AD-A087 456 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19305A MLRS, MISSILE NUMBER 1144, ROUND NUMBER V-112, 7 FEBRUAR--ETC(U)
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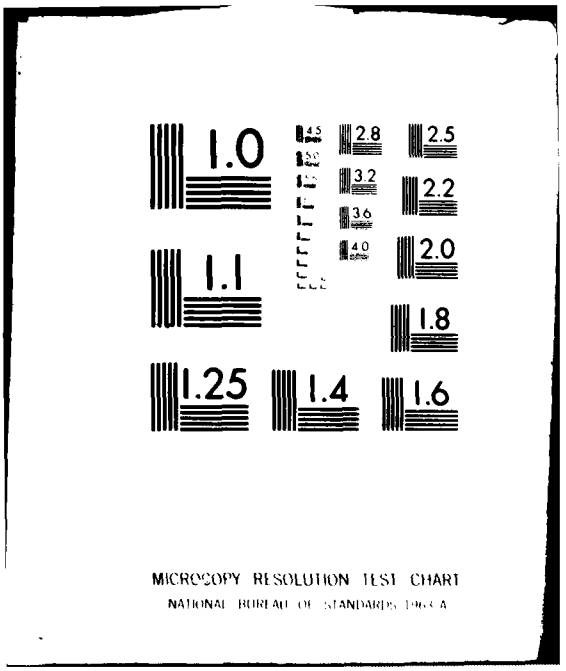
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METEOROLOGICAL DATA REPORT

19305A MLRS
Missile No. 1144
Round No. V-112
07 February 1980

by

White Sands Meteorological Team

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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1 REPORT NUMBER: DR 1125	2 GOVT ACCESSION NO: AD-A087 456
4 TITLE (and Subtitle): 19305A MLRS, Missile Number 1144, Round Number V-112, 7 February 1980.	5 TYPE OF REPORT & PERIOD COVERED
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18 SUPPLEMENTARY NOTES

19 KEY WORDS (Continue on reverse side if necessary and identify by block number)

20 ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 19305A MLRS, Missile Number 1144, Round Number V-112 are presented in tabular form.

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UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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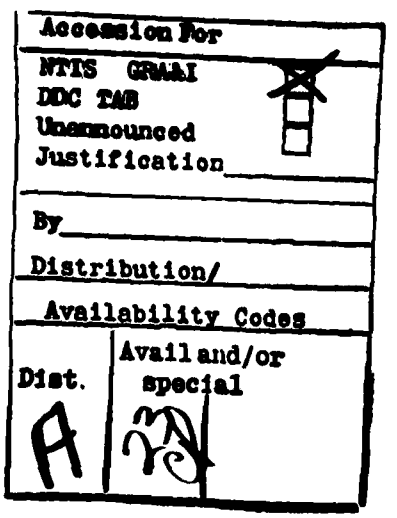
CONTENTS



INTRODUCTION

19305A MLRS, Missile Number 1144, Round Number V-112, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0900 MST on 07 Feb 80. The scheduled launch time was 0900 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 (^{o}C), relative humidity, dew point (^{o}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) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

