

AD-A058 778 ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
12832A LANCE MISSILE NO. 3330, ROUND NO. 315 ACT.(U)
JUL 78

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METEOROLOGICAL DATA REPORT

12832A LANCE
MISSILE NO. 3330, ROUND NO. 315 ACT
(15 JUNE 1978)

BY

WSMR METEOROLOGICAL TEAM

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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14

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1. REPORT NUMBER DR-974	2. GOVT ACCESSION NO. (9) meteorological data report	3. RECIPIENT'S CATALOG NUMBER
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 12832A Lance, Missile Number 3330, Round Number 315 ACT, are presented in tabular form.		

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Per

CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
TABLES	
I. Surface Observations taken at LC-33 -----	1
II. Pilot-Balloon-Measured Wind Data, Release No. 1 at 0820 HRS MDT -----	2
III. Pilot-Balloon-Measured Wind Data, Release No. 2 at 0850 HRS MDT -----	4
IV. Anemometer-Measured Wind Speed and Direction at 0820 HRS MDT -----	6
V. WSD Significant Level Data (release Time: 0840 HRS MDT) -----	7
VI. WSD Upper Air Data (Release Time: 0840 HRS MDT) -----	8
VII. WSD Mandatory Levels (Release Time: 0840 HRS MDT) -----	12
VIII. Holloman Significant Level Data (Release Time: 0930 HRS MDT) -----	13
IX. Holloman Upper Air Data (Release Time: 0930 HRS MDT) -----	15
X. Holloman Mandatory Levels (Release Time: 0930 HRS MDT) -----	22
XI. Apache Significant Level Data (Release Time: 1030 HRS MDT) -----	23
XII. Apache Upper Air Data (Release Time: 1030 HRS MDT) -----	25
XIII. Apache Mandatory Levels (Release Time: 1030 HRS MDT) -----	32

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INTRODUCTION

12832A Lance, Missile Number 3330, Round Number 315 ACT, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0850 HRS MDT, 15 June 1978. 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	4,179.9	FEET/MSL
PRESSURE	883.1	MBS
TEMPERATURE	26.5	°C
RELATIVE HUMIDITY	33	%
DEW POINT	9.3	°C
DENSITY	1,023.3	GM/M ³
WIND SPEED	02	MPH
WIND DIRECTION	330	DEGREES
CLOUD COVER	.3	Ac

TABLE I. Surface Observations taken at LC-33
at 0850 HRS MDT/15 June 1978

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	280	3.0	2100	354	5.5
100	281	3.0	2200	353	3.5
200	281	3.0	2300	340	6.5
300	275	3.0	2400	326	9.5
400	268	3.0	2500	329	10.5
500	238	4.0	2600	331	11.5
600	208	4.5	2700	321	18.0
700	168	4.0	2800	311	24.0
800	127	3.0	2900	313	24.0
900	139	4.5	3000	314	23.5
1000	151	5.5	3100	316	24.0
1100	205	4.0	3200	318	24.0
1200	258	2.0	3300	320	24.5
1300	267	4.0	3400	321	25.0
1400	275	5.5	3500	322	25.5
1500	302	6.0	3600	322	25.5
1600	329	6.5	3700	323	24.5
1700	318	6.0	3800	324	23.0
1800	307	5.5	3900	323	22.0
1900	331	6.5	4000	322	20.5
2000	355	7.0	4100	318	19.5

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-33 AT 0620 HRS MDT/15 JUNE 1978
12832A LANCE, MISSILE NO. 3330, ROUND NO. 315 ACT

PIBAL RELEASE POINT WSTM COORDINATES:

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

APPROXIMATELY: 1/2 MILE SW OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	314	18.0	6700	324	13.0
4300	309	17.5	6800	324	12.0
4400	303	16.5	6900	325	11.5
4500	302	17.0	7000	326	11.0
4600	301	17.0	7100	326	11.0
4700	301	17.5	7200	326	11.0
4800	301	18.0	7300	327	11.0
4900	302	18.0	7400	327	10.5
5000	302	18.0	7500	327	10.5
5100	302	18.0	7600	327	10.0
5200	301	17.5	7700	325	9.5
5300	303	17.0	7800	322	8.5
5400	305	16.0	7900	317	7.5
5500	306	16.0	8000	312	6.0
5600	306	15.5	8100	308	5.5
5700	307	15.5	8200	304	5.0
5800	307	15.5	8300	304	5.0
5900	308	16.0	8400	303	4.5
6000	309	16.0	8500	302	4.5
6100	311	16.0	8600	301	4.0
6200	313	16.0	8700	301	4.0
6300	316	15.5	8800	300	4.0
6400	318	15.0	8900	301	4.5
6500	321	14.5	9000	302	4.5
6600	324	13.5			

TABLE II. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	330	2.0	2100	313	11.0
100	004	2.5	2200	309	13.0
200	037	2.5	2300	313	14.0
300	036	3.0	2400	316	14.5
400	032	4.0	2500	317	16.5
500	094	4.0	2600	317	18.0
600	148	4.0	2700	322	17.0
700	154	4.5	2800	326	17.0
800	159	4.5	2900	323	18.0
900	235	4.0	3000	319	19.5
1000	311	3.5	3100	323	18.5
1100	317	6.0	3200	326	17.0
1200	322	8.4	3300	327	17.0
1300	336	10.0	3400	328	17.0
1400	349	11.5	3500	315	14.5
1500	351	13.0	3600	301	11.5
1600	352	14.0	3700	301	13.0
1700	346	11.0	3800	300	14.0
1800	340	7.5	3900	302	14.5
1900	329	8.0	4000	304	14.5
2000	317	8.5	4100	299	15.5

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 0850 HRS MDT/15 JUNE 1978
12832A LANCE, MISSILE NO. 3330, ROUND NO. 315 ACT

PIBAL RELEASE POINT WSTM COORDINATES:

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

APPROXIMATELY: 1/2 MILE SW OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	294	15.0	6700	306	13.5
4300	294	16.5	6800	316	15.0
4400	293	16.5	6900	315	15.0
4500	292	16.5	7000	313	15.0
4600	290	16.0	7100	311	14.5
4700	298	17.5	7200	309	14.0
4800	306	18.5	7300	312	13.0
4900	306	19.0	7400	315	11.5
5000	305	19.5	7500	314	11.5
5100	300	19.0	7600	313	11.0
5200	295	18.5	7700	315	11.5
5300	305	20.0	7800	317	12.0
5400	315	21.5	7900	316	11.5
5500	310	20.0	8000	314	11.0
5600	304	18.0	8100	307	11.0
5700	304	18.0	8200	299	10.5
5800	304	18.0	8300	298	10.0
5900	308	18.0	8400	297	9.0
6000	311	18.0	8500	309	8.5
6100	306	16.5	8600	320	8.0
6200	301	15.0	8700	319	8.0
6300	306	14.5	8800	317	8.0
6400	310	14.0	8900	312	8.0
6500	303	13.0	9000	306	7.5
6600	295	11.5			

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

T-TIME (SEC)	DIR DEG	SPEED (MPH)
-30.0	360	0.5
-25.0	000	0.0
-20.0	360	0.5
-15.0	000	0.0
-10.0	000	0.0
-5.0	000	0.0
-0.0	000	0.0
+5.0	000	0.0
+10.0	335	0.5

TABLE IV. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 2
 RELEASED FROM LC-33, AT 0820 HRS MDT/15 JUNE 1978
 12832A LANCE, MISSILE NO. 3330, ROUND NO. 315 ACT

WSTM COORDINATES: X = 486,296.83 Y = 185,251.85 Z = 4,179.9

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 3989.00 FEET MSL
 15 JUNE 78
 ASCENSION NO. 374
 0840 HRS MDT

SIGNIFICANT LEVEL DATA
 1660020374
 WHITE SANDS
 TABLE V.

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE AIR		REL. HUM.
MILLIBARS	MSL FEET	DEGREES	DEWPOINT CENTIGRADE	PERCENT
881.2	3989.0	28.3	6.4	25.0
873.6	4233.8	26.6	6.1	27.0
850.0	5032.3	25.9	4.9	26.0
819.0	6104.2	25.6	1.0	20.0
700.0	10550.8	15.2	-5.2	24.0
617.4	13990.6	6.4	-6.5	39.0
580.4	15643.9	1.6	-4.7	63.0
553.4	16901.1	-1.3	-5.5	73.0
510.2	19018.6	-5.3	-10.6	66.0
500.0	19538.6	-7.4	-11.7	71.0
485.0	20317.6	-8.9	-12.2	77.0
468.6	21193.2	-9.6	-27.8	21.0
429.4	23396.5	-13.4	-32.0	19.0
414.2	24297.6	-14.2	-33.8	17.0
400.0	25164.7	-16.4	-36.3	16.0
300.0	32045.7	-33.8	-49.8	18.0
267.2	34682.0	-40.4		
250.0	36167.3	-43.1		
212.8	39676.2	-51.8		
200.0	40994.6	-54.1		
150.0	46919.4	-65.6		
126.0	50372.0	-70.7		
111.6	52746.0	-70.7		
104.8	53970.8	-72.4		
100.0	54867.0	-69.5		
85.0	58067.3	-69.4		

STATION ALTITUDE 3989.00 FEET MSL
 15 JUNE 78
 ASCENSION NO. 374
 0840 HRS MDT

UPPER AIR DATA
 1660020374
 WHITE SANDS
 TABLE VI.

