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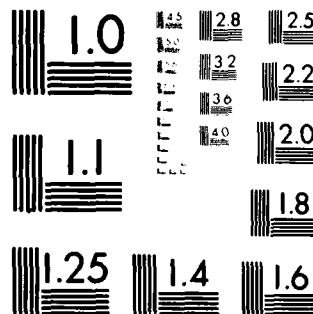
ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19309A MLRS, MISSILE NUMBERS, 1095, 1096, 1094, 1101, ROUND NUM--ETC(U)
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NATIONAL BUREAU OF STANDARDS-1963-A

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DR 1132
FEBRUARY 1980
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ADA 087463

METEOROLOGICAL DATA REPORT

19309A MLRS
Missile Numbers 1095,
1096, 1094, 1101
Round Numbers V-116
V-117, V-118, V-119
13 February 1980

by

White Sands Meteorological Team

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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INTRODUCTION

19309A MLRS, Missile Numbers 1095, 1096, 1094, 1101, Round Numbers V-116, V-117, V-118, V-119, were launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 0811:25, 0911:26, 1017:01, 1112:01 MST, 13 February 1980.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{F}$), relative humidity, dew point ($^{\circ}\text{F}$), wind direction and speed, and cloud cover were made at the "C" Station Met Site.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

LC-39	2 Km
NICK	2 Km

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

LC-37	0800 MST
WSD	0900 MST
LC-37	1000 MST
WSD	1147 MST

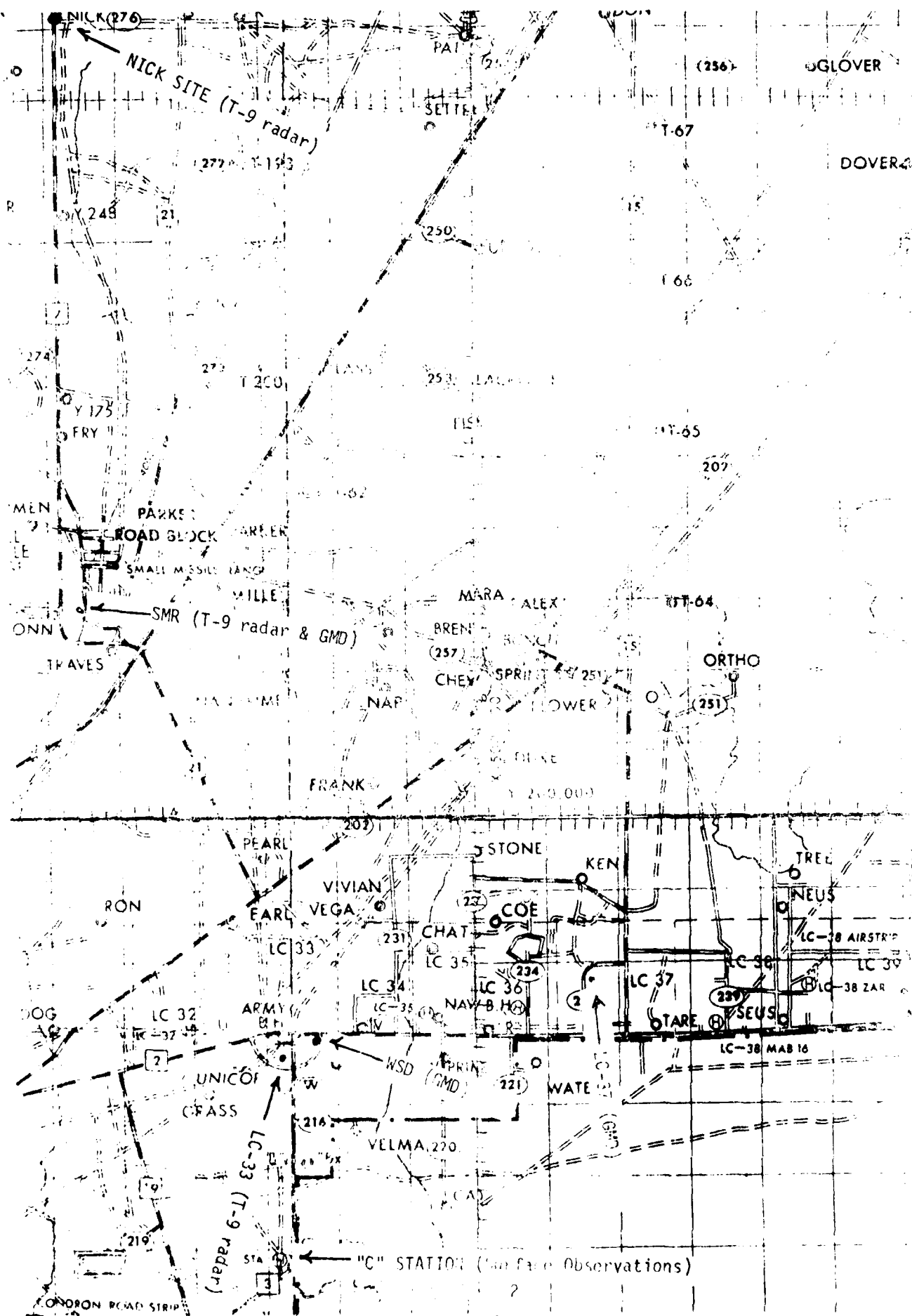


TABLE 1

SURFACE OBSERVATIONS OBTAINED FROM "C" STATION

13 February 1980

TIME MST	SKY CONDITIONS	PRC VSBY	WEATHER OBSERVED TO VISUAL	TEMP	WIND SPEED	WIND DIRECTION	REL HUMIDITY	SEA STATE
0058	120SCT250SCT	20		25.950	24	29	160	10
0158	120SCTE250BKN	20		25.950	32	27	E100	06
0258	120SCT250SCT	20		25.950	34	29	010	05
0358	120SCT250SCT	20		25.930	32	25	E130	07
0458	120SCT250SCT	20		25.940	30	26	E100	03
0558	120SCTE250BKN	20		25.940	31	25	010	03
0658	60SCT120SCTE250BKN	30		25.960	32	24	020	03
0758	E60BKN120BKN250BKN	50		25.990	34	30	340	03
0858	E60BKN120BKN	50		25.995	41	33	090	04
0958	60SCTE120BKN250BKN	50		26.005	49	34	340	03
1058	120SCT250SCT	50		25.990	55	37	360	05
1158	65SCT120SCT250SCT	50		25.960	60	38	150	04
1258	65SCT120SCTE250BKN	50		25.935	60	37	270	04
1358	65SCT120SCTE250BKN	50		25.900	65	38	210	08
1458	65SCTE120BKN250BKN	50		25.885	66	36	210	08
1558	65SCTE120BKN250BKN	50		25.880	65	37	210	08
1658	65SCTE120BKN250BKN	50		25.880	62	36	200	08
1758	E120BKN250BKN	30		25.890	57	38	150	07
1858	E120BKN250BKN	20		25.905	56	37	160	06
1958	E1200VC	20		25.920	55	42	340	04
2058	E1200VC	20	L-	25.935	53	44	110	05
2158	E1200VC	20	L-	25.935	51	44	E120	05
2258	E1200VC	20		25.925	53	43	E120	05
2358	E600VC	20	RW-	25.925	52	45	150	08

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM LC-39 DATE 13 February 1980 TIME 0810 MST

TRACKER COORDINATES (WSTM) X= 530,938.82 Y 186,564.96 H= 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL X OR FEET AGL.

