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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/6 4/2
19303A GSRS, MISSILE NUMBER 1154, ROUND NUMBER V-19.(U)
MAR 79

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METEOROLOGICAL DATA REPORT

1930M ESRS
Missile No. 1154
Round No. V-19

by

USMC Meteorological Team

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

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 Round Number V-19.
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 2. Meteorology
 3. Wind

20. ABSTRACT (Continue on reverse side if necessary and identify by block number):
 This report contains:
 Meteorological data gathered for the launching of 19303A GSRS, Missile Number 1154, Round Number V-19, are presented in tabular form.

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INTRODUCTION

19303 GSPS (AA), Missile Number(s) 1154, Round Number(s) V-19
were launched from LC-33, White Sands Missile Range (WSMR), New
Mexico, at 0910 MST, 19 March 1979. The scheduled launch time(s)
were 0900 and 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, wind velocity 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.

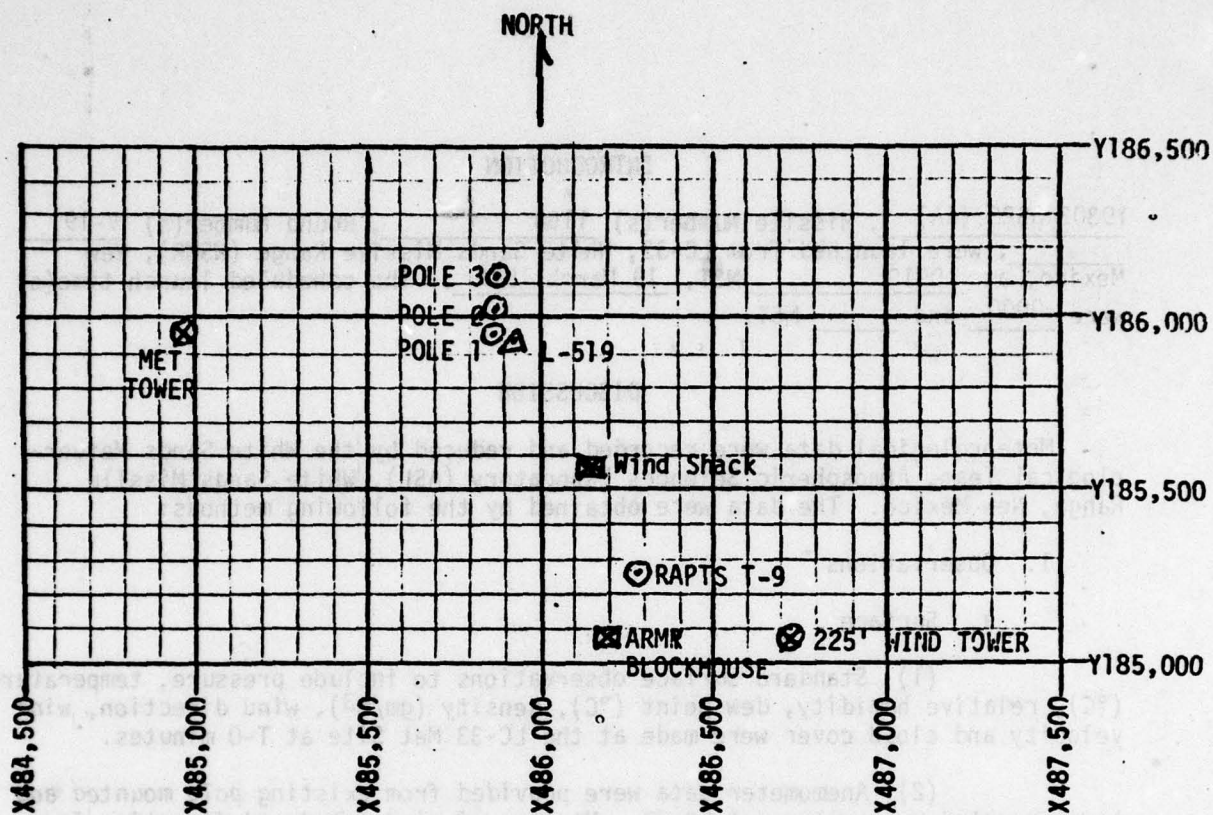
b. Upper Air

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

SITE AND ALTITUDE

LC-33 1 kilometer (50 meter inc)
at 0850 MST and 0910 MST

(2) Air structure data (rawinsonde) were collected at the SMR Met Site at T-0 minutes. Data were collected from surface to 125% of apogee in 500-foot increments.