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT DEGREES CENTIGRADE			KNOTS	FEET PER SECOND	DIRECTION DEGREES (TN)	SPEED KNOTS	
3989.0	881.2	28.3	6.4	25.0	1014.1	677.8	.0	.0	323.0	1.000266
4000.0	880.9	28.2	6.4	25.1	1014.9	677.7	.1	.1	323.0	1.000266
4500.0	865.8	26.4	5.7	26.7	1003.0	675.6	2.5	2.5	323.0	1.000262
5000.0	850.9	25.9	5.0	26.0	987.3	675.0	5.0	5.0	323.0	1.000257
5500.0	836.3	25.8	3.3	23.4	971.3	674.7	7.4	7.4	323.0	1.000249
6000.0	822.0	25.6	1.4	20.6	955.4	674.4	9.9	9.9	322.8	1.000242
6500.0	807.6	24.7	.5	20.4	941.9	673.3	12.1	12.1	321.8	1.000237
7000.0	793.5	23.5	-2	20.8	929.1	672.0	14.0	14.0	321.7	1.000233
7500.0	779.6	22.3	-9	21.3	916.6	670.6	14.9	14.9	322.9	1.000229
8000.0	766.0	21.2	-1.5	21.7	904.2	669.2	15.2	15.2	320.9	1.000225
8500.0	752.6	20.0	-2.2	22.2	892.0	667.9	14.8	14.8	315.4	1.000222
9000.0	739.4	18.8	-3.0	22.6	880.0	666.5	13.6	13.6	310.6	1.000218
9500.0	726.5	17.7	-3.7	23.1	868.1	665.2	12.0	12.0	305.1	1.000214
10000.0	713.7	16.5	-4.4	23.5	856.5	663.8	10.6	10.6	305.1	1.000211
10500.0	701.3	15.3	-5.1	24.0	845.0	662.4	9.4	9.4	306.4	1.000207
11000.0	688.6	14.1	-5.2	26.0	833.4	661.0	8.8	8.8	311.6	1.000205
11500.0	676.2	12.8	-5.2	28.1	821.9	659.5	8.0	8.0	313.5	1.000202
12000.0	663.9	11.5	-5.3	30.3	810.7	658.0	7.1	7.1	310.2	1.000200
12500.0	651.9	10.2	-5.5	32.5	799.6	656.6	5.8	5.8	299.5	1.000197
13000.0	640.1	8.9	-5.8	34.7	788.7	655.1	4.7	4.7	277.9	1.000195
13500.0	628.6	7.7	-6.1	36.9	778.0	653.6	4.3	4.3	256.6	1.000192
14000.0	617.2	6.4	-6.5	39.1	767.4	652.1	4.5	4.5	237.0	1.000189
14500.0	605.8	4.9	-5.6	46.4	757.0	650.5	5.3	5.3	236.2	1.000188
15000.0	594.5	3.5	-5.0	53.7	746.7	648.8	6.1	6.1	236.5	1.000187
15500.0	583.5	2.0	-4.7	60.9	736.7	647.1	7.3	7.3	239.0	1.000186
16000.0	572.6	.8	-4.9	65.8	726.2	645.7	8.7	8.7	238.7	1.000183
16500.0	561.9	-1.4	-5.2	69.8	715.6	644.3	10.3	10.3	235.4	1.000181
17000.0	551.3	-1.5	-5.7	72.7	705.0	643.0	11.6	11.6	239.1	1.000178
17500.0	540.8	-2.4	-6.9	71.0	694.2	641.8	12.9	12.9	248.1	1.000173
18000.0	530.5	-3.4	-8.2	69.4	683.5	640.6	14.5	14.5	260.0	1.000169

STATION ALTITUDE 3989.00 FEET MSL
 15 JUNE 78
 ASCENSION NO. 374
 0840 HRS MDT

UPPER AIR DATA
 1660020374
 WHITE SANDS
 TABLE VI. (CONT)

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 DIRECTION (TN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
18500.0	520.5	-4.3	67.7	673.0	639.5	271.3	16.7	1.000166
19000.0	510.6	-5.3	66.1	662.6	638.3	271.9	18.0	1.000162
19500.0	500.7	-7.2	70.6	654.8	635.9	270.2	18.6	1.000159
20000.0	491.1	-8.3	74.6	644.7	634.6	266.3	16.7	1.000157
20500.0	481.5	-9.0	65.3	634.2	633.6	264.5	13.3	1.000152
21000.0	472.2	-9.4	33.4	623.3	632.9	266.1	8.4	1.000144
21500.0	462.9	-10.1	20.7	612.9	632.0	266.3	5.4	1.000140
22000.0	453.8	-11.0	20.3	602.8	630.9	262.1	3.4	1.000137
22500.0	444.9	-11.9	19.8	593.0	629.9	246.3	3.8	1.000135
23000.0	436.2	-12.7	19.4	583.3	628.8	245.4	5.7	1.000132
23500.0	427.6	-13.5	18.8	573.5	627.9	249.3	8.6	1.000130
24000.0	419.2	-13.9	17.7	563.1	627.3	254.8	10.7	1.000128
24500.0	410.8	-14.7	16.8	553.6	626.4	258.8	12.4	1.000125
25000.0	402.7	-16.0	16.2	545.3	624.8	259.6	12.2	1.000123
25500.0	394.4	-17.2	16.1	536.8	623.3	260.6	12.2	1.000121
26000.0	386.3	-18.5	16.2	528.3	621.7	261.9	12.8	1.000119
26500.0	378.3	-19.8	16.4	520.0	620.2	260.7	13.5	1.000117
27000.0	370.5	-21.0	16.5	511.8	618.6	257.7	14.5	1.000115
27500.0	362.8	-22.3	16.7	503.7	617.1	253.5	15.3	1.000113
28000.0	355.3	-23.6	16.8	495.8	615.5	249.0	16.1	1.000111
28500.0	347.9	-24.8	17.0	488.1	613.9	245.4	15.9	1.000110
29000.0	340.7	-26.1	17.1	480.4	612.4	241.7	15.1	1.000108
29500.0	333.7	-27.4	17.3	472.9	610.8	237.0	14.8	1.000106
30000.0	326.8	-28.6	17.4	465.5	609.2	231.7	14.8	1.000104
30500.0	320.0	-29.9	17.6	458.3	607.6	230.0	15.3	1.000103
31000.0	313.4	-31.2	17.7	451.1	606.1	230.4	15.9	1.000101
31500.0	306.9	-32.4	17.8	444.1	604.5	234.7	16.3	1.000099
32000.0	300.6	-33.7	18.0	437.2	602.9	240.7	16.8	1.000098
32500.0	294.1	-34.9	14.9**	430.0	601.3	244.5	16.8	1.000096
33000.0	287.7	-36.2	11.5**	422.9	599.7	247.6	16.6	1.000094

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

UPPER AIR DATA
 1660020374
 WHITE SANDS
 TABLE VI. (CONT)