[illegible][illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 3

RELEASED FROM LC-39 DATE 13 February 1980 TIME 0910 MST

TRACKER COORDINATES (WSTM) X= 530,938.82 Y= 186,564.96 H= 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL x OR FEET AGL .

[illegible][illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM NICK DATE 13 February 1980 TIME 0930 MST

TRACKER COORDINATES (WSTM) X= 470,734.56 Y= 255,755.64 H= 4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL X OR FEET AGL .

[illegible][illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM LC-39 DATE 13 February 1980 TIME 1020 MST

TRACKER COORDINATES (WSTM) X= 530,938.82 Y= 186,564.96 H= 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL X OR FEET AGL.

[illegible][illegible][illegible]

PILOT BALLOON MEASURED WIND DATA

TABLE 6

RELEASED FROM LC-39 DATE 13 February 1980 TIME 1115 MST

TRACKER COORDINATES (WSTM) X= 530,938.82 Y= 186,564.96 H= 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL X OR FEET AGL .

[illegible][illegible][illegible]

STATION ALTITUDE 4047.27 FEET MSL
 15 FEB. 80
 ASSIGNMENT NO. /

SIGNIFICANT LEVEL DATA
 0440190007
 LC-37

GEODETIC COORDINATES
 32.41141 LAT DEG
 106.30052 LONG DEG

TABLE 7

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
877.8	4047.3	2.9	-1.8	71.0
864.8	4443.4	8.4	.9	59.0
850.0	4016.8	8.0	-1.0	50.0
797.4	6639.2	4.9	-2.2	60.0
744.2	8474.4	-1.2	-6	96.0
700.0	10077.3	-3.5	-3.6	99.0
692.8	10340.3	-3.6	-3.7	99.0
673.2	11093.9	-4.7	-7.6	80.0
663.2	11477.5	-5.9	-7.3	90.0
644.0	12232.7	-7.4	-7.5	99.0
597.8	14130.3	-10.3	-10.4	99.0
588.8	14513.2	-12.4	-16.7	70.0
580.0	14890.9	-13.3	-26.4	32.0
571.0	15281.4	-14.6	-33.0	18.0
500.0	18562.7	-18.6	-34.5	23.0
488.2	19146.9	-19.9	-36.1	22.0
472.6	19935.7	-21.6	-30.1	46.0
435.4	21907.7	-25.8	-32.7	52.0
400.0	23912.2	-30.0	-39.9	37.0
323.4	28776.1	-41.6	-48.8	45.0
300.0	30433.1	-45.7		
257.2	33750.9	-54.3		
250.0	34349.2	-55.1		
237.4	35435.0	-55.9		
200.0	39053.4	-52.9		
188.8	40279.0	-52.7		
150.0	45130.7	-56.7		

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 80 / 0800 HRS MST
ASCENSION NO.

UPPER AIR DATA
0440180007
LC-37

GEODETTIC COORDINATES
32.41141 LAT DEG
106.30852 LONG DEG

TABLE 8

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
4047.3	877.8	2.9	71.0	1105.2	648.0	0	0	1.000273
4500.0	863.2	8.4	58.0	1065.2	654.6	256.0	1.2	1.000268
5000.0	847.4	7.9	50.5	1048.0	653.8	256.0	2.5	1.000259
5500.0	831.8	7.0	53.4	1032.0	652.8	256.0	3.9	1.000256
6000.0	816.5	6.1	56.3	1016.3	651.8	256.0	5.2	1.000252
6500.0	801.5	5.2	59.2	1000.8	650.7	254.2	5.9	1.000249
7000.0	786.6	3.9	67.1	986.6	649.3	252.6	6.6	1.000247
7500.0	772.0	2.5	76.9	972.9	647.7	256.6	9.5	1.000245
8000.0	757.6	1.1	86.7	959.5	646.1	258.9	12.5	1.000243
8500.0	743.5	-0.3	96.0	946.3	644.5	258.4	16.0	1.000240
9000.0	729.4	-1.3	97.0	932.0	643.3	257.7	19.7	1.000235
9500.0	715.6	-2.3	97.9	918.0	642.0	257.6	22.2	1.000231
10000.0	702.1	-3.3	98.9	904.2	640.7	257.7	24.3	1.000226
10500.0	688.7	-3.8	95.1	890.7	640.1	258.1	24.9	1.000221
11000.0	675.6	-4.6	82.3	874.5	639.1	258.4	25.2	1.000214
11500.0	662.6	-5.9	90.3	862.1	637.5	256.6	25.4	1.000211
12000.0	649.9	-6.9	96.2	849.7	636.3	254.8	25.6	1.000208
12500.0	637.3	-7.8	99.0	835.0	635.2	254.2	26.6	1.000204
13000.0	624.9	-8.6	99.0	821.2	634.3	253.7	27.7	1.000200
13500.0	612.8	-9.3	99.0	807.7	633.5	257.8	27.1	1.000196
14000.0	600.9	-10.1	99.0	794.3	632.4	262.1	26.0	1.000192
14500.0	589.1	-12.3	71.0	786.0	629.5	267.2	26.3	1.000184
15000.0	577.5	-13.7	28.1	775.0	627.7	273.4	26.1	1.000176
15500.0	566.0	-14.9	18.3	763.2	626.2	276.6	26.2	1.000172
16000.0	554.6	-15.5	19.1	749.7	625.4	274.4	26.3	1.000169
16500.0	543.5	-16.1	19.9	736.4	624.7	271.2	26.5	1.000166
17000.0	532.6	-16.7	20.6	723.4	624.0	268.5	26.9	1.000163
17500.0	522.8	-17.3	21.4	710.6	623.2	262.1	27.5	1.000160
18000.0	511.5	-17.9	22.1	698.0	622.5	258.2	28.2	1.000157
18500.0	501.5	-18.5	22.9	685.6	621.7	254.5	28.8	1.000155
19000.0	491.1	-19.6	22.3	674.6	620.4	250.6	28.9	1.000152
19500.0	481.2	-20.7	32.7	663.7	619.1	247.0	29.3	1.000150
20000.0	471.4	-21.7	46.2	652.9	617.8	244.7	30.2	1.000148
20500.0	461.7	-22.8	47.7	642.2	616.5	243.0	31.3	1.000146
21000.0	452.2	-23.9	49.2	631.6	615.2	243.8	33.3	1.000143
21500.0	442.8	-24.9	50.8	621.3	613.9	244.6	35.3	1.000141
22000.0	433.7	-26.0	51.3	611.1	612.6	247.5	35.8	1.000138
22500.0	424.0	-27.0	47.6	600.9	611.3	250.4	36.4	1.000136
23000.0	415.7	-28.1	43.8	590.8	609.9	251.3	34.2	1.000133
23500.0	407.0	-29.1	40.1	581.0	608.6	252.3	32.0	1.000131