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders in Wind Shack.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders in Wind Shack
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar

The data are presented in the following tabulations:

ELEVATION	3977.30	FEET/MSL
PRESSURE	878.8	MPS
TEMPERATURE	10	°C
RELATIVE HUMIDITY	54	%
DEW POINT	1.2	°C
DENSITY	1077	GM/M ³
WIND SPEED	CALM	
WIND DIRECTION		
CLOUD COVER	9	ci

TABLE 1. SURFACE OBSERVATIONS TAKEN AT LC-33
 AT 0910 MST, 19 MARCH 1979
 (AA) 19303 GSRS, MISSILE NUMBER 1154
 POUND NUMBER V-19

LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	CALM	CALM	-30	347	3	-30	CALM	CALM
-20	CALM	CALM	-20	347	3	-20	CALM	CALM
-10	CALM	CALM	-10	350	3	-10	CALM	CALM
0.0	CALM	CALM	0.0	350	3	0.0	CALM	CALM
+10	CALM	CALM	+10	350	3	+10	CALM	CALM

POLE #1 = X485,074.29 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 = X485,077.29 Y186,116.06 H4063.92 83.6 ft. AGL

TABLE 2

TYPE 19303 GSRS MISSILE NO. 1154 ROUND NO. V-19

LAUNCHED FROM LC-33 DATE 19 March 1979 TIME 0910 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH: _____

OR TRUE NORTH TRUE NORTH.

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

LEVEL #1 12 ft			LEVEL #2 62 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	CALM	CALM	-30	CALM	CALM
-20	CALM	CALM	-20	CALM	CALM
-10	CALM	CALM	-10	CALM	CALM
0.0	CALM	CALM	0.0	CALM	CALM
+10	CALM	CALM	+10	CALM	CALM
LEVEL #3 102 ft			LEVEL #4 202 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	CALM	CALM	-30	CALM	CALM
-20	CALM	CALM	-20	CALM	CALM
-10	CALM	CALM	-10	CALM	CALM
0.0	CALM	CALM	0.0	CALM	CALM
+10	CALM	CALM	+10	CALM	CALM

WTSM COORDINATES: X484,982.64 Y185,57.73 H3983.00 (base)

TABLE 3

TYPE 19303 GSRS MISSILE NO. 1154 ROUND NO. V-19

LAUNCHED FROM LC-33 DATE 19 March 1979 TIME 0910 MST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____

OR TRUE NORTH TRUE NORTH

PILOT BALLOON MEASURED WIND DATA

HEIGHT METERS	DIRECTION DEGREES	SPEED MPH
SUR	CALM	
50	CALM	
100	270	0.5
150	090	1.5
200	092	3.0
250	118	3.0
300	103	4.0
350	174	8.5
400	172	9.0
450	168	10.0
500	156	9.5

HEIGHT METERS	DIRECTION DEGREES	SPEED MPH
550	168	11.5
600	169	11.5
650	170	11.0
700	162	12.0
750	157	11.0
800	154	10.5
850	155	14.0
900	154	13.0
950	153	13.0
1000	163	15.0
1050		

TABLE 4

RELEASED FROM LC-33 DATE 19 March 1979 TIME 0850 LST

RELEASE POINT COORDINATES (WSTM) X = 486,037.24 Y = 102,350.16 H = 3977.30

MISSILE TYPE 19303 GSRS MISSILE NO. 1154 ROUND NO. V-19

MISSILE LAUNCHED FROM LC-33 DATE 19 March 1979 TIME 0910 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH! _____

OR TRUE NORTH: TRUE NORTH

PILOT BALLOON MEASURED WIND DATA

HEIGHT METERS	DIRECTION DLGREES	SPEED MPH
SUR	CALM	
50	044	4.5
100	090	3.0
150	090	3.0
200	071	2.0
250	135	3.0
300	162	5.5
350	169	6.0
400	175	12.0
450	161	11.0
500	156	10.0

