 HRS MDT
 ASCENSION NO. 70*

SIGNIFICANT LEVEL DATA
 2790010704
 HOLLoman
 TABLE VII. (CONT)

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
70.0	61354.4	-64.1		
55.3	66097.0	-61.1		
50.0	68157.9	-56.9		
30.0	78801.2	-52.9		
20.0	87365.1	-50.5		
14.3	94558.8	-45.8		
10.0	102333.7	-44.0		

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GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

UPPER AIR DATA
2790010704
HOLLOMAN
TABLE VIII.

STATION ALTITUDE 4126.59 FEET MSL
6 OCT. 77 0820 HRS MDT
ASCENSION NO. 704

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA		INDEX OF REFRACTION
							SPEED KNOTS	SPEED KNOTS	
4126.6	880.1	15.0	81.0	1057.7	663.3	.0	.0	1.000299	
4500.0	868.6	17.9	85.9	1031.5	667.2	168.9	3.1	1.000309	
5000.0	853.3	19.5	77.8	1007.7	669.1	168.9	7.1	1.000303	
5500.0	838.2	18.9	77.8	992.0	668.4	168.9	11.2	1.000297	
6000.0	823.3	17.7	80.2	978.8	666.9	170.0	13.8	1.000291	
6500.0	808.7	16.5	82.6	965.7	665.4	172.8	14.0	1.000285	
7000.0	794.4	15.2	84.9	952.9	663.9	175.9	14.0	1.000279	
7500.0	780.3	14.0	87.3	940.2	662.4	179.6	13.8	1.000274	
8000.0	766.4	12.8	89.7	927.7	660.9	181.5	13.2	1.000268	
8500.0	752.8	11.5	92.1	915.4	659.4	181.0	12.2	1.000263	
9000.0	739.4	10.4	92.6	902.8	658.0	183.9	10.4	1.000256	
9500.0	726.0	10.2	84.6	887.8	657.5	192.8	8.1	1.000247	
10000.0	712.8	9.7	60.9	874.4	656.5	203.1	6.9	1.000230	
10500.0	699.9	8.9	60.0	861.2	655.5	214.0	6.4	1.000225	
11000.0	687.1	8.2	60.6	847.6	654.7	218.4	8.4	1.000220	
11500.0	674.3	7.5	61.3	834.1	653.9	221.2	10.7	1.000217	
12000.0	662.2	6.9	61.9	820.9	653.1	226.8	13.6	1.000213	
12500.0	649.9	5.9	62.1	808.5	651.9	230.5	15.9	1.000208	
13000.0	637.6	4.9	62.3	796.5	650.7	234.0	16.6	1.000204	
13500.0	625.9	3.9	62.4	784.6	649.5	235.8	17.3	1.000200	
14000.0	614.3	2.9	62.6	772.9	648.2	233.0	18.3	1.000196	
14500.0	602.9	1.9	62.8	761.4	647.0	230.1	19.2	1.000192	
15000.0	591.7	.9	62.9	750.1	645.8	226.9	20.0	1.000188	
15500.0	580.6	-.1	65.9	738.9	644.5	225.4	20.9	1.000185	
16000.0	569.6	-1.3	73.7	728.0	643.2	226.0	21.8	1.000183	
16500.0	558.8	-2.5	81.5	717.3	641.8	229.1	22.6	1.000181	
17000.0	548.2	-3.6	86.4	706.6	640.5	233.8	23.6	1.000178	
17500.0	537.7	-4.5	76.4	695.6	639.3	241.7	23.7	1.000173	
18000.0	527.4	-5.4	66.5	684.8	638.1	251.1	24.0	1.000167	
18500.0	517.2	-6.5	69.0	674.3	636.8	256.3	25.0	1.000164	

UPPER AIR DATA
 2790010704
 HOLLOMAN
 TABLE VIII. (CONT)

STATION ALTITUDE 4126.59 FEET MSL
 6 OCT. 77 0820 HRS MDT
 ASCENSION NO. 70*

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 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	
19000.0	507.2	-7.6	-11.5	73.6	664.1	635.5	260.3	26.1	1.000162
19500.0	497.4	-8.4	-12.1	74.8	653.4	634.4	258.4	27.6	1.000159
20000.0	487.7	-8.6	-13.7	66.6	641.2	634.1	256.2	29.1	1.000154
20500.0	478.2	-8.8	-15.5	58.3	629.2	633.9	253.4	29.8	1.000150
21000.0	468.7	-10.0	-16.5	58.9	619.7	632.4	250.7	30.4	1.000147
21500.0	459.4	-11.3	-17.5	59.9	610.4	630.8	249.3	31.3	1.000145
22000.0	450.3	-12.5	-18.5	60.9	601.2	629.3	248.1	32.2	1.000142
22500.0	441.4	-13.8	-19.5	61.9	592.2	627.7	249.1	32.1	1.000139
23000.0	432.6	-15.1	-20.5	62.9	583.3	626.2	250.7	31.9	1.000137
23500.0	424.0	-16.3	-21.6	63.9	574.6	624.6	254.7	31.4	1.000134
24000.0	415.6	-17.6	-22.6	64.8	566.1	623.1	258.2	31.6	1.000132
24500.0	407.3	-17.8	-27.2	43.1	555.2	622.8	259.9	33.1	1.000127
25000.0	399.0	-18.8	-27.6	45.4	546.2	621.5	259.4	34.6	1.000125
25500.0	390.9	-19.5	-27.6	48.4	536.7	620.6	256.6	36.0	1.000123
26000.0	382.9	-20.1	-36.7	21.0	527.2	619.7	255.2	36.8	1.000119
26500.0	375.0	-21.2	-38.0	20.4	518.4	618.4	255.2	36.9	1.000117
27000.0	367.2	-22.3	-39.2	19.8	509.8	617.1	256.0	38.4	1.000115
27500.0	359.3	-23.4	-40.4	19.2	501.4	615.7	257.8	41.9	1.000113
28000.0	352.0	-24.5	-41.6	18.5	493.1	614.4	259.7	44.6	1.000111
28500.0	344.7	-25.6	-42.8	17.9	484.9	613.0	262.0	45.7	1.000109
29000.0	337.5	-26.6	-44.1	17.3	476.9	611.7	264.2	45.8	1.000107
29500.0	330.5	-27.7	-45.3	16.7	469.0	610.4	266.4	44.4	1.000105
30000.0	323.6	-28.8	-46.5	16.1	461.3	609.0	268.1	43.8	1.000103
30500.0	316.9	-29.9	-47.8	15.5	453.7	607.6	268.4	45.0	1.000102
31000.0	310.2	-31.0	-49.8	13.6**	446.2	606.3	268.4	46.3	1.000100
31500.0	303.6	-32.1	-59.1	4.8**	438.7	604.9	267.2	48.3	1.000098
32000.0	297.0	-33.2			431.3	603.5	266.2	50.4	1.000096
32500.0	290.5	-34.4			423.8	602.0	264.1	52.3	1.000094
33000.0	284.2	-35.5			416.6	600.6	262.1	54.4	1.000093
33500.0	278.0	-36.6			409.4	599.1	261.7	55.0	1.000091

