

'AD-A095 570 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2
19311C MLRS, MISSILE NUMBER V18-006, ROUND NUMBER V-133/DF-6, 2--ETC(U)
JAN 81

UNCLASSIFIED ERADCOM/ASL-DR-1167

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CONTENTS

	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
LC 33 Launch Area Map-----	2
GENERAL AREA MAP-----	3
TABLES	
1. Surface Observation Taken at 1130 MST at LC-33-----	4
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 1130 MST-----	5
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 1130 MST -----	5
4. LC 35 Pilot-Balloon Measured Wind Data at 1130 MST----	6
5. Nick Site Pilot-Balloon Measured Wind Data at 1130 MST	7
6. WSD Significant Level Data at 1130 MST-----	8-9
7. WSD Upper Air Data at 1130 MST-----	10-14
8. WSD Mandatory Levels at 1130 MST-----	15

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INTRODUCTION

19311C MLRS, Missile Number V18-006, Round Number V-133/DF-6,
was launched from LC 33, White Sands Missile Range (WSMR), New
Mexico, at 1130 MST on 26 Jan 81. The scheduled launch time
was 1130 MST.

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 ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC 33 met site at T-0 minutes.

(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:

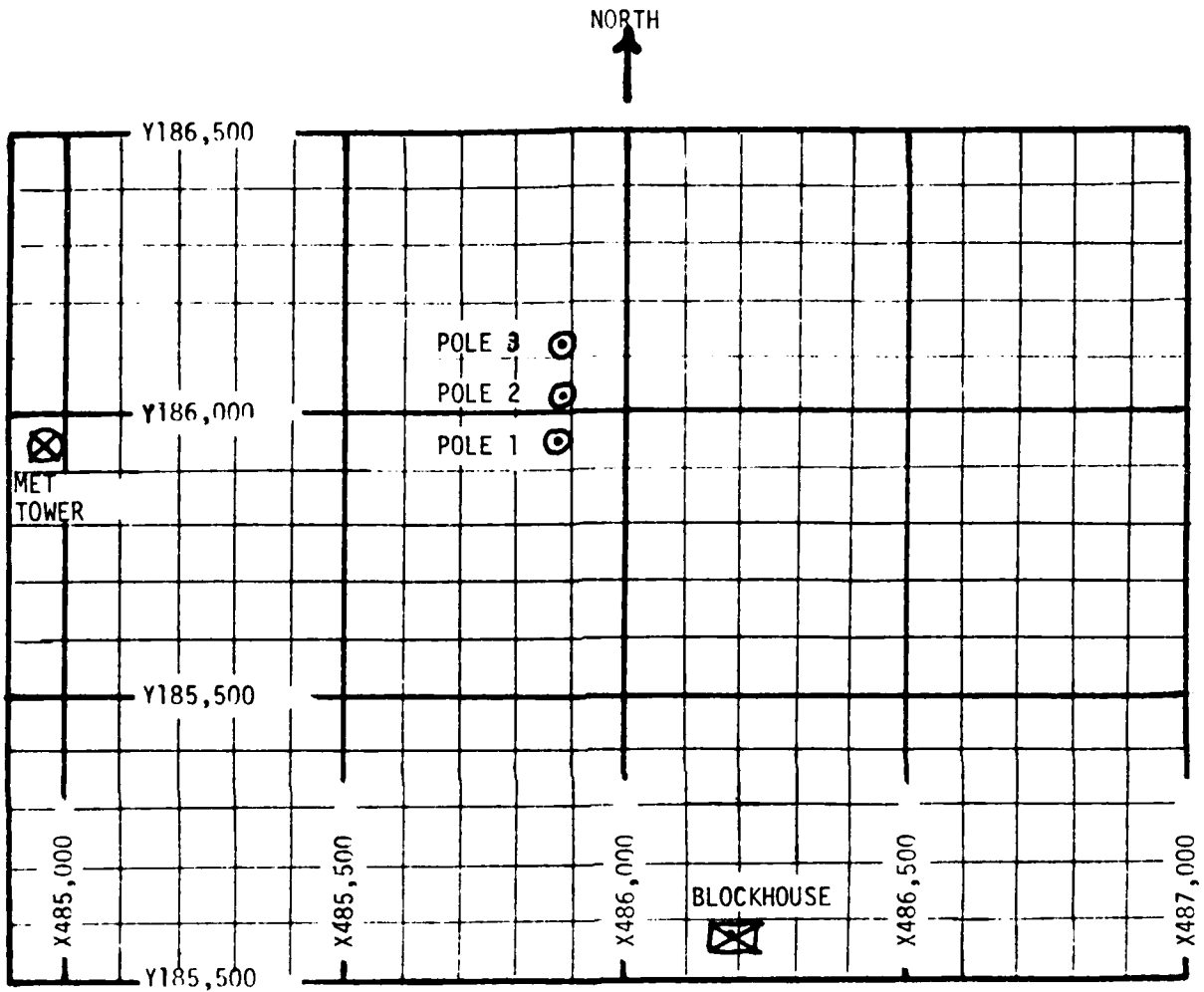
SITE AND ALTITUDE

LC 35	2 km
Nick	2 km

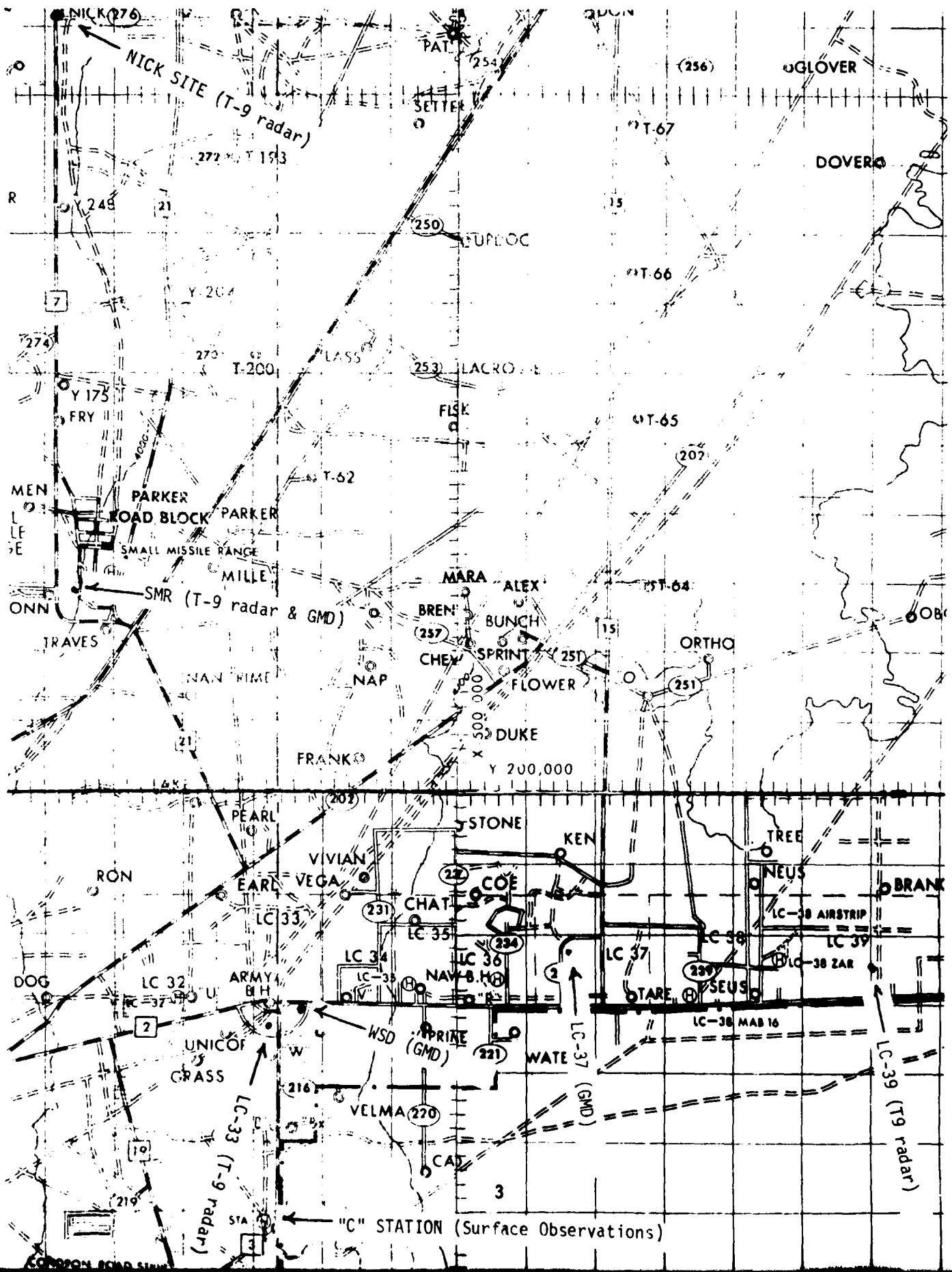
(b) Air structure data (rawinsonde) were collected at the following met sites. Data were collected from surface to as high as possible in 500-foot increments. (94,287 FT)