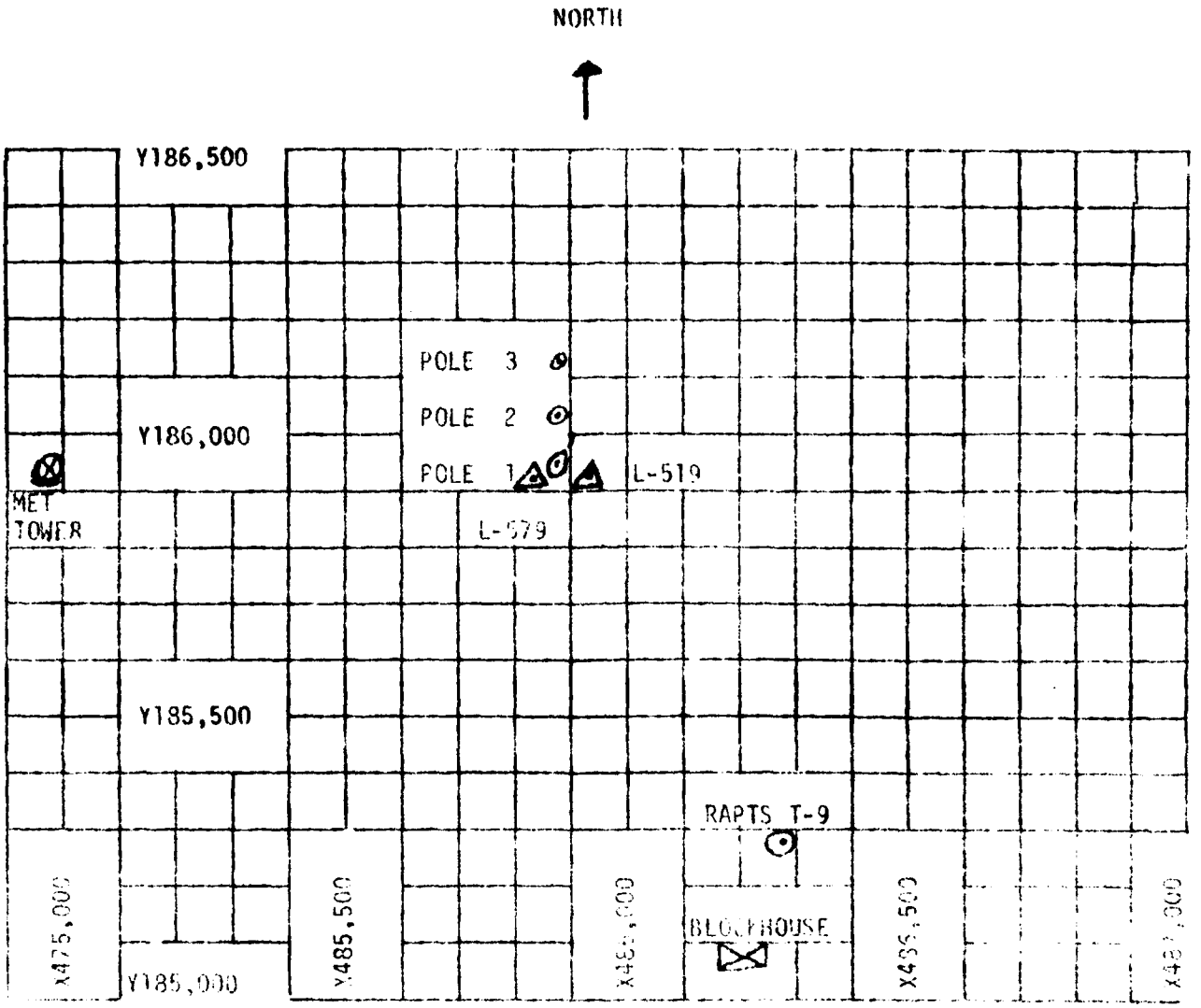
b. Upper Air

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

SITE AND ALTITUDE	
LC-33	2 km
Nick	2 km

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 96,500 feet in 500-feet increments.