GEODETIC COORDINATES
32.41141 LAT DEG
106.30452 LON DEG

UPPER AIR DATA
0440180007
LC-37

STATION ALTITUDE 4047.27 FEET MSL
15 FEB. 60
ASCENSION NO. 0800 HMS MST

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND METERS PER SECOND	WIND DATA DIRECTION DEGREES (T)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	398.5	-30.2	37.1	571.3	607.3	250.3	31.3	1.000128
24500.0	389.9	-31.4	38.0	561.7	605.8	248.3	30.6	1.000126
25000.0	381.4	-32.6	38.8	552.3	604.3	246.0	32.0	1.000124
25500.0	373.2	-33.8	39.6	543.0	602.8	245.1	33.4	1.000122
26000.0	365.1	-35.0	40.4	534.0	601.3	244.6	34.1	1.000120
26500.0	357.2	-36.2	41.3	525.1	599.8	244.0	34.8	1.000118
27000.0	349.5	-37.4	42.1	516.3	598.2	244.0	35.5	1.000116
27500.0	341.9	-38.6	42.9	507.7	596.7	244.0	36.2	1.000114
28000.0	334.6	-39.7	43.7	499.3	595.2	243.3	36.3	1.000112
28500.0	327.3	-40.9	44.5	491.0	593.7	242.4	35.9	1.000110
29000.0	320.1	-42.2	45.3	482.8	592.1	241.2	34.8	1.000108
29500.0	313.0	-43.4	46.1	474.5	590.5	239.7	32.6	1.000106
30000.0	306.0	-44.6	46.9	466.0	588.9	237.8	30.5	1.000104
30500.0	299.1	-45.9	47.7	458.5	587.3	234.0	29.8	1.000102
31000.0	292.3	-47.2	48.5	450.5	585.7	231.3	29.2	1.000100
31500.0	285.6	-48.5	49.3	442.7	584.0	227.9	30.3	1.000099
32000.0	279.0	-49.8	50.1	435.1	582.3	224.6	31.7	1.000097
32500.0	272.6	-51.1	50.9	427.6	580.6	223.2	32.4	1.000095
33000.0	266.3	-52.4	51.7	420.2	578.9	222.1	32.9	1.000094
33500.0	260.2	-53.6	52.5	413.0	577.2	223.3	32.8	1.000092
34000.0	254.2	-54.6	53.3	405.2	575.9	220.9	32.1	1.000090
34500.0	248.2	-55.2	54.1	396.8	575.1	231.2	32.2	1.000088
35000.0	242.4	-55.6	54.9	383.1	574.0	237.0	34.4	1.000086
35500.0	236.7	-55.8	55.7	379.4	574.3	241.9	36.9	1.000085
36000.0	231.1	-55.4	56.5	369.6	574.8	244.8	41.2	1.000082
36500.0	225.7	-55.0	57.3	360.5	575.4	246.7	45.9	1.000080
37000.0	220.4	-54.6	58.1	351.4	575.9	248.5	50.7	1.000078
37500.0	215.3	-54.2	58.9	342.5	576.5	250.3	55.7	1.000076
38000.0	210.2	-53.8	59.7	333.8	577.0	251.9	60.7	1.000074
38500.0	205.3	-53.4	60.5	325.4	577.6	253.3	64.2	1.000072
39000.0	200.5	-52.9	61.3	317.2	578.1	254.7	66.9	1.000071
39500.0	195.8	-52.8	62.1	309.7	578.3	255.9	69.6	1.000069
40000.0	191.3	-52.7	62.9	302.4	578.4	256.7	70.6	1.000067
40500.0	186.8	-52.9	63.7	295.5	578.2	257.6	71.6	1.000066
41000.0	182.5	-53.3	64.5	289.1	577.6	258.2	73.0	1.000064
41500.0	178.2	-53.7	65.3	282.9	577.1	258.0	75.6	1.000063
42000.0	174.0	-54.1	66.1	276.8	576.6	257.9	78.2	1.000062
42500.0	169.9	-54.5	66.9	270.8	576.0	257.5	80.1	1.000060
43000.0	165.9	-54.9	67.7	264.9	575.5	257.0	81.6	1.000059
43500.0	162.1	-55.4	68.5	259.2	574.9			1.000058

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

STATION ALTITUDE 4047.27 FEET MSL
 15 FEB. 80 / 0800 HRS MST
 ASCENSION NO. /

UPPER AIR DATA
 0440180017
 LC-37

GEODETIC COORDINATES
 32.41141 LAT DEG
 106.30852 LON DEG

TABLE 8 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TH)	SPEED KNOTS	
44000.0	158.3	-55.8		253.6	574.4			1.000056
44500.0	154.6	-56.2		248.1	573.8			1.000055
45000.0	150.9	-56.6		242.8	573.3			1.000054

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 80
ASCENSION NO. /

MANDATORY LEVELS
0440180007
LC-37

GEODETIC COORDINATES
32.41141 LAT N
106.30852 LONG W

TABLE 9

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4913.	8.0	-1.0	50.	256.0	2.3	
800.0	6547.	5.1	-2.2	59.	254.1	6.0	
750.0	8262.	.4	-6	92.	258.8	14.3	
700.0	10067.	-3.5	-3.6	99.	257.8	24.6	
650.0	11982.	-6.9	-7.4	96.	254.8	25.6	
600.0	14021.	-10.2	-10.3	99.	262.3	26.6	
550.0	16192.	-15.7	-33.6	19.	273.5	26.4	
500.0	18537.	-18.6	-34.5	23.	254.1	26.8	
450.0	21087.	-24.1	-31.6	50.	243.4	33.8	
400.0	23873.	-30.0	-39.3	37.	250.7	31.4	
350.0	26947.	-37.3	-45.4	42.	244.3	35.5	
300.0	30379.	-45.7			235.1	29.9	
250.0	34276.	-55.1			229.3	31.7	
200.0	38961.	-52.9			254.7	67.1	
175.0	41785.	-54.0			258.0	77.5	
150.0	45011.	-56.7					