SITE AND TIME

WSD	1130
-----	------



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft



"C" STATION (Surface Observations)

TABLE 1. Surface Observation taken at 1130 MST,
 26 January 1981, at LC 33, 19311C MLRS,
 Missile Number V18-006, Round Number V-133/DF-6

ELEVATION	3983	FT/MSL
PRESSURE	876.9	MBS
TEMPERATURE	14.3	°C
RELATIVE HUMIDITY	32	%
DEW POINT	-2.3	°C
DENSITY	1058.6	GM/M ³
WIND SPEED	13	KTS
WIND DIRECTION	306	DEGREES
CLOUD COVER	0/10/SC/5000 (1st) 4/CS/25000 (2nd)	AMT/TYPE/HGT

TABLE 2

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	273	17	-30	300	14	-30	294	17
-20	285	13	-20	294	16	-20	300	19
-10	283	19	-10	294	13	-10	288	21
0.0	294	20	0.0	297	18	0.0	298	20
+10	303	17	+10	312	16	+10	300	17

TABLE 3

LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	294	12	-30	303	18
-20	298	11	-20	294	15
-10	306	12	-10	294	16
0.0	306	16	0.0	304	19
+10	306	14	+10	310	17

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	291	17	-30	286	21
-20	286	18	-20	288	17
-10	294	14	-10	295	16
0.0	294	18	0.0	290	17
+10	302	15	+10	295	16

STATION ALTITUDE 3909.00 FEET MSL
 26 JAN. 61 1130 GRS EST
 ASCENDING. NO. 55

SIGHT LEAD LEVEL DATA

0260020055
 WHITE SANDS

CLOUD TIC COORDINATES
 32.40093 LAT DEG
 106.37033 LONG DEG

TABLE 6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MFL FEET	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	
				TEMPERATURE AIR DEGREE CENTIGRADE
377.1	3909.0	14.0	-1.0	32.0
356.6	4321.0	11.8	-2.4	37.0
350.0	4351.5	10.0	-3.0	40.0
700.0	7724.3	2.3	-6.1	53.0
740.2	8562.1	.4	-6.9	58.0
720.0	9259.0	-2.3	-6.4	63.0
735.2	9829.0	-3.5	-11.4	54.0
700.0	10021.5	-3.5	-12.9	48.0
692.0	10320.2	-2.9	-17.0	51.0
686.2	10539.8	-1.7	-17.8	26.0
667.2	11072.0	-2.5	-18.5	23.0
630.2	12752.5	-5.4	-18.4	35.0
593.2	14501.8	-9.4	-19.4	44.0
552.4	17018.2	-15.5	-25.7	41.0
500.0	18566.3	-17.0	-33.6	26.0
462.8	20450.5	-21.4	-36.5	24.0
451.0	21077.0	-21.4	-37.4	22.0
400.0	23452.1	-27.7	-46.5	28.0
362.8	26027.7	-30.9	-44.1	38.0
355.6	26574.5	-33.6	-44.5	40.0
320.2	29061.6	-41.0	-47.5	50.0
300.0	33407.3	-44.5	-50.6	50.0
277.0	32254.4	-43.1		
250.0	34451.0	-53.9		
239.0	35349.3	-53.5		
228.8	36321.6	-55.7		
218.6	37279.1	-55.4		
200.0	39139.9	-57.2		
185.6	40664.2	-60.2		
182.1	41981.1	-55.7		
171.2	42370.2	-56.9		
156.0	42915.0	-55.9		
152.4	43674.3	-57.0		
150.0	44580.5	-55.5		
150.0	45138.5	-56.4		
136.7	47079.3	-57.0		
125.4	49223.3	-55.6		
116.4	50482.4	-57.2		
100.0	53007.7	-63.6		