SITE AND TIME	
WSD	0928 MST



1. MET TOWER - 4 Bendix Model T-20 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.

3. **RAPTS** T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

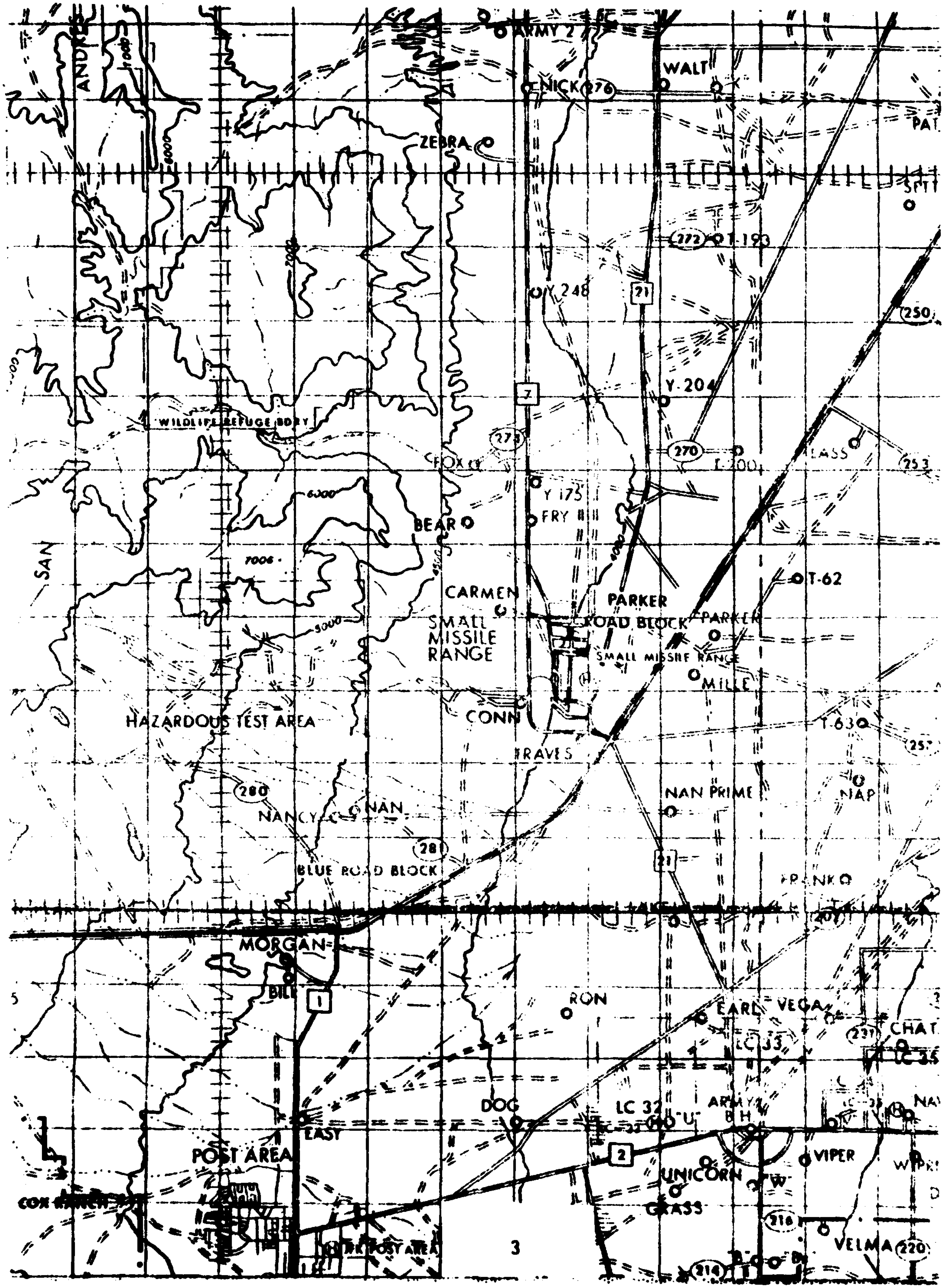

ARMY 2
NICK
276
WALT
ZEBRA
272
T-190
Y 248
21
250
Y-204
7
WILDLIFE REFUGE BDRY
273
FOX
270
T-200
LASS
253
Y 175
FRY
BEAR
6000
7000
SAN
T-62
CARMEN
PARKER
ROAD BLOCK
PARKER
SMALL MISSILE RANGE
SMALL MISSILE RANGE
MILLE
5000
HAZARDOUS TEST AREA
CONN
T-63
TRAVES
280
NAN PRIME
NAP
NANCY
NAN
281
BLUE ROAD BLOCK
21
FRANKO
MORGAN
BILL
1
RON
EARL
VEGA
231
CHAT
LC 33
LC 32
DOG
ARMY B.H.
EASY
POST AREA
2
UNICORN
VIPER
GRASS
216
VELMA
220
214

TABLE 1. Surface Observations taken at 0900 MST, 07 February 1980, at LC-33, 19305A MLRS, Missile Number 1144, Round Number V-112.

ELEVATION	3983.0	FT/MSL
PRESSURE	868.7	MBS
TEMPERATURE	15.3	^{o}C
RELATIVE HUMIDITY	31	%
DEW POINT	-1.6	^{o}C
DENSITY	1045	GM/M^3
WIND SPEED	04	KTS
WIND DIRECTION	276	DEGREES
CLOUD COVER	1	Ci

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	197	06	-30	213	06	-30	180	05
-20	204	06	-20	213	05	-20	180	05
-10	210	05	-10	216	04	-10	240	04
0.0	195	05	0.0	198	05	0.0	182	06
+10	203	05	+10	201	04	+10	219	07

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	293	04	-30	281	05
-20	297	04	-20	278	05
-10	297	04	-10	275	05
0.0	276	03	0.0	268	05
+10	276	04	+10	288	05

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	05	-30	267	04
-20	275	05	-20	282	04
-10	274	05	-10	267	03
0.0	270	04	0.0	245	03
+10	294	04	+10	237	04

PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-33 DATE 07 February 1980 TIME 0900 MST

TRACKER COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3877.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	276	04
90	MISG	MISG
150	263	07
210	265	10
270	265	10
330	265	11
390	264	08
500	265	11
650	265	16
800	267	13
950	266	13
1150	264	17
1350	241	26
1550	236	33
1750	223	41
2000	230	42

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM Nick DATE 07 February 1980 TIME 0900 MST

TRACKER COORDINATES (WSTM) X= 470,734.56 Y= 255,775.64 H= 4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH

HEIGHTS ARE METERS AGL XX OR FEET AGL ____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS
SFC	270	15
90	260	15
150	265	26
210	270	26
270	265	32
330	265	33
390	265	34
500	265	36
650	260	34
800	250	35
950	250	35
1150	245	39
1350	235	41
1550	240	41
1750	240	43
2000	230	42

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

HEIGHT AGL	DIRECTION DEGREES	SPEED KTS

STATION ALTITUDE 3989.00 FEET MSL
7 FEB. 80 0928 HRS MST
ASCENSION NO. 58

SIGNIFICANT LEVEL DATA
038002056
WHITE SANDS

TABLE 6

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
869.1	3989.0	15.8	-2.2	29.0
861.4	4236.8	15.5	.9	37.0
859.0	4606.9	14.1	.4	39.0
780.1	6954.2	6.9	-4.8	43.0
700.0	9841.3	-.3	-10.8	45.0
688.3	10589.6	-2.0	-12.9	43.0
669.0	11027.0	-2.2	-19.1	26.0
641.2	12138.9	-3.1	-19.8	26.0
605.6	13608.4	-6.9	-23.1	26.0
500.0	18402.2	-20.0	-34.1	27.0
440.8	21425.5	-28.3	-39.2	34.0
407.0	23292.1	-32.4	-43.4	32.0
400.0	23694.9	-32.1	-43.2	32.0
368.8	25564.8	-36.4	-47.3	31.0
356.8	26315.7	-38.9	-49.5	31.0
300.0	30152.3	-48.4		
282.6	31442.6	-50.0		
264.0	32823.9	-45.1		
259.0	33225.0	-44.9		
222.0	36249.5	-43.7		
208.0	37469.6	-46.0		
176.6	41769.9	-48.3		
153.6	44755.9	-54.7		
150.0	45255.4	-55.4		
126.6	48782.1	-60.3		
113.6	51314.5	-64.3		
100.0	53965.6	-64.3		
96.0	54385.6	-66.3		
79.8	58145.6	-59.1		
71.0	60836.7	-62.4		
59.0	67698.4	-62.3		
44.4	70141.4	-59.0		
30.6	78335.6	-55.6		
26.6	80886.6	-52.9		
23.8	83258.9	-53.2		
20.8	87013.3	-47.8		
12.8	96048.0	-39.5		