STATION ALTITUDE 3989.00 FEET MSL
 15 JUNE 78
 ASCENSION NO. 374
 0840 HRS MDT

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INJEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
33500.0	281.4	-37.4	-59.3	8.1**	415.9	598.1	251.1	16.5	1.000093
34000.0	275.3	-38.7	-64.4	4.7**	409.1	596.5	254.7	16.8	1.000091
34500.0	269.3	-39.9	-74.4	1.2**	402.3	594.9	258.9	19.1	1.000090
35000.0	263.4	-41.0			395.3	593.6	261.4	21.2	1.000088
35500.0	257.6	-41.9			388.0	592.4	261.3	22.2	1.000086
36000.0	251.9	-42.8			380.9	591.3	261.3	22.7	1.000085
36500.0	246.2	-43.9			374.2	589.8	261.4	21.9	1.000083
37000.0	240.6	-45.2			367.7	588.2	263.0	21.7	1.000082
37500.0	235.2	-46.4			361.3	586.6	266.0	22.5	1.000080
38000.0	229.8	-47.6			355.0	585.0	268.7	22.9	1.000079
38500.0	224.6	-48.9			348.9	583.4	271.0	22.9	1.000078
39000.0	219.5	-50.1			342.9	581.8	272.6	22.7	1.000076
39500.0	214.5	-51.4			337.0	580.2	271.4	21.2	1.000075
40000.0	209.6	-52.4			330.7	578.9	270.0	19.8	1.000074
40500.0	204.7	-53.2			324.3	577.7	267.3	20.0	1.000072
41000.0	199.9	-54.1			318.0	576.6	264.6	20.2	1.000071
41500.0	195.2	-55.1			311.8	575.3	265.9	21.1	1.000069
42000.0	190.5	-56.1			305.6	574.0	267.2	22.1	1.000068
42500.0	185.9	-57.0			299.6	572.7	268.7	22.9	1.000067
43000.0	181.4	-58.0			293.8	571.4	270.1	23.8	1.000065
43500.0	177.1	-59.0			288.0	570.2	270.5	25.2	1.000064
44000.0	172.8	-59.9			282.4	568.9	270.8	26.6	1.000063
44500.0	168.7	-60.9			276.9	567.6	270.6	27.0	1.000062
45000.0	164.7	-61.9			271.5	566.3	270.3	27.4	1.000060
45500.0	160.7	-62.8			266.2	565.0	269.9	28.7	1.000059
46000.0	156.8	-63.8			261.0	563.7	269.6	29.6	1.000058
46500.0	153.1	-64.8			255.9	562.4	271.8	26.9	1.000057
47000.0	149.4	-65.7			250.9	561.1	274.4	24.2	1.000056
47500.0	145.7	-66.5			245.5	560.1	274.8	21.7	1.000055
48000.0	142.0	-67.2			240.2	559.1	275.2	19.3	1.000054

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

STATION ALTITUDE 3989.00 FEET MSL
 15 JUNE 78
 ASCENSION NO. 374
 0840 HRS MDT

UPPER AIR DATA
 1660020374
 WHITE SANDS
 TABLE VI. (CONT)

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 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	
46500.0	138.5	-67.9			235.1	558.1	272.2	19.5	1.000052
49500.0	135.0	-68.7			230.1	557.1	269.2	19.9	1.000051
49500.0	131.7	-69.4			225.1	556.1	266.7	18.6	1.000050
50000.0	128.4	-70.2			220.3	555.1	263.9	17.0	1.000049
50500.0	125.2	-70.7			215.4	554.3	256.9	16.1	1.000048
51000.0	122.0	-70.7			210.0	554.3	247.7	15.8	1.000047
51500.0	118.9	-70.7			204.7	554.3	239.3	15.7	1.000046
52000.0	115.9	-70.7			199.5	554.3	232.4	15.3	1.000044
52500.0	113.0	-70.7			194.5	554.3	225.2	15.1	1.000043
53000.0	110.2	-71.1			189.9	553.8	228.8	14.4	1.000042
53500.0	107.4	-71.7			185.7	552.9	233.2	13.9	1.000041
54000.0	104.6	-72.3			181.5	552.1	236.7	13.1	1.000040
54500.0	102.0	-70.7			175.5	554.3	239.9	12.1	1.000039
55000.0	99.4	-69.5			170.1	556.0	242.6	12.4	1.000038
55500.0	96.9	-69.5			165.8	556.0	243.4	14.7	1.000037
56000.0	94.5	-69.5			161.6	556.0			1.000036
56500.0	92.1	-69.4			157.6	556.0			1.000035
57000.0	89.8	-69.4			153.6	556.0			1.000034
57500.0	87.6	-69.4			149.7	556.1			1.000033
58000.0	85.4	-69.4			146.0	556.1			1.000033

STATION ALTITUDE 3989.00 FEET MSL
 15 JUNE 78
 ASCENSION NO. 374
 0840 HRS MDT

MANDATORY LEVELS
 1660020374
 WHITE SANDS
 TABLE VII.

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5029.	25.9	4.9	26.	323.0	5.1
800.0	6774.	24.0	.1	21.	321.4	13.4
750.0	8609.	19.8	-2.4	22.	314.2	14.8
700.0	10540.	15.2	-5.2	24.	306.9	9.3
650.0	12580.	10.0	-5.6	33.	296.4	5.5
600.0	14741.	4.2	-5.3	50.	235.9	5.7
550.0	17040.	-1.6	-5.9	72.	240.2	11.8
500.0	19511.	-7.4	-11.7	71.	270.0	18.5
450.0	22184.	-11.4	-29.7	20.	255.2	3.6
400.0	25122.	-16.4	-36.3	16.	259.8	12.1
350.0	28365.	-24.5	-42.5	17.	246.0	16.0
300.0	31981.	-33.8	-49.8	18.	241.0	16.8
250.0	36087.	-43.1			261.4	22.4
200.0	40894.	-54.1			264.7	20.2
175.0	43671.	-59.4			270.7	26.0
150.0	46791.	-65.6			273.9	24.7
125.0	50381.	-70.7			256.8	16.1
100.0	54716.	-69.5			242.3	11.8

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78
 ASCENSION NO. 354

SIGNIFICANT LEVEL DATA
 1660010354
 HOLLOMAN
 TABLE VIII.

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

PRESSURE MILLIBARS	PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM. PERCENT
	MSL FEET	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
877.2	4126.6	30.3	8.1	8.1	25.0
850.0	5044.9	27.0	5.3	5.3	25.0
756.6	8383.3	21.0	-2.6	-2.6	20.0
700.0	10568.5	15.4	-4.5	-4.5	25.0
608.2	14410.7	4.9	-7.5	-7.5	40.0
527.6	18163.8	-4.0	-10.8	-10.8	59.0
500.0	19552.7	-6.4	-16.6	-16.6	44.0
485.4	20312.3	-8.2	-24.7	-24.7	25.0
400.0	25167.8	-17.5	-36.6	-36.6	17.0
300.0	32026.2	-34.3	-50.2	-50.2	18.0
267.8	34607.5	-40.6			
250.0	36140.2	-43.7			
208.0	40123.7	-53.7			
200.0	40951.9	-55.0			
161.4	45379.0	-63.6			
150.0	46853.5	-65.8			
133.4	49184.8	-68.9			
118.6	51499.0	-70.0			
104.8	53908.8	-73.1			
102.0	54433.0	-72.6			
100.0	54819.1	-70.2			
90.5	56773.4	-71.0			
87.9	57348.7	-67.0			
77.0	59998.4	-65.3			
74.2	60741.9	-65.9			
70.0	61917.4	-63.2			
63.4	63941.3	-60.5			
60.8	64809.6	-57.1			
50.0	68864.8	-58.5			
45.6	70797.6	-58.7			

STATION ALTITUDE 4126.59 FEET MSL
15 JUNE 78
ASCENSION NO. 354
0930 HRS MDT

SIGNIFICANT LEVEL DATA
1660010354
HOLLOMAN
TABLE VIII. (CONT)

GEODETTIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
36.0	75783.6	-51.9	
33.6	77266.0	-50.7	
30.0	79697.1	-52.7	
26.4	82427.6	-52.7	
20.0	88441.0	-46.7	
17.0	92024.2	-44.9	
12.0	99770.3	-43.0	
10.5	102788.1	-37.7	

UPPER AIR DATA
 1660010354
 HOLLOMAN
 TABLE IX.

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78
 ASCENSION NO. 354

UPPER AIR DATA
 1660010354
 HOLLOMAN
 TABLE IX.