STATION ALTITUDE 3539.00 FEET MSL
 26 JAN. 81 1130 HRS PST
 ASCENSION NO. 53

SIGNIFICANT LEVEL DATA

0250020053
 WHITE SANDS

GEODETTIC COORDINATES
 52.40093 LAT NEG
 106.37033 LONG NEG

TABLE 6 Cont'r

PRESSURE	GEOMETRIC	TEMPERATURE	REL. HUM.
ALTITUDE	AIR	DEWPOINT	PERCENT
MILLIBARS	FEET	IN DEGREES	CENTIGRADE
80.5	55947.4	-59.9	
81.6	57811.6	-68.7	
70.0	60986.7	-50.3	
66.6	62209.4	-57.3	
62.6	63306.3	-59.4	
57.0	65025.5	-60.4	
50.0	67948.7	-58.9	
46.0	69671.7	-60.4	
37.6	73777.1	-53.0	
30.0	78653.4	-56.7	
23.0	84204.9	-53.7	
20.0	87238.1	-53.7	
14.4	92830.7	-51.0	
14.4	94287.2	-49.3	

STATION ALTITUDE 3990.00 FEET ASL
 26 JAN. 61 1130 HRS MST
 ACQUISITION NO. 53

UPPER AIR DATA
 0260020055
 WHITE SANDS

GEOMETRIC COORDINATES
 32.40043 LAT DEG
 106.57033 LONG DEG

Table 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMID. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(THD)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	877.1	14.9	32.0	1056.5	662.0	500.0	15.0	1.000261
4000.0	876.8	14.8	32.2	1059.2	661.8	299.9	14.9	1.000261
4500.0	861.5	11.2	38.0	1052.5	657.7	294.2	14.2	1.000258
5000.0	845.3	9.6	40.7	1039.2	655.8	288.1	13.7	1.000255
5500.0	829.8	8.3	42.9	1024.8	654.3	291.5	13.3	1.000251
6000.0	814.5	7.0	45.2	1010.7	652.8	278.2	13.6	1.000247
6500.0	799.5	5.7	47.5	996.8	651.2	276.7	14.0	1.000243
7000.0	784.8	4.4	49.7	983.1	649.7	278.0	14.4	1.000239
7500.0	770.4	3.1	52.0	969.7	648.1	279.2	14.9	1.000236
8000.0	756.1	1.8	54.6	956.1	646.6	280.1	15.4	1.000232
8500.0	741.9	.6	57.6	942.6	645.1	279.8	15.6	1.000229
9000.0	727.8	-1.3	61.1	931.2	642.9	282.7	17.2	1.000225
9500.0	713.2	-2.8	59.2	918.8	641.9	286.5	19.6	1.000220
10000.0	700.6	-3.5	68.7	904.0	640.1	289.0	22.3	1.000213
10500.0	687.2	-1.9	28.5	892.0	641.9	287.2	22.9	1.000204
11000.0	674.2	-2.2	28.0	885.1	641.5	282.7	22.3	1.000200
11500.0	661.4	-2.9	29.1	852.0	640.6	282.8	19.1	1.000197
12000.0	648.8	-3.9	31.4	838.8	639.5	280.4	20.3	1.000194
12500.0	636.4	-4.9	33.8	825.7	638.3	276.0	21.7	1.000191
13000.0	624.1	-6.0	36.4	813.5	637.0	274.8	21.3	1.000189
13500.0	612.1	-7.3	39.3	801.4	635.4	271.3	20.8	1.000186
14000.0	600.2	-8.6	42.2	789.6	633.9	270.5	21.1	1.000183
14500.0	588.5	-9.8	43.8	778.0	632.4	269.7	21.3	1.000180
15000.0	576.9	-11.0	43.2	766.0	631.0	268.1	21.2	1.000177
15500.0	565.6	-12.1	42.7	754.2	629.7	268.0	21.0	1.000174
16000.0	554.4	-13.2	42.1	742.8	628.3	268.0	21.9	1.000171
16500.0	543.5	-14.3	41.6	731.1	626.9	268.2	23.1	1.000168
17000.0	532.8	-15.5	41.0	719.9	625.5	267.0	24.3	1.000165
17500.0	522.1	-16.6	36.3	708.6	624.1	271.0	25.1	1.000161
18000.0	511.6	-17.7	31.5	697.5	622.7	272.8	25.5	1.000158
18500.0	501.3	-18.9	26.6	686.6	621.3	272.1	26.2	1.000155
19000.0	491.2	-19.6	25.5	674.8	620.5	271.7	26.9	1.000152
19500.0	481.2	-20.2	25.0	662.5	619.7	271.7	27.7	1.000149
20000.0	471.8	-20.8	24.5	650.7	618.9	270.9	28.5	1.000147
20500.0	461.9	-21.4	23.6	639.0	618.2	270.4	29.7	1.000144
21000.0	452.4	-21.6	22.2	625.9	618.2	270.2	31.4	1.000141
21500.0	443.1	-22.3	22.9	615.3	617.1	270.3	35.2	1.000138
22000.0	434.0	-23.4	23.0	605.2	615.7	269.9	38.8	1.000136
22500.0	425.0	-24.5	25.0	595.4	614.3	269.1	42.3	1.000134
23000.0	416.2	-25.6	26.0	585.6	613.0	268.4	45.7	1.000132