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

STATION ALTITUDE 3989.00 FEET MSL
13 FEB. 80
ASCENSION NO. 74

SIGNIFICANT LEVEL DATA
0440020074
WHITE SANDS
TABLE 10

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
880.3	3989.0	6.3	1.0	69.0
871.7	4252.4	3.9	-1.7	67.0
858.5	4464.0	9.2	.1	53.0
850.0	4734.7	8.7	-0.3	53.0
808.8	6281.2	6.8	1.1	67.0
750.6	8277.8	.9	.0	99.0
700.0	10113.1	-2.3	-2.4	99.0
658.0	11723.1	-4.6	-7.6	76.0
605.0	13473.3	-10.7	-10.0	99.0
600.7	14054.7	-8.0	-12.5	70.0
587.8	14609.5	-8.0	-21.1	34.0
512.4	18058.8	-16.8	-25.4	47.0
500.0	18662.3	-18.2	-25.0	55.0
473.0	20018.3	-21.2	-29.7	46.0
450.2	21210.6	-24.3	-27.3	76.0
435.2	22021.7	-25.4	-26.0	74.0
420.4	22840.3	-26.4	-33.7	50.0
400.0	24024.3	-28.5	-36.2	47.0
344.6	27474.3	-37.7	-44.2	50.0
312.6	29661.0	-43.2	-49.7	48.0
300.0	30564.9	-45.4		
276.6	32330.1	-49.6		
250.0	34501.2	-52.7		
226.8	36561.7	-55.0		
216.6	37531.9	-54.3		
200.0	39232.0	-50.1		
187.8	40586.6	-50.2		
165.6	43279.0	-52.7		
150.0	45370.2	-55.8		
137.4	47204.7	-57.5		
126.2	48961.4	-61.0		

UPPER AIR DATA
0440020074
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
13 FEB. 68
ASCENSION NO. 74

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 11

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
3989.0	880.3	6.3	1.0	1094.3	652.2	.0	1.000276
4000.0	879.9	6.2	69.9	1094.3	652.0	230.3	1.000276
4500.0	863.7	7.1	58.6	1070.9	653.0	238.3	1.000276
5000.0	848.0	8.6	53.7	1045.6	654.8	238.3	1.000262
5500.0	832.5	7.9	58.9	1028.9	654.0	238.3	1.000259
6000.0	817.2	7.2	64.1	1012.5	653.3	248.0	1.000257
6500.0	802.2	6.2	70.5	997.4	652.1	259.8	1.000255
7000.0	787.3	4.7	78.5	984.1	650.4	262.0	1.000252
7500.0	772.8	3.2	86.5	971.0	648.7	263.0	1.000249
8000.0	758.4	1.7	94.5	958.1	646.9	261.9	1.000246
8500.0	744.3	.5	99.0	944.4	645.5	260.2	1.000242
9000.0	730.3	-4	99.0	929.7	644.4	259.3	1.000237
9500.0	716.5	-1.2	99.0	915.3	643.4	259.1	1.000232
10000.0	703.0	-2.1	99.0	901.0	642.3	259.9	1.000227
10500.0	689.7	-2.9	94.0	886.0	641.3	259.9	1.000222
11000.0	676.5	-3.6	87.4	872.2	640.4	261.0	1.000216
11500.0	663.7	-4.3	80.9	858.1	639.5	261.1	1.000210
12000.0	650.9	-5.4	80.7	845.2	638.1	259.7	1.000206
12500.0	638.3	-6.8	85.6	833.4	636.4	260.5	1.000202
13000.0	626.0	-8.2	90.5	821.7	634.7	262.2	1.000199
13500.0	613.9	-9.6	95.4	810.2	632.9	263.0	1.000196
14000.0	602.0	-8.8	78.7	792.1	633.9	265.3	1.000190
14500.0	590.3	-8.0	41.1	774.9	634.0	265.5	1.000188
15000.0	578.7	-9.0	35.5	762.7	633.4	267.4	1.000176
15500.0	567.3	-10.3	37.4	751.3	631.9		1.000173
16000.0	556.2	-11.5	39.2	740.1	630.3		1.000170
16500.0	545.2	-12.8	41.1	729.1	628.8		1.000168
17000.0	534.3	-14.1	43.0	718.3	627.2		1.000165
17500.0	523.9	-15.4	44.9	707.6	625.7		1.000162
18000.0	513.0	-16.7	46.8	697.1	624.1		1.000160
18500.0	503.3	-17.8	52.8	686.3	622.7		1.000157
19000.0	493.1	-18.9	52.8	675.4	621.3		1.000155
19500.0	483.1	-20.1	49.4	664.7	619.9		1.000152
20000.0	473.4	-21.2	46.1	654.1	618.6		1.000149
20500.0	463.7	-22.5	58.1	644.0	617.0		1.000147
21000.0	454.1	-23.8	70.7	634.0	615.4		1.000145
21500.0	444.8	-24.7	75.3	623.3	614.2		1.000143
22000.0	435.0	-25.4	74.1	612.1	613.4		1.000140
22500.0	426.6	-26.0	60.1	601.0	612.0		1.000137
23000.0	417.7	-26.7	49.6	590.2	611.7		1.000134