STATION ALTITUDE 3989.00 FEET MSL
1 FEB. 80 0928 HRS MST
ASCENSION NO. 58

UPPER AIR DATA
03800200 58
WHITE SANDS
TABLE 7

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	869.1	15.8	-2.2	29.0	1045.4	663.0	270.0	15.9	1.000257
4000.0	868.8	15.8	-2.0	29.4	1045.0	663.0	270.0	15.9	1.000257
4500.0	853.3	14.5	.5	38.4	1030.5	661.7	267.9	15.8	1.000259
5000.0	837.9	12.9	-.5	39.7	1017.7	659.8	265.8	15.7	1.000254
5500.0	822.7	11.4	-1.6	40.5	1004.8	657.9	263.7	15.6	1.000249
6000.0	807.8	9.8	-2.7	41.4	992.1	656.1	261.6	15.6	1.000245
6500.0	793.2	8.3	-3.8	42.2	979.6	654.3	259.4	15.9	1.000240
7000.0	778.8	6.8	-4.9	43.0	967.1	652.5	257.0	16.8	1.000236
7500.0	764.5	5.5	-5.9	43.4	953.5	651.0	249.1	18.2	1.000232
8000.0	750.1	4.3	-6.9	43.7	940.1	649.5	244.3	20.3	1.000227
8500.0	736.1	3.0	-8.0	44.1	926.9	648.0	240.1	23.3	1.000223
9000.0	722.5	1.8	-9.0	44.4	913.9	646.5	237.2	26.9	1.000219
9500.0	709.0	.6	-10.1	44.8	901.1	645.0	235.7	31.4	1.000215
10000.0	695.8	-.7	-11.2	44.6	888.3	643.5	234.1	35.8	1.000211
10500.0	682.6	-1.8	-12.6	43.2	875.2	642.2	234.2	38.4	1.000207
11000.0	669.7	-2.2	-13.6	27.0	860.3	641.5	237.3	37.9	1.000199
11500.0	657.0	-2.6	-13.4	26.0	845.2	641.1	243.6	35.5	1.000195
12000.0	644.5	-3.0	-19.7	26.0	830.4	640.6	245.7	37.7	1.000192
12500.0	632.2	-4.0	-20.7	26.0	817.8	639.3	246.4	39.1	1.000188
13000.0	620.0	-5.3	-21.8	26.0	806.0	637.8	247.1	40.5	1.000185
13500.0	608.1	-6.6	-22.9	26.0	794.4	636.2	249.1	42.9	1.000182
14000.0	596.4	-8.0	-24.0	26.1	782.8	634.6	250.3	44.9	1.000179
14500.0	584.4	-9.3	-25.1	26.2	771.3	632.9	250.4	46.2	1.000176
15000.0	572.8	-10.7	-26.3	26.3	760.0	631.3	250.6	47.0	1.000173
15500.0	561.5	-12.1	-27.4	26.4	748.9	629.6	251.0	47.3	1.000170
16000.0	550.4	-13.4	-28.6	26.5	738.0	628.0	250.5	48.2	1.000168
16500.0	539.5	-14.8	-29.7	26.6	727.2	626.3	249.6	49.6	1.000165
17000.0	528.8	-16.2	-30.9	26.7	716.6	624.6	248.5	50.4	1.000162
17500.0	518.4	-17.5	-32.0	26.8	706.2	622.9	247.2	50.8	1.000160
18000.0	508.1	-18.9	-33.2	26.9	696.0	621.3	247.2	51.5	1.000157
18500.0	498.0	-20.3	-34.3	27.2	685.8	619.6	247.8	52.5	1.000155
19000.0	487.7	-21.6	-35.0	28.4	675.3	617.9	248.1	53.5	1.000152
19500.0	477.6	-23.0	-35.9	29.5	665.1	616.2	248.2	54.6	1.000150
20000.0	467.5	-24.4	-36.7	30.7	654.9	614.5	248.8	56.8	1.000147
20500.0	458.1	-25.8	-37.6	31.9	645.0	612.8	249.4	59.1	1.000145
21000.0	448.7	-27.1	-38.4	33.0	635.2	611.1	250.7	61.2	1.000143
21500.0	439.4	-28.5	-39.4	33.9	625.5	609.4	251.7	62.6	1.000141
22000.0	430.1	-29.6	-40.5	33.4	615.8	608.1	252.5	62.6	1.000138
22500.0	421.0	-30.7	-41.6	32.8	606.6	606.7	252.2	61.3	1.000136
23000.0	412.1	-31.8	-42.8	32.3	596.7	605.3	251.3	59.4	1.000133

STATION ALTITUDE 3989.00 FEET MSL
7 FEB. 80 0928 HRS MST
ASCENSION NO. 58

UPPER AIR DATA
030020058
WHITE SANDS
TABLE 7 (cont)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	403.4	-32.2	-43.3	32.0	583.2	604.7	249.7	58.7	1.000131
24000.0	394.7	-32.8	-43.9	31.8	572.1	604.0	248.2	59.4	1.000128
24500.0	386.3	-34.0	-45.0	31.6	562.5	602.6	247.4	63.4	1.000126
25000.0	378.0	-35.1	-46.1	31.3	553.1	601.1	246.9	67.8	1.000124
25500.0	369.8	-36.3	-47.2	31.0	543.8	599.6	246.7	72.5	1.000122
26000.0	361.8	-37.8	-48.6	31.0	535.6	597.6	246.7	71.0	1.000120
26500.0	353.8	-39.4	-50.4	29.5**	527.2	595.7	246.7	68.2	1.000118
27000.0	345.9	-40.6	-52.7	25.5**	518.2	594.1	247.2	62.2	1.000116
27500.0	338.2	-41.8	-55.2	21.4**	509.3	592.5	247.5	57.8	1.000114
28000.0	330.6	-43.1	-57.4	17.4**	500.6	590.9	247.5	55.2	1.000112
28500.0	323.3	-44.3	-61.0	13.4**	492.1	589.3	247.0	54.5	1.000110
29000.0	316.0	-45.5	-64.7	9.3**	483.7	587.7	246.2	54.9	1.000108
29500.0	309.0	-46.8	-69.7	5.3**	475.5	586.1	245.5	57.9	1.000106
30000.0	302.1	-48.0	-80.0	1.2**	467.4	584.5	244.7	61.5	1.000104
30500.0	295.2	-48.8			458.5	583.5	245.5	68.5	1.000102
31000.0	288.5	-49.5			449.2	582.7	246.0	74.8	1.000100
31500.0	281.9	-49.8			439.6	582.2	247.5	79.0	1.000098
32000.0	275.5	-48.2			430.5	584.4	248.7	81.1	1.000095
32500.0	269.2	-46.5			413.8	586.3	249.6	80.2	1.000092
33000.0	263.1	-45.1			401.9	588.2	250.7	79.1	1.000090
33500.0	257.2	-45.0			392.7	588.4	252.1	78.0	1.000087
34000.0	251.4	-44.9			383.7	588.5	253.7	75.9	1.000085
34500.0	245.8	-44.7			374.8	588.8	255.6	72.9	1.000083
35000.0	240.3	-44.5			366.1	589.1	257.4	70.1	1.000082
35500.0	234.9	-44.3			357.5	589.4	258.1	67.6	1.000080
36000.0	229.6	-44.0			349.1	589.7	258.2	68.0	1.000078
36500.0	224.5	-43.8			341.0	590.0	257.4	72.5	1.000076
37000.0	219.5	-43.6			333.4	589.9	256.7	78.2	1.000074
37500.0	214.5	-44.1			326.3	589.6	256.1	85.1	1.000073
38000.0	209.7	-44.4			319.4	589.2	255.6	92.9	1.000071
38500.0	205.0	-44.7			312.7	588.8	255.1	101.2	1.000070
39000.0	200.5	-45.0			306.0	588.5	254.9	106.4	1.000068
39500.0	195.9	-45.5			299.9	587.7	254.9	110.7	1.000067
40000.0	191.5	-46.2			293.9	587.0	256.1	101.2	1.000065
40500.0	187.2	-46.8			288.0	586.2	257.6	90.2	1.000064
41000.0	182.9	-47.4			282.2	585.4	260.7	74.3	1.000063
41500.0	178.8	-48.0			276.6	584.6	265.7	57.4	1.000062
42000.0	174.7	-48.8			271.3	583.5	272.1	46.3	1.000060
42500.0	170.7	-49.9			266.3	582.1	280.3	38.5	1.000059
43000.0	166.7	-50.9			261.4	580.7	285.0	38.1	1.000058