STATION ALTITUDE 5989.00 FEET MSL
 26 JAN 61
 ACQUISITION NO. 53

UPPER AIR DATA
 0200020053
 WHITE SAUNDS

GEODETIC COORDINATES
 32.40043 LAT NEG
 106.37053 LONG NEG

Table 7 Cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SPEED OF SOUND KILOTS	WIND DATA DIRECTION (DEGREES TR)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	407.0	-20.7	27.1	570.1	011.0	267.5	48.4	1.000129
24000.0	399.2	-27.9	28.2	566.3	010.2	260.8	51.2	1.000127
24500.0	390.7	-29.4	30.4	558.4	008.2	260.6	52.4	1.000125
25000.0	382.4	-31.0	33.6	550.1	006.3	260.9	53.5	1.000123
25500.0	374.3	-32.6	39.8	542.0	004.3	260.3	52.6	1.000120
26000.0	366.4	-34.2	37.0	534.0	002.5	262.9	51.1	1.000120
26500.0	358.5	-35.3	39.2	525.1	000.8	261.1	49.4	1.000118
27000.0	350.7	-36.3	41.4	515.9	009.5	257.6	49.3	1.000116
27500.0	343.1	-37.5	43.5	507.0	008.1	253.0	52.0	1.000114
28000.0	335.6	-38.6	45.6	498.3	006.7	256.7	55.2	1.000112
28500.0	328.2	-39.7	47.6	489.8	005.2	254.2	58.8	1.000110
29000.0	321.1	-40.9	49.7	481.5	003.8	254.2	62.7	1.000108
29500.0	313.9	-42.1	50.0	473.2	002.2	253.1	66.5	1.000106
30000.0	307.0	-43.3	50.0	465.1	009.7	254.7	68.6	1.000104
30500.0	300.1	-44.5	50.0	457.2	009.1	259.0	70.3	1.000102
31000.0	293.3	-45.5	50.9**	448.9	007.8	251.9	71.8	1.000100
31500.0	286.7	-46.5	21.6**	440.6	006.5	250.5	72.9	1.000098
32000.0	280.2	-47.6	7.3**	432.8	005.1	250.3	72.7	1.000096
32500.0	273.8	-48.7		425.1	003.6	250.0	70.8	1.000095
33000.0	267.5	-50.1		417.8	001.9	251.1	67.6	1.000093
33500.0	261.4	-51.4		410.6	000.1	250.8	65.0	1.000091
34000.0	255.3	-52.7		403.5	008.4	250.2	62.6	1.000090
34500.0	249.4	-54.0		396.5	007.7	247.4	61.1	1.000088
35000.0	243.6	-54.6		387.9	006.2	244.0	59.9	1.000086
35500.0	237.9	-53.9		378.0	005.0	240.6	61.2	1.000084
36000.0	232.3	-55.6		371.0	003.4	237.3	63.0	1.000083
36500.0	226.9	-55.6		363.4	001.8	236.3	65.1	1.000081
37000.0	221.5	-55.5		354.5	004.8	235.5	67.1	1.000079
37500.0	216.3	-55.6		346.4	004.0	230.6	67.2	1.000077
38000.0	211.2	-50.1		339.0	004.0	237.7	67.3	1.000075
38500.0	206.2	-50.6		331.7	003.3	233.7	65.4	1.000074
39000.0	201.3	-57.1		324.0	002.7	237.7	63.6	1.000072
39500.0	196.6	-57.4		316.1	001.0	241.6	65.0	1.000071
40000.0	191.9	-58.9		311.9	000.2	243.0	68.3	1.000069
40500.0	187.3	-59.9		305.9	003.9	240.0	73.0	1.000068
41000.0	182.8	-57.4		295.2	002.3	247.0	76.7	1.000066
41500.0	178.5	-56.8		287.3	001.1	247.8	72.8	1.000064
42000.0	174.3	-56.0		281.0	003.0	247.0	68.6	1.000063
42500.0	170.1	-56.7		273.8	002.2	247.1	62.7	1.000061
43000.0	166.1	-50.1		266.6	004.9	240.0	57.8	1.000059