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

STATION ALTITUDE 3009.00 FEET MSL
13 FEB. 60 0900 HRS MST
ASCENSION NO. 74

UPPER AIR DATA
04400Z0074
WHITE SANDS

GEODETTIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 11 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METEN	SPLD OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	409.0	-27.6	48.3	579.9	610.6	253.9	33.1	1.000131
24000.0	400.0	-28.5	47.1	569.9	609.5	255.7	33.8	1.000129
24500.0	391.9	-29.8	47.4	560.8	607.8	255.1	34.6	1.000126
25000.0	383.5	-31.1	47.8	551.8	606.2	254.2	35.6	1.000124
25500.0	375.5	-32.4	48.3	543.0	604.5	253.0	36.9	1.000122
26000.0	367.5	-33.8	48.7	534.4	602.8	251.5	37.8	1.000120
26500.0	359.4	-35.1	49.2	525.9	601.1	249.5	38.4	1.000118
27000.0	351.1	-36.4	49.6	517.6	599.4			1.000116
27500.0	344.2	-37.8	50.0	509.4	597.7			1.000114
28000.0	336.6	-39.0	49.5	500.8	590.1			1.000112
28500.0	329.2	-40.3	49.1	492.4	584.5			1.000110
29000.0	321.9	-41.5	48.6	484.2	578.9			1.000108
29500.0	314.9	-42.8	48.1	476.1	573.3			1.000107
30000.0	307.8	-44.0	30.1**	468.0	569.7			1.000105
30500.0	300.9	-45.2	3.0**	460.0	566.1			1.000102
31000.0	294.1	-46.4		451.9	560.0			1.000101
31500.0	287.4	-47.6		444.0	555.1			1.000099
32000.0	280.9	-48.8		436.2	550.5			1.000097
32500.0	274.5	-49.8		428.2	546.2			1.000095
33000.0	268.2	-50.6		419.7	541.2	244.7	30.5	1.000093
33500.0	262.9	-51.5		411.3	536.3	247.9	29.8	1.000092
34000.0	255.9	-52.0		403.1	529.4	250.7	29.7	1.000090
34500.0	250.0	-52.7		395.1	528.4	250.7	32.2	1.000088
35000.0	244.2	-53.5		386.8	527.7	250.7	34.8	1.000086
35500.0	238.5	-53.8		378.8	527.0	250.8	36.2	1.000084
36000.0	232.9	-54.4		370.9	526.2	250.8	37.5	1.000083
36500.0	227.5	-54.9		363.1	525.5	252.4	41.6	1.000081
37000.0	222.1	-54.7		354.2	525.8	254.0	46.1	1.000079
37500.0	216.9	-54.5		345.3	526.5	253.4	55.9	1.000077
38000.0	211.9	-55.1		335.5	527.6	252.6	66.3	1.000075
38500.0	207.0	-51.9		325.9	529.5	252.1	67.5	1.000073
39000.0	202.2	-50.7		316.6	521.1	251.5	68.3	1.000071
39500.0	197.5	-50.1		308.5	521.8	249.8	69.9	1.000069
40000.0	193.0	-50.2		301.5	521.8	249.0	71.2	1.000067
40500.0	188.0	-50.2		294.6	521.7	251.5	70.4	1.000066
41000.0	184.2	-50.6		286.3	521.2			1.000064
41500.0	180.0	-51.0		282.3	520.6			1.000063
42000.0	175.8	-51.5		276.3	520.0			1.000062
42500.0	171.7	-52.0		270.5	519.4			1.000060
43000.0	167.0	-52.4		264.8	518.8			1.000059

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

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

STATION ALTITUDE 9999.00 FEET MSL
 15 FEB. 80
 ASCENSION NO. 74

UPPER AIR DATA
 0440020074
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

TABLE 11 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	WIND DATA		INDEX OF REFRACTION
					SPEED OF WIND KNOTS	DIRECTION DEGREES (T)	
43500.0	163.9	-53.0		259.4	578.0		1.000058
44000.0	160.0	-53.8		254.1	577.0		1.000057
44500.0	156.3	-54.5		249.0	576.1		1.000055
45000.0	152.7	-55.3		244.0	575.1		1.000054
45500.0	149.1	-55.9		239.1	574.2		1.000053
46000.0	145.5	-56.4		233.9	573.6		1.000052
46500.0	142.1	-56.8		228.9	573.0		1.000051
47000.0	138.8	-57.3		223.9	572.3		1.000050
47500.0	135.4	-58.1		219.4	571.3		1.000049
48000.0	132.2	-59.1		215.2	570.0		1.000048
48500.0	129.1	-60.1		211.0	568.7		1.000047

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

STATION ALTITUDE 3989.00 FEET MSL
13 FEB. 88
ASCENSION NO. 74

MANDATORY LEVELS
0440020074
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 12

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUMID.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT DEGREES	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
850.0	4931.	8.7	-0.3	53.	238.3	1.3	
800.0	6571.	5.9	1.2	72.	260.0	8.4	
750.0	8292.	.9	.7	99.	260.8	19.4	
700.0	10103.	-2.3	-2.4	99.	259.3	28.5	
650.0	12026.	-5.5	-8.2	81.	259.0	21.5	
600.0	14068.	-8.0	-12.8	68.	265.5	23.4	
550.0	16273.	-12.3	-23.0	40.	9999.0XX	9999.0XX	
500.0	18616.	-18.2	-25.0	55.	9999.0	9999.0XX	
450.0	21139.	-24.3	-27.3	76.	9999.0	9999.0XX	
400.0	23985.	-28.5	-36.2	47.	255.7	33.8	
350.0	27072.	-36.7	-43.4	50.	9999.0	9999.0XX	
300.0	30509.	-45.4			9999.0	9999.0XX	
250.0	34427.	-52.7			250.7	32.2	
200.0	39139.	-50.1			250.7	60.9	
175.0	41995.	-51.6			9999.0	9999.0XX	
150.0	45249.	-55.8			9999.0	9999.0XX	

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

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

STATION ALTITUDE 4047.27 FEET MSL
 13 FEB. 80
 1000 HRS MST
 ASCENSION NO. 8

SIGNIFICANT LEVEL DATA
 0440180008
 LC-37

GEODETIC COORDINATES
 32.41141 LAT DEG
 106.30852 LON DEG

TABLE 13

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
878.2	4047.3	8.3	-4	54.0
856.2	4733.0	6.1	-3.5	50.0
850.0	4929.1	7.4	-2.3	50.0
835.8	5384.6	7.2	-2.5	50.0
755.8	8080.6	2.1	-6	61.0
727.2	9100.8	-3	-1.0	91.0
717.6	9450.4	-7	-2.3	89.0
700.0	10102.8	-1.0	-5.8	70.0
671.2	11199.3	-4.0	-0.3	72.0
623.6	13087.8	-9.8	-10.7	93.0
617.4	13341.4	-10.1	-14.3	71.0
608.8	13694.9	-7.2	-21.0	32.0
600.0	14072.0	-7.1	-22.5	28.0
500.0	18645.6	-18.5	-20.5	49.0
477.2	19785.0	-21.2	-25.0	71.0
462.0	20568.2	-23.1	-26.1	76.0
439.4	21772.5	-25.0	-30.1	62.0
432.2	22167.5	-25.2	-32.1	52.0
400.0	24001.5	-29.6	-36.5	51.0
310.6	29760.7	-44.4	-50.7	49.0
300.0	30523.4	-46.3		
269.6	32834.6	-51.4		
250.0	34443.2	-53.0		
237.0	35572.6	-54.8		
207.0	38433.2	-53.4		
200.0	39160.7	-51.0		
184.2	40932.8	-50.6		
150.0	45288.3	-56.4		

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 80 1000 HRS MSL
ASSEMBLY NO. 8