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

STATION ALTITUDE 5989.00 FEET MSL
7 FEB. 60 0928 HRS MST
ASCENSION NO. 58

UPPER AIR DATA
03800200S8
WHITE SANDS
TABLE 7 (cont)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	162.9	-52.0			256.6	579.3	285.8	41.9	1.000057
44000.0	159.1	-53.1			251.9	577.9	283.6	48.2	1.000056
44500.0	155.4	-54.2			247.3	576.5	280.2	56.7	1.000055
45000.0	151.8	-55.0			242.5	575.3	276.8	64.6	1.000054
45500.0	148.2	-55.7			237.5	574.4	273.5	72.0	1.000053
46000.0	144.7	-56.4			232.6	573.5	270.3	79.5	1.000052
46500.0	141.3	-57.1			227.8	572.6	267.3	87.2	1.000051
47000.0	137.9	-57.8			223.1	571.7	265.8	90.6	1.000050
47500.0	134.7	-58.5			218.5	570.7	265.3	90.6	1.000049
48000.0	131.5	-59.2			214.1	569.8	264.6	89.7	1.000048
48500.0	128.3	-59.9			209.8	568.9	264.9	85.2	1.000047
49000.0	125.3	-60.6			205.3	567.9	265.1	80.7	1.000046
49500.0	122.2	-61.4			201.1	566.9	264.6	78.5	1.000045
50000.0	119.3	-62.2			197.0	565.8	264.1	76.8	1.000044
50500.0	116.4	-63.0			192.9	564.7	263.5	75.8	1.000043
51000.0	113.5	-63.8			188.9	563.7	263.1	75.5	1.000042
51500.0	110.8	-64.5			184.8	563.0	262.8	75.2	1.000041
52000.0	108.1	-64.5			180.3	563.0	263.3	73.3	1.000040
52500.0	105.4	-64.5			175.8	563.0	264.3	71.5	1.000039
53000.0	102.8	-64.5			171.5	563.0	266.0	70.2	1.000038
53500.0	100.3	-64.5			167.3	563.0	268.2	69.2	1.000037
54000.0	97.9	-65.4			164.1	561.6	270.1	68.3	1.000037
54500.0	95.5	-66.1			160.6	560.6	272.0	67.2	1.000036
55000.0	93.1	-65.1			156.0	561.9	273.1	65.9	1.000035
55500.0	90.9	-64.2			151.5	563.2	276.7	51.8	1.000034
56000.0	88.7	-63.2			147.1	564.5	282.6	37.9	1.000033
56500.0	86.5	-62.3			142.9	565.8	299.3	23.3	1.000032
57000.0	84.4	-61.3			138.8	567.0	350.2	15.0	1.000031
57500.0	82.4	-60.3			134.8	568.3	36.1	21.9	1.000030
58000.0	80.4	-59.4			131.0	569.6	40.4	24.0	1.000029
58500.0	78.4	-59.5			127.9	569.4	44.0	26.2	1.000028
59000.0	76.5	-60.1			125.2	568.6	38.3	20.3	1.000028
59500.0	74.7	-60.8			122.5	567.8	13.1	11.5	1.000027
60000.0	72.9	-61.4			119.9	566.9	310.8	9.6	1.000027
60500.0	71.2	-62.0			117.4	566.1	269.0	16.8	1.000026
61000.0	69.4	-62.4			114.8	565.6	255.6	27.2	1.000026
61500.0	67.8	-62.4			112.0	565.6	252.4	32.5	1.000025
62000.0	66.1	-62.4			109.3	565.6	251.2	34.2	1.000024
62500.0	64.5	-62.4			106.6	565.6	250.7	35.5	1.000024
63000.0	63.0	-62.4			104.0	565.6	254.4	32.6	1.000023