** AT LEAST ONE AVAILABLE REL. HUM. VALUE WAS USED IN THE INTERPOLATION.

UPPER AIR DATA
 0260020055
 WHITE SANDS

STATION ALTITUDE 3999.00 FEET MSL
 26 JAN 61 1130 LRS MSL
 OBSERVER NO. 53

GEOMETRIC COORDINATES
 32.40043 LAT N 66
 106.37033 LONG W 66

Table 7 Cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE ALI DEWPOINT MILLIBARS DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GR/GM CUBIC METR	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (T, D)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	162.2	-57.0		261.4	572.8	247.0	56.0	1.000058
44000.0	159.4	-56.5		259.4	573.7	247.5	54.3	1.000057
44500.0	156.6	-56.0		247.6	574.6	243.0	52.6	1.000055
45000.0	151.0	-56.2		242.4	573.9	249.7	51.0	1.000054
45500.0	147.4	-56.5		237.1	573.4	251.2	49.6	1.000054
46000.0	143.9	-56.7		231.6	573.2	252.7	48.2	1.000052
46500.0	140.5	-56.8		226.3	573.0	254.2	46.3	1.000050
47000.0	137.2	-57.0		221.1	572.8	255.6	44.5	1.000049
47500.0	134.0	-56.7		215.7	573.1	257.1	44.4	1.000048
48000.0	130.8	-56.4		210.3	573.6	258.5	44.4	1.000047
48500.0	127.7	-56.1		205.0	574.4	259.4	46.8	1.000046
49000.0	124.7	-55.7		199.9	574.4	260.2	49.4	1.000045
49500.0	121.8	-55.9		195.2	574.3	260.7	49.0	1.000043
50000.0	118.9	-56.3		191.1	573.0	261.2	48.8	1.000043
50500.0	115.4	-57.3		187.0	573.0	261.8	46.6	1.000042
51000.0	112.7	-57.5		182.9	572.4	262.9	41.1	1.000041
51500.0	110.7	-57.5		178.8	572.1	264.4	35.7	1.000040
52000.0	108.6	-57.8		174.7	571.7	265.0	33.1	1.000039
52500.0	106.5	-58.0		170.6	571.4	266.9	31.1	1.000048
53000.0	103.6	-58.3		166.9	571.1	267.2	31.4	1.000037
53500.0	100.5	-58.5		163.2	570.7	265.0	26.0	1.000036
54000.0	98.1	-58.8		159.5	570.3	264.4	40.7	1.000036
54500.0	95.6	-59.1		155.9	570.0	264.1	44.3	1.000035
55000.0	93.5	-59.4		152.3	569.6	264.0	47.7	1.000034
55500.0	91.3	-59.7		148.9	569.2	265.4	46.1	1.000033
56000.0	89.1	-59.9		145.5	569.0	264.1	41.3	1.000032
56500.0	86.9	-59.5		141.8	569.4	271.3	36.4	1.000032
57000.0	84.9	-59.2		138.2	569.8	275.2	31.3	1.000031
57500.0	82.8	-58.9		134.7	570.2	280.6	26.6	1.000030
58000.0	80.9	-58.7		131.4	570.5	284.7	22.9	1.000029
58500.0	78.9	-58.6		128.3	570.3	291.1	19.5	1.000029
59000.0	77.0	-58.0		125.3	570.2	295.4	16.8	1.000028
59500.0	75.2	-59.0		122.4	570.1	303.2	14.4	1.000027
60000.0	73.4	-59.1		119.5	570.0	313.4	13.4	1.000027
60500.0	71.7	-59.2		116.7	569.3	314.3	13.0	1.000026
61000.0	70.0	-59.3		113.9	569.7	314.3	12.6	1.000025
61500.0	68.3	-58.5		110.6	570.8	311.3	12.4	1.000025
62000.0	66.7	-57.6		107.8	571.9	305.6	12.3	1.000024
62500.0	65.1	-57.9		105.3	571.0	307.8	11.9	1.000023
63000.0	63.5	-58.4		103.3	570.4	307.4	11.5	1.000023

STATION ALTITUDE 3959.00 FEET (121)
 26 JAN. 61 1130 HRS (121)
 ASCENSION NO. 53

UPPER AIR DATA
 6200020053
 WHITE SANDS

CELESTIC COORDINATES
 32.40043 LA. DEG
 106.57033 LONG DEG

TABLE 7 Cont.