UPPER AIR DATA
0440180008
LC-37

GEODETTIC COORDINATES
32.41141 LAT DEG
106.30852 LONG DEG

TABLE 14

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	
4047.3	878.2	8.3	54.0	1044.2	654.4	00	0	1.000270
4500.0	863.6	6.8	51.4	1072.1	652.6	236.2	.4	1.000263
5000.0	847.8	7.4	50.0	1050.4	653.2	236.2	.9	1.000259
5500.0	832.8	7.0	51.3	1032.5	652.8	236.2	1.4	1.000255
6000.0	816.8	6.0	57.1	1016.7	651.7	240.5	2.3	1.000253
6500.0	801.7	5.1	62.8	1001.2	650.7	252.1	6.5	1.000250
7000.0	786.9	4.1	68.6	985.9	649.6	253.0	10.8	1.000247
7500.0	772.4	3.2	74.3	970.9	648.5	253.5	15.2	1.000245
8000.0	758.1	2.3	80.1	956.2	647.4	254.4	17.8	1.000242
8500.0	743.9	1.1	85.1	942.2	646.1	255.3	20.1	1.000238
9000.0	730.0	-1.1	90.0	928.6	644.7	256.4	22.6	1.000235
9500.0	716.2	-2.7	87.6	913.4	643.9	257.1	24.3	1.000229
10000.0	702.7	-1.0	73.0	897.4	643.5	257.4	25.5	1.000221
10500.0	689.4	-2.1	70.7	884.2	642.1	257.7	24.8	1.000216
11000.0	676.3	-3.5	71.6	872.0	640.4	258.0	23.8	1.000212
11500.0	663.4	-4.9	75.3	860.0	638.6	257.9	22.6	1.000208
12000.0	650.6	-6.5	80.9	848.3	636.8	257.0	21.3	1.000205
12500.0	638.0	-8.0	86.5	836.8	634.9	258.0	21.8	1.000202
13000.0	625.7	-9.5	92.0	825.5	633.1	258.6	23.0	1.000199
13500.0	613.6	-8.8	53.7	807.8	633.7	258.6	24.2	1.000189
14000.0	601.7	-7.1	28.8	787.4	635.0	250.5	25.5	1.000181
14500.0	589.9	-8.2	30.0	775.0	634.4	257.8	25.7	1.000178
15000.0	578.2	-9.4	32.3	763.3	632.9	257.1	25.6	1.000175
15500.0	566.8	-10.7	34.6	751.8	631.4	256.5	26.2	1.000173
16000.0	555.6	-11.9	36.9	740.4	629.9	255.9	26.6	1.000170
16500.0	544.6	-13.2	39.1	729.3	628.4	255.3	26.4	1.000167
17000.0	533.9	-14.4	41.4	718.4	626.8	254.0	26.4	1.000165
17500.0	523.4	-15.6	43.7	707.6	625.3	253.7	26.6	1.000162
18000.0	513.0	-16.9	46.0	697.1	623.8	251.2	27.2	1.000160
18500.0	502.9	-18.1	48.3	686.6	622.3	247.6	28.3	1.000157
19000.0	492.8	-19.3	55.8	676.0	620.8	245.5	29.9	1.000155
19500.0	482.8	-20.5	65.5	665.4	619.4	244.1	31.7	1.000153
20000.0	473.0	-21.7	72.4	654.9	617.9	244.6	33.3	1.000151
20500.0	463.3	-22.9	75.6	644.7	616.4	245.7	34.8	1.000148
21000.0	453.8	-23.8	71.0	633.6	615.4	245.0	34.9	1.000145
21500.0	444.4	-24.6	65.2	622.5	614.4	245.8	35.0	1.000142
22000.0	435.2	-25.1	56.2	611.1	613.7	245.5	35.2	1.000139
22500.0	426.2	-26.0	51.8	600.5	612.6	245.5	35.7	1.000136
23000.0	417.3	-27.2	51.5	590.8	611.1	245.6	36.7	1.000134
23500.0	408.6	-28.4	51.3	581.4	609.6	246.8	37.3	1.000131

STATION ALTITUDE 4047.27 FEET MSL
 13 FEB. 60 1000 HRS MST
 ASCENSION NO. 8

UPPER AIR DATA
 0440130000
 LC-37

GEODETIC COORDINATES
 32.41141 LAT DEG
 106.30852 LONG DEG

TABLE 14 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARMS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
24000.0	400.0	-29.6	-36.5	51.0	5/2.0	608.1	240.2	37.6	1.000129
24500.0	391.3	-30.9	-37.7	50.8	562.6	606.4	249.0	38.1	1.000127
25000.0	382.8	-32.2	-38.9	50.7	553.3	604.8	249.5	38.6	1.000125
25500.0	374.5	-33.5	-40.2	50.5	544.2	603.2	248.5	38.2	1.000122
26000.0	366.4	-34.7	-41.4	50.3	535.3	601.6	247.5	37.8	1.000120
26500.0	358.4	-36.0	-42.6	50.1	526.5	600.0	246.7	37.3	1.000118
27000.0	350.6	-37.3	-43.9	50.0	517.9	598.3	246.0	36.9	1.000116
27500.0	343.0	-38.6	-45.1	49.8	509.4	596.7	245.6	37.2	1.000114
28000.0	335.6	-39.9	-46.3	49.6	501.1	595.0	245.2	37.4	1.000112
28500.0	328.3	-41.2	-47.6	49.4	492.9	593.4	243.9	37.5	1.000110
29000.0	321.2	-42.4	-48.8	49.3	484.9	591.8	242.7	37.6	1.000108
29500.0	314.2	-43.7	-50.0	49.1	477.0	590.1	241.9	37.9	1.000107
30000.0	307.2	-45.0	-54.4	33.6**	469.1	588.5	241.3	37.7	1.000105
30500.0	300.3	-46.2	-77.5	1.5**	461.1	586.8	241.2	36.7	1.000103
31000.0	293.5	-47.4			452.8	585.4	240.9	36.1	1.000101
31500.0	286.8	-48.5			444.6	584.0	240.4	35.8	1.000099
32000.0	280.2	-49.6			436.6	582.5	239.4	35.4	1.000097
32500.0	273.6	-50.7			428.7	581.1	238.2	34.9	1.000095
33000.0	267.3	-51.6			420.0	579.9	239.4	33.8	1.000094
33500.0	261.3	-52.1			411.7	579.3	241.6	32.4	1.000092
34000.0	255.3	-52.6			403.1	578.6	245.0	33.9	1.000090
34500.0	249.3	-53.1			394.7	577.9	249.4	35.8	1.000088
35000.0	243.5	-53.9			386.9	576.9	249.1	39.2	1.000086
35500.0	237.8	-54.7			379.2	575.8	248.4	42.8	1.000084
36000.0	232.3	-54.6			370.2	575.9	247.9	46.4	1.000082
36500.0	226.8	-54.3			361.1	576.3	247.5	50.1	1.000080
37000.0	221.5	-54.1			352.3	576.0	249.6	54.7	1.000078
37500.0	216.3	-53.9			343.7	576.9	251.4	59.1	1.000077
38000.0	211.3	-53.6			335.3	577.2	252.1	62.7	1.000075
38500.0	206.4	-53.2			326.8	577.8	252.1	66.5	1.000073
39000.0	201.6	-51.5			318.9	579.9	251.5	70.6	1.000071
39500.0	196.9	-50.9			310.7	580.8	251.5	74.1	1.000069
40000.0	192.4	-50.8			301.4	580.9	251.8	77.3	1.000067
40500.0	188.0	-50.7			294.3	581.0	252.2	78.8	1.000066
41000.0	183.6	-50.7			287.5	581.1	252.5	79.6	1.000064
41500.0	179.3	-51.4			281.7	580.2	252.9	79.5	1.000063
42000.0	175.2	-52.0			275.9	579.3	253.3	79.2	1.000061
42500.0	171.1	-52.7			270.3	578.4	253.6	78.4	1.000060
43000.0	167.1	-53.4			264.8	577.6	253.9	77.8	1.000059
43500.0	163.2	-54.0			259.4	576.7	253.0	78.9	1.000058