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

UPPER AIR DATA
 2790010704
 HOLLOMAN
 TABLE VIII. (CONT)

STATION ALTITUDE 4126.59 FEET MSL
 6 OCT. 77 0820 HRS MDT
 ASCENSION NO. 70*

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION (TN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
34000.0	271.9	-37.8		402.4	597.7	261.6	55.4	1.000090
34500.0	265.9	-38.9		395.5	596.2	263.3	56.5	1.000088
35000.0	260.1	-40.1		388.7	594.8	265.6	58.1	1.000087
35500.0	254.4	-41.2		382.1	593.3	267.2	62.1	1.000085
36000.0	248.8	-42.3		375.5	591.9	268.2	67.5	1.000084
36500.0	243.1	-43.5		368.8	590.3	268.9	70.2	1.000082
37000.0	237.5	-44.7		362.2	588.8	269.3	70.5	1.000081
37500.0	232.1	-45.9		355.8	587.3	270.1	69.6	1.000079
38000.0	226.8	-47.1		349.4	585.8	271.3	67.4	1.000078
38500.0	221.6	-48.3		343.2	584.2	271.7	66.5	1.000076
39000.0	216.5	-49.4		337.2	582.7	270.7	67.9	1.000075
39500.0	211.5	-50.6		331.2	581.1	269.5	69.2	1.000074
40000.0	206.7	-51.8		325.3	579.6	267.7	70.3	1.000072
40500.0	202.0	-53.0		319.6	578.0	265.9	71.5	1.000071
41000.0	197.2	-54.3		314.0	576.3	265.1	70.5	1.000070
41500.0	192.5	-55.8		308.5	574.4	264.4	69.5	1.000069
42000.0	187.9	-57.2		303.1	572.5	263.9	68.9	1.000068
42500.0	183.4	-58.6		297.9	570.6	263.5	68.6	1.000066
43000.0	179.0	-60.1		292.7	568.7	263.3	68.9	1.000065
43500.0	174.7	-61.5		287.6	566.7	263.5	70.3	1.000064
44000.0	170.4	-62.7		282.1	565.1	263.7	71.7	1.000063
44500.0	166.2	-63.9		276.7	563.5	264.4	71.5	1.000062
45000.0	162.1	-65.1		271.4	561.9	265.2	71.4	1.000060
45500.0	158.0	-66.3		266.2	560.3	266.7	72.2	1.000059
46000.0	154.1	-67.5		261.1	558.7	268.4	73.4	1.000058
46500.0	150.3	-68.7		256.1	557.0	270.7	75.0	1.000057
47000.0	146.5	-69.5		250.6	555.9	273.6	77.2	1.000056
47500.0	142.8	-70.3		245.2	554.9	276.3	79.2	1.000055
48000.0	139.2	-70.0		238.6	555.3	279.0	80.6	1.000053
48500.0	135.6	-69.5		232.1	555.9	281.5	81.8	1.000052

UPPER AIR DATA
 2790010704
 HOLLOMAN
 TABLE VIII. (CONT)