HEIGHT METERS	DIRECTION DEGREES	SPEED MPH
550	170	13.0
600	166	12.0
650	167	14.0
700	171	14.0
750	173	12.0
800	168	12.5
850	153	13.0
900	169	10.5
950	175	12.0
1000	183	13.0
1050		

TABLE 5

RELEASED FROM LC-33 DATE 19 March 1979 j TIME 0910 LST

RELEASE POINT COORDINATES (WSTM) X = 486, 37.24 Y = 182, 350.16 H = 3977.30

MISSILE TYPE 19303 GSRS MISSILE NO. 1154 ROUND NO. V-19

MISSILE LAUNCHED FROM LC-33 DATE 19 March 1979 TIME 0910 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH _____

OR TRUE NORTH: TRUE NORTH.

STATION ALTITUDE 3997.30 FEET MSL
 19 MAP. 79
 ASCENSION NO. 48

SIGNIFICANT LEVEL DATA
 0780060046
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
875.0	3997.3	11.1	-2.3	39.0
650.0	4765.5	6.9	-5.1	39.0
837.2	5196.2	8.5	-5.3	37.0
816.6	5872.1	8.2	-5.6	37.0
766.2	7566.5	4.0	-9.0	38.0
700.0	9974.4	-1.8	-14.2	38.0
676.8	10853.3	-3.0	-25.2	16.0
661.4	11452.2	-3.0	-17.3	32.0
643.0	12185.0	-4.0	-24.7	18.0
573.2	15138.2	-8.6	-29.2	17.0
500.0	18566.2	-16.9	-23.6	56.0
438.0	21765.0	-24.9	-29.4	66.0
400.0	23934.8	-29.9	-36.0	55.0
339.8	27692.9	-38.4	-44.9	50.0
300.0	30468.2	-45.8	-50.9	56.0
259.4	33592.8	-54.9		
250.0	34366.7	-56.7		
233.8	35757.8	-59.1		
221.7	36861.4	-56.7		
210.0	37989.1	-58.5		
200.0	39001.6	-57.7		
171.0	42303.9	-51.8		
150.0	45099.8	-52.5		
133.4	47593.9	-53.4		
113.0	51093.0	-56.4		
100.0	53624.4	-61.2		
91.4	55450.4	-64.9		
70.0	60863.2	-60.1		
66.2	62040.0	-57.6		
50.0	67861.9	-58.4		
30.0	78505.2	-55.9		
20.0	87229.7	-49.4		
17.6	90016.2	-47.3		
13.3	96316.8	-35.3		
11.4	99854.3	-38.1		
9.6	103761.0	-37.5		