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 DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4126.6	877.2	30.3	25.0	1002.4	680.2	240.0	5.1	1.000268
4500.0	866.0	29.0	25.0	994.3	678.6	218.4	4.3	1.000263
5000.0	851.3	27.2	25.0	983.6	676.5	184.5	4.5	1.000257
5500.0	836.6	26.2	24.3	970.0	675.3	160.7	5.9	1.000251
6000.0	822.2	25.3	23.6	956.4	674.2	154.0	6.0	1.000245
6500.0	808.0	24.4	22.8	942.9	673.1	194.3	2.1	1.000240
7000.6	794.0	23.5	22.1	929.6	672.0	275.4	4.0	1.000235
7500.0	780.3	22.6	21.3	916.5	670.9	284.0	8.0	1.000230
8000.0	766.8	21.7	20.6	903.6	669.8	288.3	10.0	1.000225
8500.0	753.5	20.7	20.3	891.0	668.6	292.3	10.8	1.000220
9000.0	740.2	19.4	21.4	879.2	667.2	291.6	11.8	1.000217
9500.0	727.1	18.1	22.6	867.5	665.7	290.1	12.9	1.000214
10000.0	714.3	16.9	23.7	856.0	664.2	283.0	13.6	1.000211
10500.0	701.7	15.6	24.8	844.7	662.8	276.6	14.2	1.000208
11000.0	689.0	14.2	26.7	833.3	661.2	270.0	13.8	1.000206
11500.0	676.5	12.9	28.6	822.1	659.6	263.7	13.3	1.000203
12000.0	664.3	11.5	30.6	811.1	658.0	258.3	12.2	1.000200
12500.0	652.2	10.1	32.5	800.2	656.5	253.1	11.0	1.000197
13000.0	640.4	8.8	34.5	789.6	654.9	247.9	9.6	1.000194
13500.0	628.8	7.4	36.4	779.1	653.3	240.4	9.1	1.000192
14000.0	617.4	6.0	38.4	768.7	651.6	232.2	9.0	1.000189
14500.0	606.1	4.7	40.5	758.4	650.1	231.1	10.2	1.000186
15000.0	594.8	3.5	43.0	747.3	648.7	233.6	11.6	1.000183
15500.0	583.6	2.3	45.5	736.5	647.3	243.8	13.8	1.000180
16000.0	572.7	1.1	48.0	725.8	645.9	251.3	16.3	1.000178
16500.0	561.9	-1.1	50.6	715.3	644.5	256.7	19.2	1.000175
17000.0	551.4	-1.2	53.1	705.0	643.1	254.9	21.0	1.000172
17500.0	541.0	-2.4	55.6	694.8	641.6	251.9	22.5	1.000170
18000.0	530.9	-3.6	58.2	684.8	640.2	249.6	21.1	1.000167
18500.0	520.8	-4.6	55.4	674.3	639.0	247.9	19.1	1.000163

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78 0930 HRS MDT
 ASCENSION 110. 354

UPPER AIR DATA
 1660010354
 HOLLOWMAN
 TABLE IX. (CONT)

GEODETTIC COORDINATES
 32.68865 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 DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE						
19000.0	510.8	-5.4	-14.2	50.0	663.7	637.9	247.4	15.2	1.000159
19500.0	501.0	-6.3	-16.4	44.6	653.3	636.8	243.9	12.0	1.000155
20000.0	491.4	-7.5	-21.0	32.8	643.7	635.3	234.7	9.6	1.000150
20500.0	481.8	-8.6	-25.1	24.7	633.9	633.9	225.2	8.3	1.000145
21000.0	472.3	-9.5	-26.3	23.9	623.7	632.7	216.4	7.7	1.000143
21500.0	463.0	-10.5	-27.5	23.0	613.7	631.6	210.9	7.4	1.000140
22000.0	453.8	-11.4	-28.7	22.2	603.8	630.4	207.1	7.3	1.000138
22500.0	444.9	-12.4	-29.9	21.4	594.1	629.2	211.5	8.2	1.000135
23000.0	436.1	-13.3	-31.2	20.6	584.5	628.1	216.9	9.5	1.000133
23500.0	427.5	-14.3	-32.4	19.7	575.1	626.9	221.9	10.9	1.000130
24000.0	419.1	-15.3	-33.6	18.9	565.9	625.7	225.1	12.1	1.000128
24500.0	410.8	-16.2	-34.9	18.1	556.8	624.5	225.4	12.4	1.000126
25000.0	402.7	-17.2	-36.1	17.3	547.9	623.4	228.0	12.9	1.000124
25500.0	394.5	-18.3	-37.2	17.0	539.1	622.0	235.1	13.9	1.000122
26000.0	386.3	-19.5	-38.2	17.1	530.5	620.5	241.3	15.1	1.000119
26500.0	378.3	-20.8	-39.2	17.2	522.0	619.0	246.7	16.5	1.000117
27000.0	370.4	-22.0	-40.2	17.3	513.7	617.5	247.8	17.3	1.000115
27500.0	362.7	-23.2	-41.2	17.4	505.5	616.0	246.4	18.0	1.000114
28000.0	355.2	-24.4	-42.2	17.4	497.4	614.4	239.7	18.7	1.000112
28500.0	347.8	-25.7	-43.1	17.5	489.5	612.9	233.6	20.0	1.000110
29000.0	340.6	-26.9	-44.1	17.6	481.8	611.4	228.5	21.7	1.000108
29500.0	333.5	-28.1	-45.1	17.6	474.1	609.9	227.0	22.5	1.000106
30000.0	326.6	-29.3	-46.1	17.7	466.6	608.3	226.3	23.1	1.000105
30500.0	319.8	-30.6	-47.1	17.8	459.2	606.8	223.7	23.0	1.000103
31000.0	313.2	-31.8	-48.1	17.9	452.0	605.3	221.0	22.8	1.000101
31500.0	306.7	-33.0	-49.1	17.9	444.9	603.7	222.8	22.4	1.000100
32000.0	300.3	-34.2	-50.1	18.0	437.9	602.2	224.8	22.0	1.000098
32500.0	293.8	-35.5	-52.9	14.7**	430.6	600.6	228.3	22.1	1.000096
33000.0	287.4	-36.7	-56.1	11.2**	423.4	599.1	231.1	22.4	1.000095
33500.0	281.2	-37.9	-60.0	7.7**	416.3	597.5	231.4	23.3	1.000093

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

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78
 ASCENSION NO. 354

UPPER AIR DATA
 1660010354
 HOLLOMAN

0930 HRS MDT
 TABLE IX. (CONT)

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	
34000.0	275.1	-39.1	-65.4	4.2**	409.4	596.0	231.9	24.1	1.000091
34500.0	269.1	-40.3	-77.8	.7**	402.6	594.4	232.5	24.6	1.000090
35000.0	263.1	-41.4			395.5	593.1	233.4	25.0	1.000088
35500.0	257.3	-42.4			388.4	591.8	236.3	24.9	1.000087
36000.0	251.6	-43.4			381.5	590.5	239.2	24.8	1.000085
36500.0	245.9	-44.6			374.8	589.0	244.2	25.1	1.000083
37000.0	240.3	-45.9			368.3	587.3	249.0	25.5	1.000082
37500.0	234.8	-47.1			361.9	585.7	251.7	25.4	1.000081
38000.0	229.4	-48.4			355.6	584.1	254.3	25.3	1.000079
38500.0	224.2	-49.6			349.4	582.5	256.4	24.1	1.000078
39000.0	219.1	-50.9			343.4	580.8	258.8	22.8	1.000076
39500.0	214.1	-52.1			337.4	579.2	258.8	22.2	1.000075
40000.0	209.2	-53.4			331.6	577.5	258.5	21.7	1.000074
40500.0	204.3	-54.3			325.2	576.3	255.9	23.2	1.000072
41000.0	199.5	-55.1			318.8	575.3	253.7	24.8	1.000071
41500.0	194.8	-56.1			312.5	574.0	253.5	26.4	1.000070
42000.0	190.1	-57.0			306.4	572.7	253.2	27.8	1.000068
42500.0	185.6	-58.0			300.4	571.4	253.3	28.1	1.000067
43000.0	181.1	-59.0			294.6	570.1	253.3	28.3	1.000066
43500.0	176.8	-59.9			288.9	568.8	252.9	29.1	1.000064
44000.0	172.5	-60.9			283.2	567.5	252.6	30.0	1.000063
44500.0	168.4	-61.9			277.7	566.2	251.7	32.0	1.000062
45000.0	164.4	-62.9			272.3	564.9	250.9	34.1	1.000061
45500.0	160.4	-63.8			266.9	563.7	251.0	35.0	1.000059
46000.0	156.5	-64.5			261.3	562.7	251.3	35.7	1.000058
46500.0	152.7	-65.3			255.8	561.7	252.2	32.9	1.000057
47000.0	148.9	-66.0			250.4	560.7	253.4	29.6	1.000056
47500.0	145.2	-66.7			245.0	559.8	254.5	25.7	1.000055
48000.0	141.6	-67.3			239.6	558.9	255.8	21.7	1.000053
48500.0	138.1	-68.0			234.5	558.0	254.7	20.4	1.000052

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

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78
 ASCENSION NO. 354
 0930 HRS MDT

UPPER AIR DATA
 1660010354
 HOLLOMAN
 TABLE IX. (CONT)