STATION ALTITUDE 4126.59 FEET MSL
 6 OCT. 77
 ASCENSION NO. 704 0820 HRS MDT

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 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	
49000.0	132.2	-69.1			225.7	556.5	283.6	78.7	1.000050
49500.0	128.9	-68.6			219.5	557.2	285.8	75.7	1.000049
50000.0	125.6	-68.1			213.4	557.8	285.7	69.6	1.000048
50500.0	122.4	-68.5			208.4	557.3	285.0	62.9	1.000046
51000.0	119.3	-69.0			203.6	556.7	282.1	57.3	1.000045
51500.0	116.3	-69.4			198.9	556.1	277.5	52.4	1.000044
52000.0	113.4	-69.9			194.3	555.5	273.7	48.0	1.000043
52500.0	110.5	-70.3			189.8	554.8	271.1	44.1	1.000042
53000.0	107.7	-70.8			185.4	554.2	268.5	40.2	1.000041
53500.0	104.9	-70.8			180.7	554.2	269.7	35.2	1.000040
54000.0	102.3	-70.4			175.7	554.8	271.4	30.3	1.000039
54500.0	99.7	-70.1			171.0	555.2	273.9	27.3	1.000038
55000.0	97.1	-70.5			167.0	554.6	277.0	25.0	1.000037
55500.0	94.6	-71.0			163.0	553.9	279.8	24.0	1.000036
56000.0	92.2	-71.4			159.2	553.3	281.7	24.4	1.000035
56500.0	89.8	-71.9			155.5	552.7	283.4	24.7	1.000035
57000.0	87.5	-72.3			151.9	552.1	284.9	24.7	1.000034
57500.0	85.3	-72.8			148.3	551.5	286.4	24.7	1.000033
58000.0	83.1	-73.2			144.8	550.8	287.4	23.8	1.000032
58500.0	81.0	-72.1			140.4	552.4	288.4	22.9	1.000031
59000.0	79.0	-70.7			135.9	554.3	289.5	21.2	1.000030
59500.0	77.0	-69.3			131.5	556.2	290.8	19.4	1.000029
60000.0	75.0	-67.9			127.3	558.1	295.3	15.9	1.000028
60500.0	73.1	-66.5			123.3	560.0	303.9	12.2	1.000027
61000.0	71.3	-65.1			119.4	561.9	301.5	10.8	1.000027
61500.0	69.5	-64.0			115.8	563.4	290.8	10.8	1.000026
62000.0	67.8	-63.7			112.7	563.8	280.9	11.2	1.000025
62500.0	66.1	-63.4			109.8	564.3	273.0	11.8	1.000024
63000.0	64.5	-63.1			107.0	564.7	266.1	12.6	1.000024
63500.0	62.9	-62.7			104.2	565.1	264.1	11.1	1.000023

UPPER AIR DATA
 2790010704
 HOLLOMAN
 TABLE VIII. (CONT)

STATION ALTITUDE 4126.59 FEET MSL
 6 OCT. 77 0820 HRS MDT
 ASCENSION NO. 704

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 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	
64000.0	61.4	-62.4		101.5	565.5	264.1	8.3	1.000023
64500.0	59.9	-62.1		98.8	565.9	264.1	5.8	1.000022
65000.0	58.4	-61.8		96.3	566.4	264.1	5.2	1.000021
65500.0	57.0	-61.5		93.8	566.8	264.1	4.5	1.000021
66000.0	55.6	-61.2		91.3	567.2	264.1	3.6	1.000020
66500.0	54.2	-60.3		88.7	568.4	264.1	2.6	1.000020
67000.0	52.9	-59.3		86.2	569.8	264.1	1.7	1.000019
67500.0	51.6	-58.2		83.7	571.1	264.1	1.4	1.000019
68000.0	50.4	-57.2		81.3	572.5	264.1	1.1	1.000018
68500.0	49.2	-56.8		79.2	573.1	288.1	1.7	1.000018
69000.0	48.0	-56.6		77.2	573.3	299.6	2.5	1.000017
69500.0	46.9	-56.4		75.3	573.6	311.3	3.4	1.000017
70000.0	45.8	-56.2		73.5	573.8	322.0	4.6	1.000016
70500.0	44.7	-56.0		71.7	574.1	328.2	6.0	1.000016
71000.0	43.6	-55.8		69.9	574.3	332.6	6.5	1.000016
71500.0	42.6	-55.6		68.2	574.6	336.5	7.1	1.000015
72000.0	41.6	-55.5		66.5	574.8	343.7	7.4	1.000015
72500.0	40.6	-55.3		64.9	575.1	7.9	7.4	1.000014
73000.0	39.6	-55.1		63.3	575.3	28.3	8.7	1.000014
73500.0	38.7	-54.9		61.8	575.5	42.7	9.9	1.000014
74000.0	37.8	-54.7		60.2	575.8	55.0	10.7	1.000013
74500.0	36.9	-54.5		58.8	576.0	65.2	11.9	1.000013
75000.0	36.0	-54.3		57.3	576.3	71.2	11.4	1.000013
75500.0	35.2	-54.1		55.9	576.5	77.2	10.3	1.000012
76000.0	34.3	-54.0		54.5	576.8	84.6	9.2	1.000012
76500.0	33.5	-53.8		53.2	577.0	88.4	8.6	1.000012
77000.0	32.7	-53.6		51.9	577.3	92.7	8.0	1.000012
77500.0	31.9	-53.4		50.6	577.5	97.7	7.4	1.000011
78000.0	31.2	-53.2		49.4	577.8	103.5	6.7	1.000011
78500.0	30.4	-53.0		48.2	578.0	110.9	6.0	1.000011

UPPER AIR DATA
 2790010704
 HOLLOMAN
 TABLE VIII. (CONT)