STATION ALTITUDE 3997.30 FEET MSL
 19 MAR. 79 0900 HRS MST
 ASCENSION NO. 48

UPPER AIR DATA
 0780060046
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3997.3	875.0	11.1	-2.3	39.0	1070.0	657.6	30.0	1.9	1.000263
4000.0	874.9	11.1	-2.3	39.0	1069.9	657.5			1.000263
4500.0	859.0	8.4	-4.7	39.0	1060.7	654.3			1.000257
5000.0	843.3	7.7	-5.7	38.0	1044.0	653.5			1.000252
5500.0	827.9	8.4	-5.5	37.0	1022.6	654.3			1.000247
6000.0	812.7	7.9	-5.9	37.1	1005.6	653.7			1.000243
6500.0	797.8	6.7	-6.8	37.4	991.5	652.2			1.000239
7000.0	783.1	5.4	-7.8	37.7	977.6	650.6			1.000234
7500.0	768.7	4.2	-8.8	37.9	964.0	649.3			1.000230
8000.0	754.3	3.0	-9.9	38.0	950.2	647.9			1.000226
8500.0	740.2	1.8	-11.0	38.0	936.6	646.4			1.000222
9000.0	726.3	.6	-12.1	38.0	923.2	644.9			1.000218
9500.0	712.7	-.6	-13.2	38.0	910.0	643.5	209.2	19.7	1.000214
10000.0	699.3	-1.8	-14.4	37.4	896.9	642.0	215.7	22.3	1.000210
10500.0	686.0	-2.5	-15.9	24.8	882.5	641.1	220.8	25.2	1.000203
11000.0	673.0	-3.0	-17.7	19.9	867.4	640.5	222.5	28.8	1.000198
11500.0	660.2	-3.1	-19.9	31.1	850.8	640.5	223.6	32.6	1.000197
12000.0	647.6	-3.7	-22.5	21.5	836.9	639.6	225.7	33.9	1.000192
12500.0	635.2	-4.5	-25.2	17.9	823.2	638.7	228.0	34.6	1.000187
13000.0	622.9	-5.3	-26.0	17.7	809.7	637.8	230.6	35.7	1.000184
13500.0	610.9	-6.0	-26.7	17.6	796.5	636.8	233.0	37.1	1.000181
14000.0	599.2	-6.8	-27.5	17.4	783.4	635.9	231.1	39.3	1.000178
14500.0	587.6	-7.6	-28.2	17.2	770.6	635.0	229.1	41.7	1.000175
15000.0	576.3	-8.4	-29.0	17.0	759.0	634.0	226.3	41.9	1.000172
15500.0	565.0	-9.5	-27.6	21.1	746.2	632.7	225.6	42.1	1.000170
16000.0	553.8	-10.7	-26.1	26.8	734.8	631.3	223.2	41.6	1.000168
16500.0	542.9	-11.9	-25.0	32.5	723.5	629.9	222.8	41.2	1.000166
17000.0	532.2	-13.1	-24.3	38.2	712.5	628.4	223.4	41.6	1.000163
17500.0	521.7	-14.3	-23.9	43.9	701.7	627.0	224.2	42.0	1.000161
18000.0	511.4	-15.5	-23.6	49.6	691.1	625.5	224.4	43.3	1.000159
18500.0	501.3	-16.7	-23.6	55.2	680.6	624.0	224.4	44.6	1.000157
19000.0	491.2	-18.0	-24.3	57.3	670.1	622.5	225.4	46.0	1.000154
19500.0	481.2	-19.2	-25.2	58.9	659.7	621.0	226.6	47.4	1.000152
20000.0	471.4	-20.5	-26.1	60.5	649.5	619.5	228.4	48.2	1.000149
20500.0	461.8	-21.7	-27.0	62.0	639.4	617.9	230.4	49.0	1.000146
21000.0	452.4	-22.9	-27.9	63.6	629.5	616.4	231.9	49.3	1.000144
21500.0	443.2	-24.2	-28.8	65.1	619.8	614.8	233.3	49.3	1.000141
22000.0	434.0	-25.4	-30.0	64.9	610.0	613.5	233.1	50.2	1.000139
22500.0	425.0	-26.6	-31.6	62.3	600.2	611.9	232.4	51.5	1.000136
23000.0	416.1	-27.7	-33.1	59.8	590.4	610.4	231.1	52.4	1.000134