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CEMPTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
49000.0	134.6	-68.7		229.4	557.1	253.4	19.3	1.000051
49500.0	131.3	-69.0		224.1	556.6	255.7	19.2	1.000050
50000.0	128.0	-69.3		218.7	556.2	257.9	19.1	1.000049
50500.0	124.8	-69.5		213.5	555.9	258.0	17.8	1.000048
51000.0	121.6	-69.8		208.4	555.6	257.2	16.0	1.000046
51500.0	118.6	-70.0		203.4	555.3	252.3	14.5	1.000045
52000.0	115.6	-70.6		198.8	554.4	240.8	13.8	1.000044
52500.0	112.7	-71.3		194.4	553.5	229.8	13.7	1.000043
53000.0	109.8	-71.9		190.1	552.6	227.8	14.6	1.000042
53500.0	107.0	-72.6		185.9	551.7	226.1	15.6	1.000041
54000.0	104.3	-73.0		181.6	551.1	224.3	15.1	1.000040
54500.0	101.7	-72.2		176.2	552.3	222.3	14.5	1.000039
55000.0	99.1	-70.3		170.1	554.9	216.6	13.6	1.000038
55500.0	96.6	-70.5		166.0	554.6	208.3	12.6	1.000037
56000.0	94.1	-70.7		162.0	554.3	202.3	12.5	1.000036
56500.0	91.8	-70.9		158.1	554.1	201.4	13.4	1.000035
57000.0	89.5	-69.4		153.0	556.1	200.3	14.0	1.000034
57500.0	87.2	-66.9		147.4	559.5	198.5	13.6	1.000033
58000.0	85.1	-66.6		143.5	559.9	196.3	13.2	1.000032
58500.0	83.0	-66.3		139.7	560.4	181.0	11.4	1.000031
59000.0	80.9	-65.9		136.1	560.8	161.6	10.6	1.000030
59500.0	78.9	-65.6		132.5	561.2	159.0	10.3	1.000030
60000.0	77.0	-65.3		129.0	561.7	161.4	10.0	1.000029
60500.0	75.1	-65.7		126.1	561.1	164.3	8.8	1.000028
61000.0	73.3	-65.3		122.8	561.6	169.0	6.7	1.000027
61500.0	71.5	-64.2		119.1	563.2	160.8	5.0	1.000027
62000.0	69.7	-63.1		115.6	564.6	115.8	6.5	1.000026
62500.0	68.0	-62.4		112.5	565.5	95.3	10.0	1.000025
63000.0	66.4	-61.8		109.4	566.4	89.4	12.6	1.000024
63500.0	64.8	-61.1		106.4	567.3	85.5	15.2	1.000024

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78
 ASCENSION NO. 354
 0930 HRS MDT

UPPER AIR DATA
 1660010354
 HOLLOWMAN
 TABLE IX. (CONT)

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	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	63.2	-60.3		103.5	568.4	86.0	15.6	1.000023
64500.0	61.7	-58.3		100.1	571.0	87.4	15.3	1.000022
65000.0	60.2	-57.2		97.2	572.5	89.8	15.4	1.000022
65500.0	58.8	-57.3		94.9	572.3	93.0	15.8	1.000021
66000.0	57.4	-57.5		92.8	572.1	94.4	16.1	1.000021
66500.0	56.1	-57.7		90.6	571.9	91.1	16.1	1.000020
67000.0	54.7	-57.9		88.6	571.6	87.9	16.1	1.000020
67500.0	53.4	-58.0		86.5	571.4	89.9	16.9	1.000019
68000.0	52.2	-58.2		84.5	571.2	92.2	17.8	1.000019
68500.0	50.9	-58.4		82.6	570.9	94.2	18.6	1.000018
69000.0	49.7	-58.5		80.7	570.8	95.9	19.1	1.000018
69500.0	48.5	-58.6		78.8	570.7	97.6	19.6	1.000018
70000.0	47.4	-58.6		76.9	570.6	96.5	18.7	1.000017
70500.0	46.3	-58.7		75.1	570.5	94.9	17.6	1.000017
71000.0	45.2	-58.4		73.3	570.9	92.1	16.9	1.000016
71500.0	44.1	-57.7		71.3	571.8	87.4	16.7	1.000016
72000.0	43.1	-57.1		69.4	572.7	82.7	16.6	1.000015
72500.0	42.1	-56.4		67.6	573.6	79.7	17.6	1.000015
73000.0	41.1	-55.7		65.8	574.5	77.3	18.8	1.000015
73500.0	40.1	-55.0		64.1	575.4	76.6	19.7	1.000014
74000.0	39.2	-54.3		62.4	576.3	78.1	20.0	1.000014
74500.0	38.3	-53.7		60.7	577.2	79.6	20.3	1.000014
75000.0	37.4	-53.0		59.1	578.1	80.6	20.1	1.000013
75500.0	36.5	-52.3		57.6	579.0	81.5	19.8	1.000013
76000.0	35.6	-51.7		56.1	579.7	82.1	19.7	1.000012
76500.0	34.8	-51.3		54.7	580.2	82.4	19.8	1.000012
77000.0	34.0	-50.9		53.3	580.8	82.7	20.0	1.000012
77500.0	33.2	-50.9		52.1	580.8	82.4	20.1	1.000012
78000.0	32.5	-51.3		49.9	580.3	82.1	20.1	1.000011
78500.0	31.7	-51.7		49.9	579.7	81.8	20.0	1.000011

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78
 ASCENSION NO. 354
 0930 HRS MDT

UPPER AIR DATA
 1660010354
 HOLLOMAN
 TABLE IX. (CONT)

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	
79000.0	31.0	-52.1			48.8	579.2	81.7	19.7	1.000011
79500.0	30.3	-52.5			47.8	578.6	81.6	19.4	1.000011
80000.0	29.6	-52.7			46.7	578.4	81.9	19.8	1.000010
80500.0	28.9	-52.7			45.7	578.4	82.3	20.4	1.000010
81000.0	28.2	-52.7			44.6	578.4	82.8	21.1	1.000010
81500.0	27.6	-52.7			43.6	578.4	82.0	22.1	1.000010
82000.0	26.9	-52.7			42.6	578.4	81.2	23.0	1.000009
82500.0	26.3	-52.6			41.6	578.5	80.0	23.6	1.000009
83000.0	25.7	-52.1			40.5	579.2	77.4	22.9	1.000009
83500.0	25.1	-51.6			39.5	579.8	74.6	22.2	1.000009
84000.0	24.6	-51.1			38.5	580.5	71.8	22.1	1.000009
84500.0	24.0	-50.6			37.6	581.1	69.1	22.5	1.000008
85000.0	23.4	-50.1			36.6	581.8	66.6	23.0	1.000008
85500.0	22.9	-49.6			35.7	582.4	64.9	24.6	1.000008
86000.0	22.4	-49.1			34.8	583.1	63.8	26.5	1.000008
86500.0	21.9	-48.6			33.9	583.7	62.8	28.5	1.000008
87000.0	21.4	-48.1			33.1	584.4	62.9	28.6	1.000007
87500.0	20.9	-47.6			32.3	585.0	63.1	28.8	1.000007
88000.0	20.4	-47.1			31.5	585.7	64.0	28.8	1.000007
88500.0	19.9	-46.7			30.7	586.3	66.9	28.4	1.000007
89000.0	19.5	-46.4			30.0	586.6	69.9	28.1	1.000007
89500.0	19.1	-46.2			29.3	586.9	73.1	28.1	1.000007
90000.0	18.6	-45.9			28.6	587.3	76.5	28.5	1.000006
90500.0	18.2	-45.7			27.9	587.6	79.8	29.0	1.000006
91000.0	17.8	-45.4			27.2	587.9	81.4	29.3	1.000006
91500.0	17.4	-45.2			26.6	588.2	81.7	29.5	1.000006
92000.0	17.0	-44.9			26.0	588.6	81.9	29.8	1.000006
92500.0	16.6	-44.8			25.4	588.7	81.1	30.1	1.000006
93000.0	16.3	-44.7			24.8	588.9	79.5	30.6	1.000006
93500.0	15.9	-44.5			24.2	589.0	78.1	31.1	1.000005

UPPER AIR DATA
 1660010354
 HOLLOMAN

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78
 ASCENSION NO. 354

GEODETIC COORDINATES
 32.86865 LAT DEG
 106.09965 LON DEG

TABLE IX. (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT DEGREES						
94000.0	15.6	-44.4			23.7	589.2	77.0	31.2	1.000005
94500.0	15.2	-44.3			23.2	589.4	76.0	31.1	1.000005
95000.0	14.9	-44.2			22.6	589.5	75.1	30.9	1.000005
95500.0	14.5	-44.0			22.1	589.7	73.7	31.1	1.000005
96000.0	14.2	-43.9			21.6	589.8	72.1	31.5	1.000005
96500.0	13.9	-43.8			21.1	590.0	70.6	31.9	1.000005
97000.0	13.6	-43.7			20.6	590.1	69.8	32.2	1.000005
97500.0	13.3	-43.6			20.2	590.3	69.4	32.3	1.000004
98000.0	13.0	-43.4			19.7	590.5	68.9	32.5	1.000004
98500.0	12.7	-43.3			19.3	590.6	68.1	33.0	1.000004
99000.0	12.4	-43.2			18.8	590.8	67.1	33.7	1.000004
99500.0	12.1	-43.1			18.4	590.9	66.2	34.4	1.000004
100000.0	11.9	-42.6			17.9	591.5	65.4	34.7	1.000004
100500.0	11.6	-41.7			17.5	592.7	64.7	35.0	1.000004
101000.0	11.4	-40.8			17.0	593.8	64.0	35.2	1.000004
101500.0	11.1	-40.0			16.8	594.9			1.000004
102000.0	10.9	-39.1			16.2	596.0			1.000004
102500.0	10.6	-38.2			15.8	597.1			1.000004

STATION ALTITUDE 4126.59 FEET MSL
 15 JUNE 78
 ASCENSION NO. 354

MANDATORY LEVELS
 1660010354
 HOLLOWMAN
 TABLE X.