STATION ALTITUDE 4126.59 FEET MSL
 6 OCT. 77 0820 HRS MDT
 ASCENSION NO. 704

GEODETIC COORDINATES
 32.86865 LAT DEG
 106.09965 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 DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
79000.0	29.7	-52.8		47.0	578.2	120.1	5.4	1.000010
79500.0	29.0	-52.7		45.9	578.4	122.1	5.1	1.000010
80000.0	28.3	-52.6		44.8	578.6	116.9	4.9	1.000010
80500.0	27.7	-52.4		43.7	578.8	111.5	4.8	1.000010
81000.0	27.0	-52.3		42.6	579.0	104.8	5.0	1.000009
81500.0	26.4	-52.1		41.6	579.2	97.0	5.7	1.000009
82000.0	25.8	-52.0		40.6	579.3	90.9	6.5	1.000009
82500.0	25.2	-51.9		39.6	579.5	86.5	7.2	1.000009
83000.0	24.6	-51.7		38.7	579.7	85.8	6.6	1.000009
83500.0	24.0	-51.6		37.8	579.9	84.9	6.0	1.000008
84000.0	23.5	-51.4		36.9	580.1	83.9	5.4	1.000008
84500.0	22.9	-51.3		36.0	580.3	79.5	5.8	1.000008
85000.0	22.4	-51.2		35.1	580.4	75.3	6.4	1.000008
85500.0	21.8	-51.0		34.3	580.6	71.8	7.1	1.000008
86000.0	21.3	-50.9		33.4	580.8	75.5	8.7	1.000007
86500.0	20.8	-50.7		32.6	581.0	80.4	10.9	1.000007
87000.0	20.3	-50.6		31.9	581.2	83.6	13.2	1.000007
87500.0	19.9	-50.4		31.1	581.4	87.3	14.4	1.000007
88000.0	19.4	-50.1		30.3	581.8	91.5	14.8	1.000007
88500.0	19.0	-49.8		29.6	582.3	95.5	15.4	1.000007
89000.0	18.5	-49.4		28.9	582.7	97.3	15.8	1.000006
89500.0	18.1	-49.1		28.2	583.1	97.1	15.9	1.000006
90000.0	17.7	-48.8		27.5	583.6	97.0	16.1	1.000006
90500.0	17.3	-48.5		26.8	584.0	94.7	15.9	1.000006
91000.0	16.9	-48.1		26.1	584.4	88.8	15.3	1.000006
91500.0	16.5	-47.8		25.5	584.8	82.5	14.8	1.000006
92000.0	16.1	-47.5		24.9	585.2	76.6	14.7	1.000006
92500.0	15.7	-47.1		24.3	585.7	72.3	14.7	1.000005
93000.0	15.4	-46.8		23.7	586.1	68.0	14.9	1.000005
93500.0	15.0	-46.5		23.1	586.5	65.5	15.0	1.000005

UPPER AIR DATA
 2790010704
 HOLLOWMAN
 TABLE VIII. (CONT)

STATION ALTITUDE 4126.59 FEET MSL
 6 OCT. 77 0820 HRS MDT
 ASCENSION NO. 704

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 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	
94000.0	14.7	-46.2		22.5	586.9	69.9	15.0	1.000005
94500.0	14.5	-45.8		22.0	587.4	74.2	15.0	1.000005
95000.0	14.0	-45.7		21.5	587.5	77.9	15.1	1.000005
95500.0	13.7	-45.6		21.0	587.7	74.6	16.1	1.000005
96000.0	13.4	-45.5		20.5	587.8	71.6	17.0	1.000005
96500.0	13.1	-45.4		20.0	588.0	68.9	18.1	1.000004
97000.0	12.8	-45.2		19.5	588.1	69.9	15.7	1.000004
97500.0	12.5	-45.1		19.1	588.3	71.7	13.0	1.000004
98000.0	12.2	-45.0		18.6	588.4	74.3	10.4	1.000004
98500.0	11.9	-44.9		18.2	588.6	90.2	8.7	1.000004
99000.0	11.7	-44.8		17.8	588.7	113.0	8.4	1.000004
99500.0	11.4	-44.7		17.4	588.9	133.9	9.5	1.000004
100000.0	11.1	-44.5		17.0	589.0			1.000004
100500.0	10.9	-44.4		16.6	589.2			1.000004
101000.0	10.6	-44.3		16.2	589.3			1.000004
101500.0	10.4	-44.2		15.8	589.5			1.000004
102000.0	10.2	-44.1		15.4	589.6			1.000003

STATION ALTITUDE 4126.59 FEET MSL
 6 OCT. 77
 ASCENSION NO. 704

MANDATORY LEVELS
 2790010704
 HOLLOMAN
 TABLE IX.

GEODETIC COORDINATES
 32.68865 LAT DEG
 106.09965 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5110.	19.9	76.	168.9	8.1
800.0	6818.	15.7	84.	174.6	14.1
750.0	8608.	11.3	95.	180.8	11.9
700.0	10495.	8.9	60.	214.0	6.4
650.0	12501.	5.9	62.	230.6	15.9
600.0	14638.	1.7	63.	229.2	19.5
550.0	16921.	-3.5	88.	233.2	23.5
500.0	19375.	-8.4	77.	258.9	27.3
450.0	22045.	-12.6	61.	248.2	32.1
400.0	24959.	-18.7	45.	259.4	34.5
350.0	28189.	-24.8	18.	260.8	45.1
300.0	31810.	-32.7		266.5	49.8
250.0	35941.	-42.1		268.2	67.5
200.0	40773.	-53.5		265.3	70.9
175.0	43541.	-61.4		263.5	70.6
150.0	46622.	-68.8		272.0	76.0
125.0	50193.	-68.1		285.3	65.4
100.0	54554.	-70.0		275.1	26.4
80.0	58872.	-71.4		289.6	21.1
70.0	61508.	-64.1		286.8	10.9
60.0	64619.	-62.1		264.1	5.4
50.0	68351.	-56.9		290.4	1.8
40.0	73007.	-55.2		36.3	9.7
30.0	79065.	-52.9		123.4	5.1
25.0	82933.	-51.8		85.4	6.3
20.0	87693.	-50.5		92.1	14.9
15.0	93904.	-46.5		72.7	15.0
10.0	102792.	-44.0			

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

STATION ALTITUDE 3989.00 FEET MSL
 6 OCT. 77
 ASCENSION NO. 723

SIGNIFICANT LEVEL DATA
 2790020725
 WHITE SANDS
 TABLE X.