GEOMETRIC ALTITUDE 45L FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND METERS PER SEC	WIND DATA DIRECTION DEGREES (TD)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.0	-59.5	59.4	101.1	569.4	307.2	11.0	1.000023
63600.0	60.5	-59.3	59.0	98.8	569.0	307.3	10.4	1.000022
63700.0	59.1	-60.1	58.6	96.5	568.6	307.5	9.8	1.000022
63800.0	57.7	-60.4	58.3	94.4	568.3	307.5	9.3	1.000021
63900.0	56.3	-60.2	58.0	92.1	568.0	307.5	8.9	1.000021
64000.0	54.9	-59.9	57.9	89.8	567.9	308.1	8.1	1.000020
64100.0	53.6	-59.6	57.2	87.5	569.2	310.1	6.6	1.000019
64200.0	52.3	-59.4	56.9	85.3	569.6	313.2	5.4	1.000019
64300.0	51.1	-59.1	56.2	83.2	569.9	339.6	2.1	1.000019
64400.0	49.9	-58.9	55.9	81.1	570.2	85.3	2.5	1.000018
64500.0	48.7	-58.4	55.5	79.3	570.5	103.0	5.2	1.000018
64600.0	47.5	-58.8	55.8	77.6	569.0	107.3	7.4	1.000017
64700.0	46.4	-60.3	56.4	75.9	568.4	109.7	9.2	1.000017
64800.0	45.3	-59.0	58.9	74.0	570.9	111.9	7.6	1.000016
64900.0	44.2	-59.1	57.0	72.0	570.0	113.5	6.0	1.000016
65000.0	43.2	-58.3	57.1	70.0	571.0	96.9	9.2	1.000016
65100.0	42.1	-57.5	57.2	68.1	572.1	86.1	16.1	1.000015
65200.0	41.2	-56.7	57.3	66.2	573.1	81.9	23.2	1.000015
65300.0	40.2	-55.9	57.4	64.4	574.2	75.5	24.4	1.000014
65400.0	39.2	-55.1	57.5	62.7	575.2	69.6	25.8	1.000014
65500.0	38.3	-54.3	57.6	61.0	576.3	64.4	26.5	1.000014
65600.0	37.4	-54.0	57.7	59.5	576.7	57.0	24.3	1.000013
65700.0	36.5	-54.3	57.9	58.1	576.5	49.5	22.5	1.000013
65800.0	35.7	-54.6	57.9	56.9	575.9	43.1	21.3	1.000013
65900.0	34.8	-54.9	57.9	55.8	575.6	43.9	20.3	1.000012
66000.0	34.0	-55.2	57.5	54.4	575.2	46.7	19.3	1.000012
66100.0	33.2	-55.5	57.4	53.2	574.8	53.3	19.6	1.000012
66200.0	32.4	-55.8	57.4	52.0	574.4	61.6	20.7	1.000012
66300.0	31.7	-56.0	57.4	50.6	574.0	68.9	22.3	1.000011
66400.0	30.9	-56.3	57.3	49.7	573.7	72.2	25.5	1.000011
66500.0	30.2	-56.6	57.3	48.6	573.3	74.5	29.0	1.000011
66600.0	29.5	-56.9	57.3	47.5	573.4	76.4	32.4	1.000011
66700.0	28.8	-56.2	57.3	46.3	573.6	76.2	30.6	1.000010
66800.0	28.1	-56.0	57.4	45.2	574.1	76.6	28.6	1.000010
66900.0	27.5	-55.7	57.4	44.0	574.5	75.7	26.6	1.000010
67000.0	26.8	-55.4	57.4	43.0	574.8	74.0	26.7	1.000010
67100.0	26.2	-55.2	57.5	41.9	575.2	68.7	27.1	1.000009
67200.0	25.6	-54.9	57.5	40.9	575.5	63.4	27.6	1.000009
67300.0	25.0	-54.6	57.5	39.9	575.9	60.5	29.0	1.000009
67400.0	24.4	-54.6	576.2	38.9	576.2	55.9	32.0	1.000009