STATION ALTITUDE 3989.00 FEET MSL
7 FEB. 80 0928 HRS MST
ASCENSION NO. 58

UPPER AIR DATA
038002008
WHITE SANDS
TABLE 7 (cont)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	61.4	-62.4			101.5	565.6	253.9	29.9	1.000023
64000.0	59.9	-62.4			99.1	565.6	263.5	27.0	1.000022
64500.0	58.5	-62.3			96.7	565.6	273.7	24.0	1.000022
65000.0	57.1	-62.3			94.3	565.6	279.3	21.2	1.000021
65500.0	55.7	-62.3			92.0	565.7	284.2	17.5	1.000020
66000.0	54.3	-62.3			89.8	565.7	297.2	14.5	1.000020
66500.0	53.0	-62.3			87.6	565.7	313.3	13.0	1.000020
67000.0	51.7	-62.3			85.5	565.7	330.9	12.9	1.000019
67500.0	50.5	-62.3			83.4	565.7	348.7	13.9	1.000019
68000.0	49.3	-61.9			81.2	566.2	357.4	15.2	1.000018
68500.0	48.1	-61.2			79.0	567.1	356.3	16.7	1.000016
69000.0	46.9	-60.5			76.9	568.0	353.2	17.2	1.000017
69500.0	45.8	-59.9			74.8	568.0	353.9	17.1	1.000017
70000.0	44.7	-59.2			72.8	568.9	351.2	16.8	1.000016
70500.0	43.5	-58.9			70.9	570.3	348.0	15.0	1.000016
71000.0	42.5	-58.6			69.2	570.6	343.4	13.3	1.000015
71500.0	41.5	-58.4			67.5	570.9	341.3	12.1	1.000015
72000.0	40.5	-58.2			65.8	571.1	342.0	11.5	1.000015
72500.0	39.7	-58.0			64.2	571.4	341.9	11.4	1.000014
73000.0	38.7	-57.8			62.6	571.7	339.9	11.8	1.000014
73500.0	37.8	-57.6			61.1	572.0	341.	12.7	1.000014
74000.0	36.9	-57.4			59.5	572.2	297.4	13.7	1.000013
74500.0	36.0	-57.2			58.1	572.5	295.9	14.6	1.000013
75000.0	35.2	-57.0			56.7	572.8	292.9	15.9	1.000013
75500.0	34.4	-56.8			55.3	573.1	292.6	16.9	1.000012
76000.0	33.6	-56.6			54.0	573.3	294.5	17.5	1.000012
76500.0	32.8	-56.4			52.6	573.6	295.2	18.2	1.000012
77000.0	32.0	-56.2			51.3	573.9	302.7	17.5	1.000011
77500.0	31.2	-55.9			50.1	574.2	311.4	16.8	1.000011
78000.0	30.5	-55.7			48.8	574.4	320.6	16.5	1.000011
78500.0	29.8	-55.4			47.6	574.8	331.2	15.9	1.000011
79000.0	29.1	-54.9			46.4	575.5	342.2	16.0	1.000010
79500.0	28.4	-54.4			45.2	576.2	350.1	16.2	1.000010
80000.0	27.7	-53.8			44.1	576.9	351.5	15.5	1.000010
80500.0	27.1	-53.3			42.9	577.6	353.0	15.0	1.000010
81000.0	26.5	-52.9			41.9	578.1	349.6	14.2	1.000009
81500.0	25.8	-53.0			40.9	578.1	335.9	13.5	1.000009
82000.0	25.2	-53.0			40.0	578.0	321.0	13.6	1.000009
82500.0	24.7	-53.1			39.0	577.9	309.0	14.6	1.000009
83000.0	24.1	-53.2			38.1	577.8	301.0	16.9	1.000008