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT
855.0	3989.0	17.7	95.0
876.0	4217.7	19.4	82.0
890.0	5098.4	19.9	80.0
895.3	5619.0	15.4	77.0
765.8	8016.4	12.9	90.0
746.8	8709.6	11.9	72.0
737.8	9043.2	11.9	80.0
700.0	10482.2	9.1	85.0
586.8	15206.7	.4	79.0
560.3	16418.1	-2.3	89.0
500.0	19359.2	-7.3	97.0
461.3	21404.4	-11.1	97.0
450.1	22022.6	-11.9	76.0
430.8	23115.1	-15.4	71.0
409.3	24375.3	-18.2	58.0
400.0	24937.8	-18.2	60.0
389.3	25599.7	-19.5	70.0
376.8	26368.1	-23.3	13.0
326.0	29754.8	-29.8	-43.9
312.0	30769.0	-30.8	-49.2
308.3	31110.2	-31.7	
300.0	31739.0	-33.9	
250.0	35840.6	-42.2	
200.0	40651.0	-54.6	
150.0	46451.8	-70.5	
138.3	48016.4	-73.2	
127.3	49619.3	-68.9	
114.3	51716.2	-70.5	
101.9	53916.5	-75.2	
100.0	54274.7	-73.2	

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STATION ALTITUDE 3969.00 FEET MSL
6 OCT. 77
ASCENSION NO. 729
0825 HRS MDT

SIGNIFICANT LEVEL DATA
2790020725
WHITE SANDS
TABLE X. (CONT)

GEODETTIC COORDINATES
32.40043 LAT DEG
106.57033 LON DEG

PRESSURE	GEOMETRIC	TEMPERATURE	REL. HUM.
MILLIBARS	ALTITUDE	AIR DEWPOINT	PERCENT
	MSL FEET	DEGREES	CENTIGRADE
32.0	57993.9	-73.8	
70.0	61105.1	-70.4	
62.5	63222.8	-66.4	
50.0	67821.2	-57.9	
30.0	76362.3	-55.3	
20.0	80803.8	-52.4	
14.5	93729.8	-45.9	

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GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
279020725
WHITE SANDS
TABLE XI.

STATION ALTITUDE 3989.00 FEET MSL
6 OCT. 77 0825 HRS MDT
ASCENSION NO. 723

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION WIND DEGREES (TN)	SPEED WIND KNOTS	INDEX OF REFRACTION
3989.00	633.8	17.7	95.0	1049.8	607.2	300.0	2.9	1.000320
4000.00	633.5	17.8	94.4	1049.2	607.2	299.2	2.9	1.000320
4500.00	608.1	19.0	81.4	1024.0	609.2	212.5	1.7	1.000310
5000.00	653.0	19.8	60.2	1005.8	609.6	171.9	4.4	1.000306
5500.00	638.0	18.7	79.2	992.5	600.1	163.2	7.5	1.000297
6000.00	623.2	17.2	78.2	980.5	600.2	161.8	9.0	1.000288
6500.00	608.7	15.3	77.2	968.9	664.3	162.4	9.2	1.000279
7000.00	794.3	14.7	80.5	955.1	663.1	167.0	9.2	1.000275
7500.00	780.2	13.3	85.2	940.9	662.1	174.1	9.3	1.000272
8000.00	700.5	12.9	69.8	926.9	661.1	180.1	8.3	1.000269
8500.00	752.3	12.2	77.4	913.6	659.9	180.0	7.4	1.000255
9000.00	739.0	11.9	61.6	899.1	659.2	180.8	6.5	1.000240
9500.00	725.0	11.0	61.6	885.8	658.1	189.7	6.0	1.000235
10000.00	712.4	10.0	53.3	872.8	657.0	199.9	6.5	1.000231
10500.00	699.3	9.1	65.1	860.0	655.8	209.0	7.5	1.000227
11000.00	686.0	8.1	66.5	846.9	654.7	210.4	9.3	1.000223
11500.00	673.9	7.2	68.0	834.1	653.6	222.1	11.5	1.000219
12000.00	661.4	6.3	69.5	821.4	652.5	228.5	14.1	1.000215
12500.00	649.2	5.4	71.0	809.0	651.4	228.1	16.3	1.000211
13000.00	637.2	4.5	72.5	796.7	650.3	228.9	18.2	1.000207
13500.00	625.4	3.5	73.9	784.0	649.2	228.9	19.4	1.000204
14000.00	613.8	2.0	75.4	772.0	648.1	228.7	20.5	1.000200
14500.00	602.3	1.7	76.9	761.1	648.9	230.3	20.9	1.000196
15000.00	591.3	.8	78.4	749.0	648.8	231.9	21.3	1.000193
15500.00	580.3	-.3	61.4	738.4	648.0	231.7	22.0	1.000189
16000.00	569.3	-1.4	65.5	727.4	648.3	231.4	22.7	1.000186
16500.00	558.3	-2.4	69.2	716.5	642.0	231.2	22.5	1.000183
17000.00	547.3	-3.3	90.6	705.1	640.9	231.5	22.3	1.000180
17500.00	537.3	-4.1	93.3	693.8	639.9	233.8	21.4	1.000176
18000.00	527.0	-5.0		682.7	638.9	230.5	21.3	1.000173

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UPPER AIR DATA
 2790020725
 WHITE SANDS
 TABLE XI. (CONT)