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

STATION ALTITUDE 3997.30 FEET MSL
 19 MAR. 79 0900 HRS MDT
 ASCENSION NO. 48

UPPER AIR DATA
 0780060048
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT DEGREES				DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	407.4	-28.9	-34.6	57.2	580.9	609.0	229.7	53.2	1.000131
24000.0	388.9	-30.0	-36.1	54.9	571.4	607.5	229.9	51.8	1.000129
24500.0	390.3	-31.2	-37.3	54.2	561.8	605.1	230.3	50.2	1.000127
25000.0	381.9	-32.3	-38.5	53.6	552.3	604.7	230.5	48.7	1.000124
25500.0	373.7	-33.4	-39.7	52.9	543.0	603.2	230.7	47.3	1.000122
26000.0	365.7	-34.6	-40.9	52.3	533.9	601.8	229.7	48.6	1.000120
26500.0	357.9	-35.7	-42.1	51.6	524.9	600.4	229.0	49.9	1.000118
27000.0	350.2	-36.8	-43.2	50.9	516.1	598.9	230.6	51.3	1.000116
27500.0	342.7	-38.0	-44.4	50.3	507.5	597.5	232.1	52.6	1.000114
28000.0	335.1	-39.2	-45.5	50.7	499.0	595.9	234.0	53.3	1.000112
28500.0	327.7	-40.6	-46.6	51.7	490.8	594.2	235.5	54.0	1.000110
29000.0	320.4	-41.9	-47.7	52.8	482.6	592.5	235.3	54.3	1.000108
29500.0	313.3	-43.2	-48.7	53.9	474.7	590.8	235.2	54.5	1.000106
30000.0	306.4	-44.6	-49.8	55.0	466.8	589.0	235.7	53.8	1.000104
30500.0	299.6	-45.9	-51.0	55.4**	459.2	587.3	236.2	53.1	1.000103
31000.0	292.7	-47.3	-53.9	46.5**	451.5	585.4	237.4	52.7	1.000101
31500.0	285.9	-48.8	-56.9	37.5**	444.0	583.5	239.5	52.4	1.000099
32000.0	279.4	-50.3	-60.4	28.5**	436.6	581.6	240.8	52.5	1.000097
32500.0	272.9	-51.7	-64.5	19.6**	429.4	579.7	242.0	52.8	1.000096
33000.0	266.7	-53.2	-70.0	10.6**	422.3	577.8	243.3	53.3	1.000094
33500.0	260.5	-54.6	-82.8	1.7**	415.3	575.9	244.5	53.9	1.000093
34000.0	254.4	-55.8			407.9	574.3	245.0	54.3	1.000091
34500.0	248.4	-56.9			400.2	572.9	245.0	54.6	1.000089
35000.0	242.5	-57.3			392.3	571.7	243.9	54.7	1.000087
35500.0	236.7	-58.7			384.5	570.6	242.1	54.7	1.000086
36000.0	231.1	-58.6			375.2	570.7	240.6	55.0	1.000084
36500.0	225.6	-57.5			364.4	572.1	239.5	55.6	1.000081
37000.0	220.2	-56.9			354.8	572.9	238.9	56.3	1.000079
37500.0	215.0	-57.7			347.7	571.8	239.0	57.4	1.000077
38000.0	209.9	-58.5			340.6	570.6	239.1	58.2	1.000076
38500.0	204.9	-58.1			331.9	571.3	239.3	58.2	1.000074
39000.0	200.0	-57.7			323.4	571.8	239.5	58.2	1.000072
39500.0	195.3	-56.8			314.5	573.0	239.4	56.8	1.000070
40000.0	190.7	-55.9			305.9	574.2	240.2	55.3	1.000068
40500.0	186.3	-55.0			297.5	575.4	240.5	54.6	1.000066
41000.0	181.9	-54.1			289.3	576.6	240.9	54.1	1.000064
41500.0	177.6	-53.2			281.4	577.7	241.2	54.6	1.000063
42000.0	173.5	-52.3			273.7	578.9	241.3	55.6	1.000061
42500.0	169.4	-51.8			266.7	579.5	241.4	56.7	1.000059
43000.0	165.5	-52.0			260.7	579.4	241.5	57.9	1.000058