STATION ALTITUDE 3989.00 FEET MSL
/ FEB. 60 0928 HRS MST
ASCENSION NO. 58

UPPER AIR DATA
038002005B
WHITE SANDS
TABLE 7 (cont)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
83500.0	23.5	-52.9			37.2	578.2	294.4	19.2	1.000008
84000.0	23.0	-52.1			36.2	579.2	291.4	20.6	1.000008
84500.0	22.5	-51.4			35.3	580.1	291.7	20.4	1.000008
85000.0	22.0	-50.7			34.4	581.1	292.1	20.2	1.000008
85500.0	21.5	-50.0			33.5	582.0	292.8	19.2	1.000007
86000.0	21.0	-49.3			32.6	582.9	294.4	16.9	1.000007
86500.0	20.5	-48.5			31.8	583.9	296.4	14.7	1.000007
87000.0	20.0	-47.8			30.9	584.8	298.7	12.4	1.000007
87500.0	19.6	-47.4			30.2	585.3	301.6	10.0	1.000007
88000.0	19.1	-47.0			29.5	585.9	306.2	7.6	1.000007
88500.0	18.7	-46.6			28.8	586.4	314.8	5.3	1.000006
89000.0	18.3	-46.1			28.1	587.0	333.6	3.4	1.000006
89500.0	17.9	-45.7			27.4	587.5	17.8	2.5	1.000006
90000.0	17.5	-45.3			26.7	588.1	46.3	2.1	1.000006
90500.0	17.1	-44.9			26.1	588.6	268.1	1.9	1.000006
91000.0	16.7	-44.5			25.5	589.1	255.3	5.4	1.000006
91500.0	16.3	-44.1			24.9	589.7	251.5	9.8	1.000006
92000.0	16.0	-43.6			24.3	590.2	253.9	17.3	1.000005
92500.0	15.6	-43.2			23.7	590.7	254.8	24.7	1.000005
93000.0	15.3	-42.8			23.1	591.3	255.2	31.6	1.000005
93500.0	14.9	-42.4			22.6	591.8	254.7	32.2	1.000005
94000.0	14.6	-42.0			22.0	592.3	254.1	32.8	1.000005
94500.0	14.3	-41.5			21.5	592.9			1.000005
95000.0	14.0	-41.1			21.0	593.4			1.000005
95500.0	13.7	-40.7			20.5	594.0			1.000005
96000.0	13.4	-40.3			20.0	594.5			1.000004
96500.0	13.1	-39.9			19.5	595.0			1.000004

STATION ALTITUDE 3989.00 FEET MSL
7 FEB. 80 0928 HRS MST
ASCENSION NO. 58

MANDATORY LEVELS
0380020056
WHITE SANDS
TABLE 8

GEODETIC COORDINATES
32.40083 LAT DEG
106.37033 LON DEG

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT	PERCENT	DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE			DEGREES(TN)	KNOTS
850.0	4604.	14.1	.4	39.	267.5	15.8
800.0	6256.	9.0	-3.2	42.	260.4	15.6
750.0	8065.	4.3	-6.9	44.	244.2	20.3
700.0	9832.	-.3	-10.8	45.	234.6	34.4
650.0	11756.	-2.8	-19.0	26.	244.3	36.7
600.0	13830.	-7.5	-23.6	26.	250.2	44.5
550.0	16027.	-13.5	-28.6	27.	250.5	48.3
500.0	18377.	-20.0	-34.1	27.	247.7	52.3
450.0	20905.	-26.9	-38.5	33.	250.5	60.9
400.0	23636.	-32.1	-43.2	32.	249.1	58.5
350.0	26712.	-40.0	-51.5	28.**	246.9	65.4
300.0	30094.	-48.4			244.4	63.4
250.0	34050.	-44.9			254.2	75.3
200.0	38357.	-45.0			254.9	106.7
175.0	[illegible]	-43.7			271.4	47.2
150.0	[illegible]	[illegible]			275.2	66.0
125.0	[illegible]	[illegible]			265.1	60.5
100.0	[illegible]	[illegible]			266.5	69.1
80.0	[illegible]	[illegible]			40.9	24.3
70.0	[illegible]	[illegible]			259.3	23.0
60.0	[illegible]	-62.4			263.0	27.3
50.0	[illegible]	[illegible]			347.8	14.3
40.0	[illegible]	[illegible]			316.6	11.3
30.0	[illegible]	[illegible]			326.6	16.1
25.0	[illegible]	[illegible]			317.2	13.9
20.0	[illegible]	-47.8			298.0	12.6
15.0	[illegible]	-42.4			254.9	32.0

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