STATION ALTITUDE 2739.00 FEET MSL
 6 OCT. 77
 ASCENSION NO. 743
 0825 HRS MDT

GEOMETRIC ALTITUDE 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
18000.0	516.9	-5.6	-6.6	94.7	071.6	637.6	209.3	22.1	1.000170
19000.0	507.0	-6.7	-7.2	96.0	061.1	630.8	241.0	22.9	1.000166
19500.0	497.2	-7.6	-8.0	97.0	050.5	635.7	241.0	23.6	1.000163
20000.0	487.5	-8.5	-8.9	97.0	040.2	634.5	243.2	23.9	1.000160
20500.0	478.0	-9.4	-9.8	97.0	030.0	635.4	245.3	23.7	1.000156
21000.0	468.7	-10.3	-10.7	97.0	020.0	632.2	248.2	24.0	1.000153
21500.0	459.5	-11.2	-12.0	93.8	010.0	631.1	252.0	24.7	1.000149
22000.0	450.5	-11.9	-15.1	76.8	599.7	630.2	254.6	25.5	1.000144
22500.0	441.0	-13.4	-17.1	73.8	591.5	628.3	254.9	26.5	1.000141
23000.0	432.0	-15.0	-19.0	71.5	583.4	626.3	254.0	27.2	1.000138
23500.0	424.1	-16.5	-20.9	67.0	574.5	624.7	252.1	27.6	1.000135
24000.0	415.0	-17.4	-22.9	61.9	565.5	623.3	252.9	28.4	1.000132
24500.0	407.2	-18.2	-24.3	58.4	556.0	622.3	254.4	29.3	1.000129
25000.0	399.0	-18.5	-24.0	60.9	545.0	622.2	250.6	30.4	1.000127
25500.0	390.9	-19.3	-23.0	68.5	536.0	621.0	258.0	31.4	1.000125
26000.0	382.9	-21.4	-41.1	41.1	529.7	618.2	260.1	32.0	1.000121
26500.0	375.0	-23.5	-44.1	13.0	523.3	615.6	261.4	32.7	1.000117
27000.0	367.2	-24.5	-44.9	13.0	514.3	614.4	262.1	33.8	1.000115
27500.0	359.5	-25.4	-45.7	13.0	505.5	613.2	261.6	35.5	1.000113
28000.0	352.0	-26.4	-46.4	13.0	496.9	612.0	260.4	37.6	1.000111
28500.0	344.0	-27.4	-47.2	13.0	488.4	610.8	259.2	40.1	1.000109
29000.0	337.4	-28.5	-48.0	13.0	480.1	609.6	258.1	42.5	1.000107
29500.0	330.3	-29.5	-48.8	13.0	471.9	608.4	258.8	44.9	1.000106
30000.0	323.4	-30.0	-51.7	9.9**	463.4	607.5	259.6	46.9	1.000104
30500.0	316.5	-30.5	-60.2	3.0**	454.4	606.8	261.3	46.9	1.000101
31000.0	309.5	-31.4			446.4	605.7	263.1	46.9	1.000099
31500.0	303.1	-33.1			439.6	603.6	265.3	47.1	1.000098
32000.0	296.5	-34.4			432.7	601.9	268.9	47.7	1.000096
32500.0	290.0	-35.4			425.0	600.6	268.2	48.5	1.000095
33000.0	283.7	-36.4			417.5	599.4	267.1	49.4	1.000093

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

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STATION ALTITUDE 0959.00 FLEET MSL 6 OCT. 77 0825 HRS MDT ASCENSION NO. 729		UPPER AIR DATA 2790020725 WHITE SANDS		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	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3500.0	277.4	-37.5		410.1	598.1	203.9	50.4	1.000091
3400.0	271.4	-38.5		402.8	598.8	204.5	52.3	1.000090
3300.0	265.4	-39.5		395.7	595.5	203.2	54.3	1.000088
3200.0	259.0	-40.5		388.7	594.2	202.1	58.5	1.000087
3100.0	253.9	-41.5		381.8	592.9	201.2	62.7	1.000085
3000.0	248.2	-42.8		375.1	591.5	201.7	63.2	1.000084
2900.0	242.5	-43.9		368.5	589.9	202.3	63.7	1.000082
2800.0	237.0	-45.2		362.1	588.2	203.7	61.3	1.000081
2700.0	231.5	-46.5		355.8	586.5	203.3	58.8	1.000079
2600.0	226.2	-47.8		349.6	584.9	203.6	60.5	1.000078
2500.0	221.0	-49.0		343.6	583.2	206.3	62.7	1.000077
2400.0	215.9	-50.3		337.6	581.5	200.2	64.9	1.000075
2300.0	211.0	-51.8		331.8	579.8	200.0	67.0	1.000074
2200.0	206.1	-52.9		326.1	578.1	205.5	66.6	1.000073
2100.0	201.4	-54.2		320.5	576.4	204.8	64.9	1.000071
2000.0	196.8	-55.8		314.7	574.7	204.1	63.0	1.000070
1900.0	191.8	-56.9		308.9	572.9	203.5	61.2	1.000069
1800.0	187.1	-58.3		303.3	571.0	203.1	61.8	1.000068
1700.0	182.5	-59.7		297.8	569.2	202.9	63.4	1.000066
1600.0	178.0	-61.0		292.4	567.4	204.5	63.9	1.000065
1500.0	173.6	-62.4		287.0	565.5	200.6	64.1	1.000064
1400.0	169.4	-63.8		281.8	563.7	208.4	63.9	1.000063
1300.0	165.2	-65.2		276.8	561.9	270.2	63.6	1.000062
1200.0	161.2	-66.5		271.8	560.0	271.3	64.6	1.000061
1100.0	157.3	-67.9		266.9	558.1	272.4	65.7	1.000059
1000.0	153.4	-69.3		262.1	556.3	274.8	66.3	1.000058
900.0	149.8	-70.8		257.3	554.5	277.1	67.0	1.000057
800.0	146.3	-71.4		251.6	553.3	279.4	67.1	1.000056
700.0	142.8	-72.3		246.4	552.1	281.8	67.2	1.000055
600.0	139.4	-73.2		241.1	550.9	283.1	68.4	1.000054