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

STATION ALTITUDE 4047.27 FEET MSL
 13 FEB. 60
 ASCENSION NO. 8

UPPER AIR DATA
 04401J0000
 LC-37

GEODETIC COORDINATES
 32.41141 LAT DEG
 106.30852 LONG DEG

TABLE 14 (CONT)

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TYP)	SPEED KNOTS	
44000.0	159.4	-54.7			254.2	575.8			1.000057
44500.0	155.7	-55.4			249.0	574.9			1.000055
45000.0	152.1	-56.0			243.9	574.1			1.000054

STATION ALTITUDE 4047.27 FEET MSL
13 FEB. 60
ASCENSION, NO. 8

MANDATORY LEVELS
0440180000
LC-37

TABLE 15

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEW POINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4925.	7.4	-2.3	50.	236.2	9	
800.0	6558.	5.0	-1.4	63.	252.5	7.0	
750.0	8278.	1.6	-.9	63.	254.9	19.1	
700.0	10093.	-1.0	-5.8	70.	257.5	25.7	
650.0	12016.	-6.5	-9.2	61.	257.6	21.2	
600.0	14056.	-7.1	-22.5	28.	258.5	25.7	
550.0	16259.	-12.5	-23.9	38.	255.6	20.5	
500.0	18627.	-18.5	-26.5	49.	246.7	24.6	
450.0	21169.	-24.1	-28.2	69.	245.9	34.9	
400.0	23962.	-29.6	-36.5	51.	248.2	37.6	
350.0	27038.	-37.4	-44.0	50.	246.0	36.9	
300.0	30464.	-46.3			241.2	30.7	
250.0	34369.	-53.0			248.9	35.5	
200.0	39074.	-51.0			251.4	71.8	
175.0	41925.	-52.0			253.3	79.2	
150.0	45168.	-56.4					

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

STATION ALTITUDE 3989.00 FEET MSL
13 FEB. 80
ASCENSION NO. 76

SIGNIFICANT LEVEL DATA
0440020076
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37053 LON DEG

TABLE 16

PRESSURE	GEODETIC ALTITUDE MILLIBARS MSL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
879.6	3989.0	14.4	3.2	47.0
861.8	4552.9	11.0	2.6	56.0
850.0	4930.2	9.9	.8	53.0
810.8	6213.6	7.3	.3	61.0
721.8	9320.5	.2	-1.2	90.0
700.0	10127.2	-1.2	-8.5	67.0
638.2	12525.1	-7.1	-8.2	92.0
629.4	12981.7	-6.6	-10.1	76.0
611.6	13613.1	-6.4	-15.0	48.0
568.0	15505.8	-10.5	-20.1	45.0
546.7	16463.5	-13.1	-19.2	60.0
500.0	18687.3	-17.6	-23.8	58.0
485.4	19415.5	-18.8	-25.8	54.0
400.0	24059.9	-29.5	-34.9	59.0
345.6	27435.1	-37.8	-44.0	52.0
315.2	29642.4	-43.4	-48.0	60.0
300.0	30591.0	-46.0	-50.7	58.0
250.0	34515.1	-54.0		
232.2	36002.0	-52.5		
216.6	37565.3	-51.7		
206.6	38580.6	-49.4		
200.0	39282.2	-49.1		
150.0	45426.8	-54.7		

STATION ALTITUDE 3989.00 FEET MSL
13 FEB. 80
ASCENSION NO. 76

UPPER AIR DATA
0440020076
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 17

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, SPEED DEGREES, KNOTS	INDEX OF REFRACTION
3989.0	879.6	14.4	47.0	1062.1	661.7	40.0	1.000272
4000.0	879.2	14.3	47.2	1061.9	661.6	40.0	1.000272
4500.0	863.3	11.3	55.2	1054.0	658.1	255.3	1.000270
5000.0	847.8	9.8	53.4	1041.0	650.2	221.2	1.000263
5500.0	832.4	8.7	56.6	1025.7	655.0	220.9	1.000259
6000.0	817.2	7.7	59.7	1010.6	653.9	228.7	1.000255
6500.0	802.2	6.6	63.7	995.8	652.8	243.5	1.000252
7000.0	787.3	5.5	58.3	981.3	651.3	248.8	1.000249
7500.0	772.1	4.4	73.0	967.1	650.0	249.8	1.000245
8000.0	758.4	3.2	77.7	953.1	648.6	250.8	1.000242
8500.0	744.3	2.1	82.3	939.3	647.3	251.5	1.000239
9000.0	730.5	.9	87.0	925.8	645.9	254.3	1.000235
9500.0	716.9	-.1	84.9	912.2	644.6	256.5	1.000229
10000.0	703.4	-1.0	70.6	898.4	643.4	257.9	1.000221
10500.0	690.0	-2.1	70.9	885.1	642.0	259.6	1.000216
11000.0	676.8	-3.3	76.1	872.2	640.6	262.2	1.000213
11500.0	663.9	-4.6	81.3	859.4	639.1	264.8	1.000210
12000.0	651.2	-5.8	86.5	846.9	637.6	265.6	1.000207
12500.0	638.8	-7.0	91.7	834.6	636.1	268.4	1.000204
13000.0	626.3	-8.6	71.5	817.4	636.6	264.7	1.000196
13500.0	614.4	-9.4	52.5	801.6	636.6	262.4	1.000189
14000.0	602.3	-7.2	47.4	788.5	635.6	259.1	1.000185
14500.0	590.8	-8.3	46.6	776.4	634.3	255.1	1.000181
15000.0	579.4	-9.4	45.8	764.6	633.0	251.3	1.000178
15500.0	568.1	-10.5	45.0	752.9	631.8	247.6	1.000175
16000.0	557.0	-11.8	52.7	741.8	630.0	247.2	1.000172
16500.0	546.0	-13.2	60.0	730.9	628.4	249.3	1.000170
17000.0	535.1	-14.2	59.5	719.2	627.2	252.8	1.000167
17500.0	524.3	-15.2	59.1	707.7	626.0	256.7	1.000164
18000.0	514.0	-16.2	58.6	696.4	624.7	258.5	1.000161
18500.0	503.8	-17.2	58.2	685.3	623.5	259.4	1.000158
19000.0	493.7	-18.1	56.3	673.9	622.3	259.1	1.000155
19500.0	483.7	-19.0	54.1	662.6	621.3	258.1	1.000152
20000.0	473.7	-20.1	54.6	651.9	619.8	257.7	1.000149
20500.0	464.0	-21.3	55.2	641.4	618.4	257.8	1.000147
21000.0	454.4	-22.5	55.7	631.1	617.0	257.8	1.000144
21500.0	445.0	-23.6	56.2	621.0	615.6	257.9	1.000141
22000.0	435.8	-24.8	56.8	611.0	614.1	258.0	1.000139
22500.0	426.9	-25.9	57.3	601.2	612.7	257.9	1.000137
23000.0	418.1	-27.1	57.9	591.0	611.2	257.6	1.000134