GEODETIC COORDINATES
 32.88865 LAT DEG
 106.09965 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5041.	27.0	5.3	25.	181.9	4.6
800.0	6787.	23.9	1.1	22.	263.2	2.4
750.0	8624.	20.4	-2.9	21.	292.8	11.0
700.0	10556.	15.4	-4.5	25.	275.8	14.2
650.0	12598.	9.9	-5.7	33.	252.1	10.7
600.0	14757.	4.1	-7.7	42.	230.8	10.9
550.0	17057.	-1.4	-9.6	53.	254.4	21.3
500.0	19525.	-6.4	-16.6	44.	243.2	11.8
450.0	22199.	-11.8	-29.2	22.	207.7	7.5
400.0	25120.	-17.5	-36.6	17.	230.7	13.2
350.0	28357.	-25.3	-42.9	17.	234.6	19.7
300.0	31963.	-34.3	-50.2	18.	224.8	22.0
250.0	36061.	-43.7			240.5	24.8
200.0	40853.	-55.0			253.9	24.6
175.0	43616.	-60.4			252.8	29.5
150.0	46727.	-65.8			253.0	30.7
125.0	50321.	-69.5			258.1	18.0
100.0	54650.	-70.2			220.0	14.0
80.0	59036.	-65.8			157.7	10.5
70.0	61700.	-63.2			123.5	5.9
60.0	64854.	-57.2			90.2	15.4
50.0	68627.	-58.5			95.4	18.9
40.0	73250.	-54.9			76.6	19.7
30.0	79357.	-52.7			81.5	19.3
25.0	83223.	-51.5			74.3	22.2
20.0	88027.	-46.7			66.3	28.5
15.0	94327.	-44.2			75.6	31.0

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78 1030 HRS MDT
 ASCENSION NO. 67

SIGNIFICANT LEVEL DATA
 1660050067
 APACHE
 TABLE XI.

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

PRESSURE GEOMETRIC ALTITUDE		TEMPERATURE		REL. HUM. PERCENT
MILLIBARS	MSL FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
882.6	3951.4	30.8	7.3	23.0
850.0	5053.7	29.4	4.8	21.0
820.8	6073.9	28.8	3.6	20.0
749.8	8674.5	20.5	-1.3	23.0
700.0	10605.2	15.5	-3.9	26.0
597.4	14929.0	3.7	-8.0	42.0
577.8	15817.0	1.6	-6.2	56.0
534.0	17888.4	-3.4	-10.7	57.0
507.2	19220.8	-6.6	-10.6	73.0
500.0	19588.2	-7.2	-11.4	72.0
491.0	20054.0	-7.6	-15.3	54.0
420.2	23967.6	-14.8	-30.8	24.0
400.0	25208.0	-17.6	-34.1	22.0
370.2	27098.4	-22.2	-38.0	22.0
336.2	29404.0	-27.7	-42.0	24.0
300.0	32061.7	-34.8	-47.8	25.0
287.2	33059.3	-37.1	-50.1	24.0
250.0	36173.9	-43.7		
219.2	39059.8	-50.8		
200.0	40967.9	-55.1		
162.4	45283.5	-63.9		
150.0	46802.0	-65.6		
125.8	50369.4	-70.3		
119.6	51360.9	-69.9		
105.0	53894.6	-73.6		
100.0	54841.7	-71.0		
93.6	56154.1	-71.0		
70.0	61951.9	-61.1		
50.0	68903.8	-58.1		
32.0	78332.6	-51.8		

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78
 ASCENSION NO. 67

SIGNIFICANT LEVEL DATA
 1660050067
 APACHE
 TABLE XI. (CONT)

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
30.0 79710.0	-53.9	
20.0 68489.3	-45.6	
14.0 96366.2	-44.2	
10.0 103944.2	-39.3	

UPPER AIR DATA
 1660050067
 APACHE
 TABLE XII.

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78
 ASCENSION NO. 67
 1030 HRS MDT

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 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	882.6	30.8	7.3	23.0	1007.1	680.7	350.0	4.1	1.000266
4000.0	881.1	30.7	7.2	22.9	1005.7	680.6	348.2	4.1	1.000266
4500.0	860.2	30.1	6.1	22.0	991.0	679.8	332.7	5.0	1.000260
5000.0	851.6	29.5	4.9	21.1	976.5	679.0	322.3	6.1	1.000254
5500.0	837.1	29.1	4.3	20.6	961.1	678.6	315.3	7.4	1.000249
6000.0	822.9	28.8	3.7	20.1	945.8	678.3	313.8	8.6	1.000244
6500.0	808.7	27.4	2.8	20.5	934.0	676.6	322.0	9.4	1.000240
7000.0	794.8	25.8	1.9	21.1	922.9	674.8	323.2	10.2	1.000235
7500.0	781.1	24.2	1.0	21.6	912.0	672.9	315.7	10.7	1.000231
8000.0	767.6	22.7	.0	22.2	901.3	671.0	303.0	12.1	1.000227
8500.0	754.4	21.1	-1.0	22.8	890.7	669.2	290.2	14.8	1.000223
9000.0	741.2	19.7	-1.7	23.5	879.4	667.5	286.7	16.5	1.000220
9500.0	728.1	18.4	-2.4	24.3	867.8	666.0	286.2	17.5	1.000216
10000.0	715.2	17.1	-3.1	25.1	856.3	664.5	284.5	17.7	1.000213
10500.0	702.6	15.8	-3.7	25.8	845.1	663.0	282.3	17.6	1.000209
11000.0	689.9	14.4	-4.1	27.5	833.7	661.5	279.9	16.5	1.000206
11500.0	677.4	13.1	-4.4	29.3	822.5	659.9	277.2	15.2	1.000204
12000.0	665.1	11.7	-4.8	31.2	811.5	658.3	274.6	12.8	1.000201
12500.0	653.0	10.3	-5.2	33.0	800.6	656.7	269.9	10.6	1.000198
13000.0	641.2	9.0	-5.7	34.9	789.9	655.1	259.6	9.0	1.000195
13500.0	629.5	7.6	-6.2	36.7	779.3	653.5	248.8	9.0	1.000192
14000.0	618.1	6.2	-6.8	38.6	769.0	651.9	242.4	10.6	1.000189
14500.0	606.9	4.9	-7.4	40.4	758.8	650.3	238.8	11.3	1.000186
15000.0	595.8	3.5	-7.8	43.1	748.6	648.7	236.0	11.5	1.000184
15500.0	584.7	2.3	-6.7	51.0	737.6	647.4	236.5	12.4	1.000183
16000.0	573.8	1.2	-6.6	56.1	726.9	646.0	237.4	13.5	1.000181
16500.0	563.0	-.0	-7.7	56.3	716.5	644.6	246.6	16.5	1.000177
17000.0	552.4	-1.3	-8.8	56.6	706.2	643.1	253.0	19.4	1.000173
17500.0	542.0	-2.5	-9.8	56.8	696.1	641.6	258.6	19.9	1.000170
18000.0	531.7	-3.7	-10.6	58.3	686.0	640.1	262.0	20.2	1.000167

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78
 ASCENSION NO. 67 1030 HRS MDT

UPPER AIR DATA
 1660050007
 APACHE

TABLE XII. (CONT)