UPPER AIR DATA
 2790020720
 WHITE SANDS
 TABLE XI. (CONT)

STATION ALTITUDE 9989.00 FEET MSL
 6 OCT. 77
 ASCENSION NO. 725
 0825 HRS MDT

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 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	
48500.0	134.9	-71.9		253.5	552.7	284.4	69.6	1.000052
49000.0	131.4	-70.6		220.0	554.3	284.5	66.0	1.000050
49500.0	128.1	-69.2		218.8	556.3	284.5	62.2	1.000049
50000.0	124.8	-69.2		213.2	556.4	283.8	56.8	1.000047
50500.0	121.7	-69.6		208.2	555.9	282.0	49.6	1.000046
51000.0	118.0	-70.0		203.3	555.3	279.6	42.4	1.000045
51500.0	115.0	-70.3		198.5	554.8	275.9	38.5	1.000044
52000.0	112.0	-71.1		194.2	553.8	271.5	35.0	1.000043
52500.0	109.7	-72.2		190.2	552.3	268.7	33.0	1.000042
53000.0	106.9	-73.2		186.3	550.8	266.7	31.7	1.000041
53500.0	104.1	-74.3		182.4	549.3	265.8	30.8	1.000041
54000.0	101.3	-74.7		178.1	548.8	260.5	30.4	1.000040
54500.0	98.5	-73.2		172.2	550.8	267.3	30.1	1.000038
55000.0	96.3	-73.3		167.8	550.7	268.7	30.4	1.000037
55500.0	93.8	-73.4		163.6	550.6	270.1	30.7	1.000036
56000.0	91.4	-73.5		159.4	550.5	269.9	31.0	1.000035
56500.0	89.0	-73.6		155.3	550.4	269.6	31.4	1.000035
57000.0	86.7	-73.6		151.4	550.3	272.7	32.0	1.000034
57500.0	84.5	-73.7		147.5	550.2	273.9	32.6	1.000033
58000.0	82.3	-73.8		143.8	550.1	281.4	29.7	1.000032
58500.0	80.2	-73.2		139.7	550.6	288.8	22.3	1.000031
59000.0	78.1	-72.7		135.7	551.0	298.4	15.6	1.000030
59500.0	76.1	-72.2		131.9	552.3	293.5	9.5	1.000029
60000.0	74.1	-71.6		128.2	553.1	272.1	3.7	1.000029
60500.0	72.2	-71.1		124.5	553.8	264.1	7.1	1.000028
61000.0	70.4	-70.5		121.0	554.6	262.5	11.0	1.000027
61500.0	68.0	-69.7		117.5	555.7	266.1	12.2	1.000026
62000.0	66.9	-68.8		114.0	556.9	271.8	12.2	1.000025
62500.0	65.2	-67.9		110.6	558.2	274.4	12.4	1.000025
63000.0	63.5	-67.0		107.4	559.4	272.2	12.7	1.000024

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UPPER AIR DATA
2720020725
WHITE SANDS
TABLE XI. (CONT)

STATION ALTITUDE 2969.00 FEET MSL
6 OCT. 77
ASCENSION NO. 729
0825 HRS MDT

GEOMETRIC ALTITUDE 2969.00 FEET MSL
6 OCT. 77
ASCENSION NO. 729
0825 HRS MDT

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
0300.0	62.0	-66.1		104.2	560.6	270.7	12.4	1.000023
0400.0	60.4	-65.1		101.2	561.9	275.0	7.5	1.000023
0500.0	59.0	-64.2		98.3	563.2	295.0	2.8	1.000022
0600.0	57.5	-63.2		95.4	564.4	324.3	1.7	1.000021
0700.0	56.1	-62.3		92.7	565.7	341.1	1.6	1.000021
0800.0	54.7	-61.3		90.0	567.0	316.3	2.0	1.000020
0900.0	53.4	-60.4		87.4	568.2	260.0	4.3	1.000019
1000.0	52.1	-59.5		84.9	569.5	277.8	6.8	1.000019
1100.0	50.8	-58.5		82.5	570.8	267.7	4.3	1.000018
1200.0	49.6	-57.9		80.2	571.6	316.6	2.3	1.000018
1300.0	48.4	-57.7		78.2	571.8	340.6	1.9	1.000017
1400.0	47.2	-57.6		76.3	572.0	331.4	1.9	1.000017
1500.0	46.1	-57.5		74.5	572.1	331.5	1.9	1.000017
1600.0	45.0	-57.4		72.6	572.3	34.5	2.3	1.000016
1700.0	43.9	-57.2		70.9	572.4	57.9	4.2	1.000016
1800.0	42.9	-57.1		69.1	572.6	60.1	7.0	1.000015
1900.0	41.8	-57.0		67.4	572.8	69.4	10.2	1.000015
2000.0	40.8	-56.9		65.8	572.9	70.9	12.7	1.000015
2100.0	39.9	-56.7		64.2	573.1	71.0	11.3	1.000014
2200.0	38.9	-56.6		62.6	573.3	71.1	9.9	1.000014
2300.0	38.0	-56.5		61.1	573.4	71.3	8.4	1.000014
2400.0	37.1	-56.4		59.6	573.6	73.7	6.6	1.000013
2500.0	36.2	-56.3		58.1	573.7	77.4	4.9	1.000013
2600.0	35.3	-56.1		56.7	573.9	63.2	3.5	1.000013
2700.0	34.5	-56.0		55.3	574.1	61.5	4.0	1.000012
2800.0	33.7	-55.9		54.0	574.2	80.1	4.4	1.000012
2900.0	32.9	-55.8		52.7	574.4	78.9	4.7	1.000012
3000.0	32.1	-55.6		51.4	574.6	76.5	4.0	1.000011
3100.0	31.3	-55.5		50.1	574.7	73.0	3.3	1.000011
3200.0	30.6	-55.4		48.9	574.9	69.3	2.8	1.000011