STATION ALTITUDE 3900.00 FEET MSL
 26 JAN 61 1130 HRS EST
 ASCENSION NO. 53

UPPER AIR DATA
 0700Z0050
 WHITE SANDS

GEODETTIC COORDINATES
 32.40043 LAT NEG
 106.37033 LON NEG

TABLE 7 Cont'

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEPTHT CENTIGRADE	REL. HUMID. PERCENT	DENSITY G/CM ³	SOUND SPEED METERS PER SECOND	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
83500.0	23.8	-54.1		37.9	570.6	91.1	35.9	1.000004
84000.0	23.3	-53.8		37.0	570.9	89.7	38.1	1.000004
84500.0	22.7	-53.7		36.1	577.1	86.5	40.0	1.000004
85000.0	22.2	-53.7		35.3	577.1	83.7	41.6	1.000004
85500.0	21.7	-53.7		34.5	577.1	80.4	42.6	1.000004
86000.0	21.2	-53.7		33.7	577.1	76.5	42.0	1.000007
86500.0	20.7	-53.7		32.9	577.1	72.1	41.6	1.000007
87000.0	20.2	-53.7		32.1	577.1	69.1	42.0	1.000007
87500.0	19.8	-53.6		31.3	577.3	63.0	43.3	1.000007
88000.0	19.3	-53.5		30.6	577.6	67.0	44.6	1.000007
88500.0	18.9	-53.1		29.8	577.9	60.3	45.6	1.000007
89000.0	18.4	-52.9		29.1	578.2	60.3	45.2	1.000006
89500.0	18.0	-52.6		28.4	578.5	60.3	44.9	1.000006
90000.0	17.6	-52.4		27.7	578.9	60.3	44.5	1.000006
90500.0	17.2	-52.1		27.1	579.2	67.0	40.8	1.000006
91000.0	16.8	-51.9		26.4	579.5	68.1	36.1	1.000006
91500.0	16.4	-51.6		25.8	579.8	69.6	31.5	1.000006
92000.0	16.0	-51.4		25.2	580.1	71.5	26.8	1.000006
92500.0	15.6	-51.2		24.5	580.4			1.000005
93000.0	15.3	-50.8		23.9	580.9			1.000005
93500.0	14.9	-50.2		23.3	581.7			1.000005
94000.0	14.6	-49.8		22.7	582.4			1.000005

STATION ALTITUDE 5949.00 FEET HSL
 26 JAN. 61 1130 GRS NSI
 ASCENSION 140. 53

PADLOCK LEVELS
 02000.00000
 WHITE GAUGES

GEODETIC COORDINATES
 52.40043 LAT DEG
 100.37033 LON DEG

TABLE 8

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CELSIUS	RELATIVE HUMIDITY PERCENT	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS
855.0	4698.	10.0	-3.0	290.0	13.6
800.0	4670.	9.7	-4.0	270.7	14.6
750.0	4297.	1.4	-6.5	279.9	15.5
700.0	4001.	-3.5	-12.9	269.0	22.3
650.0	3739.	-5.8	-18.9	280.7	20.1
600.0	3495.	-8.6	-19.1	270.5	21.1
550.0	3247.	-13.7	-23.8	259.7	22.4
500.0	3004.	-19.0	-33.6	272.0	20.3
450.0	2799.	-21.5	-37.4	270.2	32.3
400.0	2591.	-27.7	-40.5	260.9	50.9
350.0	2382.	-36.4	-44.5	259.5	49.5
300.0	2176.	-44.5	-50.0	258.0	70.3
250.0	1974.	-53.0		247.9	61.2
200.0	1767.	-57.2		240.3	64.1
175.0	1607.	-58.8		247.9	69.8
150.0	1401.	-56.4		250.0	50.7
125.0	1184.	-55.8		260.0	49.1
100.0	939.	-58.6		265.4	50.8
70.0	607.	-58.8		280.9	21.6
66.0	595.	-59.3		314.5	12.6
50.0	376.	-59.0		307.4	10.2
40.0	220.	-58.0		75.4	2.0
30.0	78.	-55.0		75.0	24.5
25.0	12.	-56.7		75.0	29.8
20.0	0.	-54.6		80.0	29.6
15.0	0.	-53.7		69.7	42.5
10.0	0.	-50.3			

DATE
ILME