STATION ALTITUDE 3989.00 FEET MSL
13 FEB. 60 1147 HRS MSL
ASCENSION NO. 76

UPPER AIR DATA
0440020076
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT LEG
106.37033 LONG DEG

TABLE 17 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	409.4	-28.2	58.4	582.1	609.8	257.6	41.2	1.000132
24000.0	401.0	-29.4	58.9	572.8	608.4	257.4	42.0	1.000130
24500.0	392.4	-30.6	58.1	563.5	606.8	257.4	41.6	1.000127
25000.0	384.0	-31.8	57.1	554.2	605.3	257.5	40.4	1.000125
25500.0	375.8	-33.0	56.0	545.1	603.7	257.4	39.5	1.000123
26000.0	367.8	-34.3	55.0	535.2	602.2	256.6	39.1	1.000121
26500.0	359.9	-35.5	53.9	527.5	600.6	255.9	38.9	1.000119
27000.0	352.2	-36.7	52.9	518.9	599.1	255.2	40.5	1.000116
27500.0	344.6	-38.0	52.2	510.4	597.5	254.6	42.1	1.000114
28000.0	337.0	-39.2	54.0	501.8	595.9	254.8	43.1	1.000113
28500.0	329.6	-40.5	55.9	493.4	594.2	255.0	44.0	1.000111
29000.0	322.3	-41.8	57.7	485.2	592.6	255.6	44.7	1.000109
29500.0	315.2	-43.0	59.5	477.1	591.0	256.8	45.3	1.000107
30000.0	308.2	-44.4	59.2	469.2	589.3	258.0	45.9	1.000105
30500.0	301.2	-45.8	58.2	461.5	587.5	258.4	45.3	1.000103
31000.0	294.4	-46.8	52.0**	453.1	586.1	258.8	44.6	1.000101
31500.0	287.6	-47.9	44.6**	444.7	584.8	259.1	44.4	1.000099
32000.0	281.0	-48.9	37.2**	436.4	583.4	259.2	44.9	1.000097
32500.0	274.5	-49.9	29.8**	428.4	582.1	259.4	45.4	1.000095
33000.0	268.2	-50.9	22.4**	420.5	580.8	259.5	47.2	1.000094
33500.0	262.1	-51.9	15.0**	412.7	579.4	259.5	49.3	1.000092
34000.0	256.1	-52.9	7.6**	405.1	578.1	259.1	51.4	1.000090
34500.0	250.2	-54.0	.2**	397.6	576.8	259.9	52.6	1.000089
35000.0	244.4	-55.5		387.6	577.3	252.9	53.6	1.000088
35500.0	238.7	-53.1		377.7	578.0	252.0	54.7	1.000084
36000.0	233.1	-52.6		368.2	576.0	252.7	55.5	1.000082
36500.0	227.7	-52.3		359.1	574.0	253.5	56.3	1.000080
37000.0	222.4	-52.0		350.4	579.3	253.7	57.7	1.000078
37500.0	217.3	-51.7		341.8	579.7	253.0	60.1	1.000076
38000.0	212.3	-50.7		332.4	581.0	252.4	62.5	1.000074
38500.0	207.4	-49.6		323.1	582.5	251.8	65.5	1.000072
39000.0	202.0	-49.2		315.2	583.0	251.2	68.6	1.000070
39500.0	198.0	-49.3		308.1	582.9	250.7	71.8	1.000069
40000.0	193.4	-49.8		301.6	582.3	250.9	73.9	1.000067
40500.0	188.9	-50.2		295.2	581.7	251.1	76.0	1.000066
41000.0	184.5	-50.7		289.0	581.1	251.6	77.3	1.000064
41500.0	180.3	-51.1		282.9	580.5	252.7	76.3	1.000063
42000.0	176.1	-51.6		276.9	579.9	253.9	75.3	1.000062
42500.0	172.0	-52.0		271.0	579.3	253.9	75.0	1.000060
43000.0	168.0	-52.5		265.3	578.7	252.1	75.9	1.000059

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

STATION ALTITUDE 3989.00 FEET MSL
 13 FEB. 80 1147 HRS MSL
 ASCENSION NO. 76

UPPER AIR DATA
 0440020076
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 17 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
43500.0	164.2	-52.9		259.7	576.1	250.4	76.8	1.000058
44000.0	160.4	-53.4		254.2	577.5			1.000057
44500.0	156.7	-53.9		248.9	576.9			1.000055
45000.0	153.0	-54.3		243.0	576.3			1.000054

STATION ALTITUDE 9989.00 FEET MSL
13 FEB. 60 1147 HRS MST
ASCENSION NO. 76

MANDATORY LEVELS
0440020076
WHITE SANDS

GEODELTIC COORDINATES
32.40043 LAT DEG
106.37053 LONG DEG

TABLE 18

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT DEGREES	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4927.	9.9	.8	53.		221.3	1.8
800.0	6571.	6.5	.3	64.		245.2	7.2
750.0	8298.	2.5	-.5	60.		251.3	15.1
700.0	10117.	-1.2	-6.5	67.		258.3	23.8
650.0	12041.	-5.9	-7.7	67.		265.7	26.0
600.0	14094.	-7.5	-16.7	47.		258.3	28.5
550.0	16297.	-12.7	-19.3	58.		248.5	24.6
500.0	18661.	-17.6	-23.8	58.		259.7	30.9
450.0	21224.	-23.0	-29.3	56.		257.9	38.2
400.0	24020.	-29.5	-34.9	59.		257.4	42.0
350.0	27099.	-37.1	-43.2	53.		255.1	40.9
300.0	30531.	-46.0	-50.7	53.		258.5	45.2
250.0	34441.	-54.0		58.		254.0	52.6
200.0	39189.	-49.1				251.0	70.3
175.0	42047.	-51.7				254.2	75.0
150.0	45306.	-54.7					

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