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 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
		AIK DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
18500.0	521.5	-4.9	-10.5	64.3	675.9	638.7	262.1	19.8	1.000165
19000.0	511.5	-6.1	-10.6	70.3	665.9	637.3	260.3	18.8	1.000163
19500.0	501.7	-7.1	-11.2	72.2	655.6	636.1	256.5	17.3	1.000160
20000.0	492.0	-7.6	-14.8	56.1	644.4	635.4	250.6	14.2	1.000154
20500.0	482.4	-8.4	-16.8	50.6	634.0	634.3	240.7	10.9	1.000150
21000.0	473.0	-9.3	-18.6	46.8	623.8	633.1	223.3	8.0	1.000147
21500.0	463.7	-10.2	-20.4	43.0	613.8	632.0	199.5	6.9	1.000143
22000.0	454.6	-11.2	-22.3	39.2	604.0	630.8	183.4	7.3	1.000140
22500.0	445.7	-12.1	-24.3	35.3	594.3	629.7	185.7	7.6	1.000137
23000.0	437.0	-13.0	-26.3	31.5	584.7	628.6	196.5	7.8	1.000134
23500.0	428.4	-13.9	-28.5	27.7	575.4	627.4	213.7	8.0	1.000131
24000.0	420.0	-14.8	-30.8	24.0	566.2	626.3	229.2	8.8	1.000129
24500.0	411.6	-16.0	-32.2	23.2	557.3	624.9	238.5	10.4	1.000126
25000.0	403.4	-17.1	-33.5	22.3	548.7	623.5	245.4	12.6	1.000124
25500.0	395.2	-18.3	-34.7	22.0	540.1	622.0	250.8	16.6	1.000122
26000.0	387.2	-19.5	-35.7	22.0	531.7	620.5	253.4	19.6	1.000120
26500.0	379.4	-20.7	-36.8	22.0	523.5	619.0	253.5	19.6	1.000118
27000.0	371.7	-22.0	-37.8	22.0	515.4	617.5	251.9	19.2	1.000116
27500.0	364.0	-23.2	-38.7	22.3	507.2	616.0	247.2	17.6	1.000114
28000.0	356.5	-24.4	-39.6	22.8	499.1	614.6	241.5	17.3	1.000112
28500.0	349.1	-25.5	-40.4	23.2	491.1	613.1	236.0	18.3	1.000110
29000.0	341.9	-26.7	-41.3	23.6	483.3	611.6	232.6	18.8	1.000109
29500.0	334.8	-28.0	-42.2	24.0	475.6	610.1	230.2	19.0	1.000107
30000.0	327.7	-29.3	-43.3	24.2	468.1	608.4	229.1	19.3	1.000105
30500.0	320.8	-30.6	-44.3	24.4	460.7	606.7	228.5	19.6	1.000103
31000.0	314.0	-32.0	-45.4	24.6	453.4	605.1	228.0	20.5	1.000102
31500.0	307.3	-33.3	-46.5	24.8	446.3	603.4	228.8	21.5	1.000100
32000.0	300.8	-34.6	-47.6	25.0	439.3	601.7	233.0	21.9	1.000098
32500.0	294.3	-35.8	-48.8	24.6	431.9	600.2	237.6	22.4	1.000097
33000.0	287.9	-37.0	-50.0	24.1	424.7	598.7	241.4	22.6	1.000095

UPPER AIR DATA
 1660050067
 APACHE
 TABLE XII. (CONT)

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78
 ASCENSION NO. 67
 1030 HRS MDT

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 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	
33500.0	281.6	-38.0	-52.2	20.6**	417.2	597.4	245.1	22.8	1.000093
34000.0	275.4	-39.1	-54.9	16.8**	409.9	596.0	246.3	23.4	1.000092
34500.0	269.4	-40.2	-57.8	12.9**	402.7	594.7	247.0	24.0	1.000090
35000.0	263.4	-41.2	-61.4	9.0**	395.6	593.3	249.7	24.3	1.000088
35500.0	257.6	-42.3	-66.3	5.2**	388.7	592.0	252.8	24.6	1.000087
36000.0	251.9	-43.3	-76.2	1.3**	381.9	590.6	256.8	24.5	1.000085
36500.0	246.3	-44.5			375.3	589.1	260.7	24.3	1.000084
37000.0	240.7	-45.7			368.7	587.5	262.6	23.2	1.000082
37500.0	235.2	-47.0			362.4	585.9	264.3	21.9	1.000081
38000.0	229.9	-48.2			356.1	584.3	265.5	20.7	1.000079
38500.0	224.7	-49.5			349.9	582.7	266.8	19.5	1.000078
39000.0	219.6	-50.7			343.9	581.0	268.9	20.1	1.000077
39500.0	214.5	-51.8			337.6	579.6	270.8	21.0	1.000075
40000.0	209.5	-52.9			331.4	578.1	270.3	23.6	1.000074
40500.0	204.6	-54.0			325.3	576.7	269.7	26.4	1.000072
41000.0	199.9	-55.1			319.4	575.2	268.8	27.8	1.000071
41500.0	195.1	-56.1			313.2	573.9	268.0	29.1	1.000070
42000.0	190.4	-57.2			307.1	572.5	268.7	28.6	1.000068
42500.0	185.9	-58.2			301.2	571.2	269.4	28.0	1.000067
43000.0	181.4	-59.2			295.4	569.8	269.6	27.7	1.000066
43500.0	177.1	-60.2			289.7	568.4	269.7	27.4	1.000065
44000.0	172.8	-61.3			284.2	567.1	269.3	28.5	1.000063
44500.0	168.7	-62.3			278.7	565.7	268.8	29.7	1.000062
45000.0	164.6	-63.3			273.3	564.3	268.7	30.1	1.000061
45500.0	160.7	-64.1			267.8	563.2	268.7	30.2	1.000060
46000.0	156.7	-64.7			261.9	562.5	269.0	29.2	1.000058
46500.0	152.9	-65.2			256.1	561.8	269.8	27.0	1.000057
47000.0	149.1	-65.8			250.5	561.0	270.8	25.1	1.000056
47500.0	145.4	-66.4			245.0	560.1	271.0	24.3	1.000055
48000.0	141.8	-67.1			239.7	559.2	271.4	23.5	1.000053

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

UPPER AIR DATA
 1660050067
 APACHE
 TABLE XII. (CONT)

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78 1030 HRS MDT
 ASCENSION NO. 67

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INJEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
48500.0	138.2	-67.8			234.5	558.3	274.3	23.2	1.000052
49000.0	134.8	-68.5			229.4	557.4	277.2	22.9	1.000051
49500.0	131.4	-69.1			224.4	556.5	274.6	21.2	1.000050
50000.0	128.2	-69.8			219.6	555.5	269.4	19.2	1.000049
50500.0	125.0	-70.2			214.6	554.9	262.7	17.7	1.000048
51000.0	121.8	-70.0			208.9	555.2	254.6	17.1	1.000047
51500.0	118.7	-70.1			203.7	555.1	246.8	16.8	1.000045
52000.0	115.7	-70.8			199.3	554.1	248.1	16.6	1.000044
52500.0	112.8	-71.6			194.9	553.1	249.5	16.4	1.000043
53000.0	109.9	-72.3			190.7	552.1	246.3	16.2	1.000042
53500.0	107.2	-73.0			186.5	551.1	242.2	16.1	1.000042
54000.0	104.4	-73.3			182.0	550.7	238.5	16.1	1.000041
54500.0	101.8	-71.9			176.2	552.6	235.0	16.0	1.000039
55000.0	99.2	-71.0			170.9	553.9	230.8	15.8	1.000038
55500.0	96.7	-71.0			166.6	553.9	224.6	15.4	1.000037
56000.0	94.2	-71.0			162.4	553.9	218.1	15.1	1.000036
56500.0	91.9	-70.4			157.9	554.8	210.9	14.7	1.000035
57000.0	89.6	-69.5			153.4	555.9	203.4	14.5	1.000034
57500.0	87.4	-68.7			149.0	557.1	197.3	14.0	1.000033
58000.0	85.3	-67.8			144.7	558.2	192.4	13.1	1.000032
58500.0	83.2	-67.0			140.5	559.4	187.4	12.1	1.000031
59000.0	81.1	-66.1			136.5	560.5	183.5	10.7	1.000030
59500.0	79.1	-65.3			132.6	561.7	178.3	9.4	1.000030
60000.0	77.2	-64.4			128.8	562.8	174.4	8.3	1.000029
60500.0	75.3	-63.6			125.1	564.0	169.3	7.2	1.000028
61000.0	73.4	-62.7			121.5	565.1	156.4	7.4	1.000027
61500.0	71.6	-61.9			118.1	566.3	144.1	8.1	1.000026
62000.0	69.8	-61.1			114.7	567.3	128.5	10.0	1.000026
62500.0	68.2	-60.9			111.9	567.6	116.0	13.0	1.000025
63000.0	66.5	-60.6			109.1	567.9	109.8	15.6	1.000024

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78
 ASCENSION NO. 67
 1030 HRS MDT

UPPER AIR DATA
 1660050067
 APACHE
 TABLE XII. (CONT)