UPPER AIR DATA
 2790020725
 WHITE SANDS
 TABLE XI. (CONT)

STATION ALTITUDE 9999.00 FEET MSL
 6 OCT. 77
 ASCENSION NO. 725
 0825 HRS MDT

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARMS	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
7500.0	29.8	-55.3		47.7	575.1	75.5	3.8	1.000011
7900.0	29.1	-55.1		46.5	575.3	76.0	4.8	1.000010
7950.0	28.4	-54.9		45.4	575.5	77.6	5.9	1.000010
8000.0	27.8	-54.7		44.3	575.7	78.8	7.6	1.000010
8050.0	27.1	-54.6		43.2	576.0	79.5	9.3	1.000010
8100.0	26.5	-54.4		42.2	576.2	80.0	11.0	1.000009
8150.0	25.8	-54.2		41.1	576.4	79.3	10.2	1.000009
8200.0	25.2	-54.1		40.1	576.6	79.6	9.5	1.000009
8250.0	24.6	-53.9		39.1	576.9	79.3	8.8	1.000009
8300.0	24.1	-53.7		38.2	577.1	78.9	8.5	1.000008
8350.0	23.5	-53.6		37.3	577.3	78.3	8.3	1.000008
8400.0	22.9	-53.4		36.4	577.5	77.6	8.1	1.000008
8450.0	22.4	-53.2		35.5	577.8	78.3	8.5	1.000008
8500.0	21.9	-53.0		34.6	578.0	79.6	9.3	1.000008
8550.0	21.3	-52.9		33.8	578.2	80.7	10.1	1.000008
8600.0	20.8	-52.7		32.9	578.4	80.8	10.7	1.000007
8650.0	20.4	-52.5		32.1	578.7	79.1	11.2	1.000007
8700.0	19.9	-52.3		31.3	579.0	77.6	11.6	1.000007
8750.0	19.4	-51.8		30.6	579.6	76.3	12.0	1.000007
8800.0	19.0	-51.3		29.8	580.2	78.4	12.1	1.000007
8850.0	18.5	-50.9		29.0	580.8	80.5	12.2	1.000006
8900.0	18.1	-50.4		28.3	581.5	82.5	12.3	1.000006
8950.0	17.7	-49.9		27.6	582.1	83.0	12.4	1.000006
9000.0	17.3	-49.4		26.9	582.7	83.1	12.5	1.000006
9050.0	16.9	-49.0		26.2	583.3	83.1	12.5	1.000006
9100.0	16.5	-48.5		25.4	583.9			1.000006
9150.0	16.1	-48.0		24.9	584.5			1.000006
9200.0	15.7	-47.5		24.3	585.2			1.000005
9250.0	15.4	-47.1		23.7	585.8			1.000005
9300.0	15.0	-46.6		23.1	586.4			1.000005

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
279020725
WHITE SANDS
TABLE XI. (CONT)

STATION ALTITUDE 9889.00 FEET MSL
6 OCT. 77 0825 HRS MDT
ASCENSION NO. 729

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
9350.0	14.7	-46.1		22.5	587.0			1.000005

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STATION ALTITUDE 3489.00 FEET MSL
 6 OCT. 77
 ASCENSION NO. 723

MANDATORY LEVELS
 2790020723
 WHITE SANDS
 TABLE XII.

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT DEGREE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5097.	19.9	10.3	80.	169.3	5.0	
800.0	6002.	15.1	11.4	79.	165.3	9.2	
750.0	8091.	12.1	7.8	75.	180.0	7.2	
700.0	10482.	9.1	2.9	65.	208.8	7.4	
650.0	12487.	5.4	.6	71.	228.1	16.2	
600.0	14022.	1.5	-2.0	77.	230.7	21.0	
550.0	16907.	-3.1	-4.5	90.	231.1	22.4	
500.0	19368.	-7.3	-7.7	97.	241.0	23.5	
450.0	22041.	-11.9	-15.3	76.	254.6	25.7	
400.0	24955.	-18.2	-24.0	60.	250.5	30.3	
350.0	28168.	-26.7	-46.7	13.	259.9	38.6	
300.0	31772.	-33.9			260.5	47.4	
250.0	35891.	-42.2			261.7	63.2	
200.0	40710.	-54.6			264.4	63.8	
175.0	43460.	-62.0			266.8	64.2	
150.0	46335.	-70.5			277.7	67.0	
125.0	50071.	-69.2			283.2	54.0	
100.0	54390.	-73.2			267.4	30.1	
80.0	58671.	-73.2			297.2	17.7	
70.0	61255.	-70.4			265.3	12.2	
60.0	64299.	-64.8			294.7	2.6	
50.0	68009.	-57.9			345.8	1.9	
40.0	72537.	-56.8			71.1	10.2	
30.0	78040.	-55.3			75.7	4.6	
25.0	82460.	-54.0			79.1	8.6	
20.0	87185.	-52.4			76.5	12.0	
15.0	93368.	-46.6					

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