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 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	
63500.0	64.9	-60.4		106.4	568.2	108.2	16.1	1.000024	
64000.0	63.4	-60.2		103.7	568.5	106.6	16.6	1.000023	
64500.0	61.9	-60.0		101.1	568.8	109.2	15.9	1.000023	
65000.0	60.4	-59.8		98.6	569.1	112.2	15.2	1.000022	
65500.0	59.0	-59.6		96.2	569.3	113.2	15.1	1.000021	
66000.0	57.5	-59.4		93.8	569.6	112.7	15.6	1.000021	
66500.0	56.2	-59.1		91.4	569.9	111.6	16.0	1.000020	
67000.0	54.8	-58.9		89.2	570.2	109.0	16.3	1.000020	
67500.0	53.5	-58.7		86.9	570.5	106.4	16.5	1.000019	
68000.0	52.2	-58.5		84.8	570.8	108.0	16.1	1.000019	
68500.0	51.0	-58.3		82.7	571.1	110.1	15.7	1.000018	
69000.0	49.8	-58.0		80.6	571.4	115.0	15.3	1.000018	
69500.0	48.6	-57.7		78.6	571.8	122.1	15.1	1.000017	
70000.0	47.5	-57.4		76.6	572.3	126.6	14.9	1.000017	
70500.0	46.4	-57.0		74.7	572.7	123.6	14.2	1.000017	
71000.0	45.3	-56.7		72.9	573.2	120.3	13.5	1.000016	
71500.0	44.2	-56.4		71.1	573.6	110.9	13.5	1.000016	
72000.0	43.2	-56.0		69.3	574.0	101.3	13.8	1.000015	
72500.0	42.2	-55.7		67.6	574.5	95.1	15.6	1.000015	
73000.0	41.2	-55.4		65.9	574.9	91.6	18.2	1.000015	
73500.0	40.2	-55.0		64.2	575.4	90.0	20.3	1.000014	
74000.0	39.3	-54.7		62.6	575.8	91.1	21.0	1.000014	
74500.0	38.4	-54.4		61.1	576.2	92.1	21.8	1.000014	
75000.0	37.5	-54.0		59.6	576.7	93.7	21.4	1.000013	
75500.0	36.6	-53.7		58.1	577.1	95.6	20.7	1.000013	
76000.0	35.7	-53.4		56.6	577.6	97.5	20.2	1.000013	
76500.0	34.9	-53.0		55.2	578.0	98.7	20.0	1.000012	
77000.0	34.1	-52.7		53.9	578.4	99.9	19.9	1.000012	
77500.0	33.3	-52.4		52.5	578.9	100.8	19.2	1.000012	
78000.0	32.5	-52.0		51.2	579.3	101.6	18.2	1.000011	

UPPER AIR DATA
 1660050067
 APACHE
 TABLE XII. (CONT)

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78
 ASCENSION NO. 67
 1030 HRS MDT

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
78500.0	31.8	-52.1		50.0	579.3	102.5	17.2	1.000011
79000.0	31.0	-52.8		49.0	578.3	97.6	17.4	1.000011
79500.0	30.3	-53.6		48.1	577.3	92.7	17.9	1.000011
80000.0	29.6	-53.6		47.0	577.2	89.4	18.9	1.000010
80500.0	28.9	-53.2		45.8	577.8	89.4	21.0	1.000010
81000.0	28.3	-52.7		44.7	578.5	89.3	23.1	1.000010
81500.0	27.6	-52.2		43.5	579.1	90.2	24.2	1.000010
82000.0	27.0	-51.7		42.5	579.7	91.6	24.7	1.000009
82500.0	26.4	-51.3		41.4	580.3	93.0	25.2	1.000009
83000.0	25.8	-50.8		40.4	580.9	92.6	25.0	1.000009
83500.0	25.2	-50.3		39.4	581.5	91.6	24.5	1.000009
84000.0	24.6	-49.8		38.4	582.2	90.5	24.0	1.000009
84500.0	24.0	-49.4		37.4	582.8	89.4	24.0	1.000008
85000.0	23.5	-48.9		36.5	583.4	88.2	24.4	1.000008
85500.0	23.0	-48.4		35.6	584.0	87.1	24.7	1.000008
86000.0	22.4	-48.0		34.7	584.6	85.6	25.8	1.000008
86500.0	21.9	-47.5		33.8	585.2	84.5	27.5	1.000008
87000.0	21.4	-47.0		33.0	585.8	83.3	29.2	1.000007
87500.0	20.9	-46.5		32.2	586.5	83.3	30.5	1.000007
88000.0	20.5	-46.1		31.4	587.1	84.9	30.9	1.000007
88500.0	20.0	-45.6		30.6	587.7	86.4	31.5	1.000007
89000.0	19.5	-45.5		29.9	587.8	88.5	32.0	1.000007
89500.0	19.1	-45.4		29.2	587.9	92.2	32.5	1.000006
90000.0	18.7	-45.3		28.6	588.0	95.8	33.1	1.000006
90500.0	18.3	-45.2		27.9	588.1	99.1	33.8	1.000006
91000.0	17.9	-45.2		27.3	588.2	99.5	34.2	1.000006
91500.0	17.5	-45.1		26.7	588.4	99.9	34.6	1.000006
92000.0	17.1	-45.0		26.1	588.5	100.3	35.0	1.000006
92500.0	16.7	-44.9		25.5	588.6	98.9	33.7	1.000006
93000.0	16.3	-44.8		24.9	588.7	97.0	32.1	1.000006

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78
 ASCENSION NO. 67
 1030 HRS MDT

UPPER AIR DATA
 1660050067
 APACHE
 TABLE XII. (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 DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
93500.0	15.9	-44.7		24.3	588.8	95.0	30.6	1.000005
94000.0	15.6	-44.6		23.8	588.9	93.1	29.7	1.000005
94500.0	15.2	-44.5		23.2	589.0	91.5	29.2	1.000005
95000.0	14.9	-44.4		22.7	589.2	89.7	28.7	1.000005
95500.0	14.6	-44.4		22.2	589.3	88.6	28.2	1.000005
96000.0	14.2	-44.3		21.7	589.4	88.2	27.6	1.000005
96500.0	13.9	-44.1		21.2	589.6	87.7	27.1	1.000005
97000.0	13.6	-43.8		20.7	590.0	87.3	26.5	1.000005
97500.0	13.3	-43.5		20.2	590.4	86.1	26.9	1.000005
98000.0	13.0	-43.2		19.7	590.8	84.8	27.4	1.000004
98500.0	12.7	-42.8		19.3	591.2	83.6	27.9	1.000004
99000.0	12.5	-42.5		18.8	591.7	82.4	28.4	1.000004
99500.0	12.2	-42.2		18.4	592.1	82.5	28.8	1.000004
100000.0	11.9	-41.9		18.0	592.5	84.1	29.3	1.000004
100500.0	11.7	-41.5		17.5	592.9	85.6	29.8	1.000004
101000.0	11.4	-41.2		17.1	593.3	87.1	30.4	1.000004
101500.0	11.1	-40.9		16.7	593.7			1.000004
102000.0	10.9	-40.6		16.3	594.1			1.000004
102500.0	10.7	-40.2		16.0	594.6			1.000004
103000.0	10.4	-39.9		15.6	595.0			1.000003
103500.0	10.2	-39.6		15.2	595.4			1.000003

STATION ALTITUDE 3951.40 FEET MSL
 15 JUNE 78
 ASCENSION NO. 67
 1030 HRS MDT
 MANDATORY LEVELS
 1660050067
 APACHE
 TABLE XIII.
 GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5050.	29.4	4.8	21.	321.5	6.3
800.0	6814.	26.4	2.3	21.	326.1	10.0
750.0	8659.	20.5	-1.3	23.	287.1	15.8
700.0	10595.	15.5	-3.9	20.	281.9	17.5
650.0	12636.	10.0	-5.3	35.	267.3	10.1
600.0	14795.	4.0	-7.8	42.	237.1	11.4
550.0	17095.	-1.5	-9.0	57.	254.2	19.5
500.0	19561.	-7.2	-11.4	72.	255.8	17.1
450.0	22236.	-11.6	-23.3	37.	180.3	7.5
400.0	25166.	-17.6	-34.1	22.	247.8	14.1
350.0	28395.	-25.4	-40.3	23.	236.7	18.1
300.0	31997.	-34.8	-47.8	25.	233.4	22.0
250.0	36094.	-43.7			257.9	24.4
200.0	40888.	-55.1			268.9	27.7
175.0	43650.	-60.7			269.5	27.8
150.0	46754.	-65.6			270.4	25.4
125.0	50348.	-70.2			263.2	17.7
100.0	54672.	-71.0			232.8	16.0
80.0	59047.	-65.7			181.2	10.1
70.0	61739.	-61.1			131.2	9.6
60.0	64890.	-59.7			112.8	15.0
50.0	68644.	-58.1			113.2	15.4
40.0	73289.	-55.0			90.1	20.3
30.0	79368.	-53.9			91.1	18.1
25.0	83242.	-50.2			91.4	24.4
20.0	88073.	-45.6			86.2	31.4
15.0	94380.	-44.5			90.4	28.9
10.0	103379.	-39.3				

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