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

STATION ALTITUDE 3997.30 FEET MSL
 19 MAR. 79 0900 HRS MST
 ASCENSION NO. 48

UPPER AIR DATA
 078006048
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TI)	WIND SPEED KNOTS	INDEX OF REFRACTION
43500.0	161.7	-52.1	-52.1	579.2	254.8	241.5	241.5	59.2	1.000057
44000.0	157.9	-52.2	-52.2	249.0	249.0	241.5	241.5	60.8	1.000055
44500.0	154.3	-52.3	-52.3	243.4	243.4	241.6	241.6	61.9	1.000054
45000.0	150.7	-52.5	-52.5	237.9	237.9	241.8	241.8	62.0	1.000053
45500.0	147.2	-52.6	-52.6	232.6	232.6	242.2	242.2	61.6	1.000052
46000.0	143.8	-52.8	-52.8	227.3	227.3	242.8	242.8	58.7	1.000051
46500.0	140.4	-53.0	-53.0	222.2	222.2	243.6	243.6	55.6	1.000050
47000.0	137.2	-53.2	-53.2	217.3	217.3	244.6	244.6	51.9	1.000048
47500.0	134.0	-53.4	-53.4	212.4	212.4	245.7	245.7	48.1	1.000047
48000.0	130.9	-53.7	-53.7	207.8	207.8	245.8	245.8	45.9	1.000046
48500.0	127.8	-54.2	-54.2	203.3	203.3	249.0	249.0	43.7	1.000045
49000.0	124.8	-54.6	-54.6	198.9	198.9	245.4	245.4	42.6	1.000044
49500.0	121.9	-55.0	-55.0	194.6	194.6	244.6	244.6	41.9	1.000043
50000.0	119.0	-55.5	-55.5	190.5	190.5	243.4	243.4	41.3	1.000042
50500.0	116.2	-55.9	-55.9	186.4	186.4	241.9	241.9	40.8	1.000041
51000.0	113.5	-56.3	-56.3	182.4	182.4	240.3	240.3	40.3	1.000041
51500.0	110.8	-57.2	-57.2	178.7	178.7	238.5	238.5	39.8	1.000040
52000.0	108.2	-58.1	-58.1	175.2	175.2	236.6	236.6	39.3	1.000039
52500.0	105.6	-59.1	-59.1	171.8	171.8	235.9	235.9	38.5	1.000038
53000.0	103.1	-60.0	-60.0	168.5	168.5	236.0	236.0	37.5	1.000038
53500.0	100.6	-61.0	-61.0	165.2	165.2	236.2	236.2	36.4	1.000037
54000.0	98.2	-62.0	-62.0	161.9	161.9	237.3	237.3	35.2	1.000036
54500.0	95.8	-63.0	-63.0	158.8	158.8	238.5	238.5	34.0	1.000035
55000.0	93.5	-64.0	-64.0	155.6	155.6	238.8	238.8	33.3	1.000035
55500.0	91.2	-64.9	-64.9	152.5	152.5	239.7	239.7	32.9	1.000034
56000.0	89.0	-64.4	-64.4	148.5	148.5	238.5	238.5	32.8	1.000033
56500.0	86.8	-64.0	-64.0	144.8	144.8	238.0	238.0	33.1	1.000032
57000.0	84.7	-63.5	-63.5	140.8	140.8	237.5	237.5	33.5	1.000031
57500.0	82.6	-63.1	-63.1	137.1	137.1	237.2	237.2	32.2	1.000031
58000.0	80.6	-62.6	-62.6	133.5	133.5	236.9	236.9	30.7	1.000030
58500.0	78.7	-62.2	-62.2	130.0	130.0	236.7	236.7	28.1	1.000029
59000.0	76.8	-61.8	-61.8	126.5	126.5	236.5	236.5	24.6	1.000028
59500.0	74.9	-61.3	-61.3	123.2	123.2	236.2	236.2	21.0	1.000027
60000.0	73.1	-60.9	-60.9	120.0	120.0	235.2	235.2	17.7	1.000027
60500.0	71.3	-60.4	-60.4	116.8	116.8	233.7	233.7	14.3	1.000026
61000.0	69.6	-59.8	-59.8	113.7	113.7	230.5	230.5	11.0	1.000025
61500.0	67.9	-58.8	-58.8	110.4	110.4	223.6	223.6	7.7	1.000025
62000.0	66.3	-57.7	-57.7	107.2	107.2	200.7	200.7	4.7	1.000024
62500.0	64.8	-57.7	-57.7	104.7	104.7	168.4	168.4	3.8	1.000023
63000.0	63.2	-57.7	-57.7	102.2	102.2	130.7	130.7	4.8	1.000023

STATION ALTITUDE 3997.30 FEET MSL
 19 MAR. 79 0900 HRS MST
 ASCENSION NO. 48

UPPER AIR DATA
 0780060046
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	61.7	-57.8	99.8	571.7	119.5	6.5	1.000022	
64000.0	60.3	-57.9	97.5	571.6	115.7	8.3	1.000022	
64500.0	58.8	-57.9	95.2	571.5	113.6	9.5	1.000021	
65000.0	57.4	-58.0	93.0	571.4	112.6	9.8	1.000021	
65500.0	56.1	-58.1	90.8	571.3	111.8	10.2	1.000020	
66000.0	54.7	-58.1	88.7	571.2	117.1	9.1	1.000020	
66500.0	53.4	-58.2	86.6	571.2	124.0	8.0	1.000019	
67000.0	52.2	-58.3	84.6	571.1	132.8	7.4	1.000019	
67500.0	50.9	-58.3	82.6	571.0	142.7	7.2	1.000018	
68000.0	49.7	-58.4	80.6	570.9	150.6	7.2	1.000018	
68500.0	48.5	-58.3	78.7	571.1	143.1	6.6	1.000018	
69000.0	47.4	-58.1	76.8	571.3	134.2	6.1	1.000017	
69500.0	46.3	-58.0	74.9	571.4	129.0	6.6	1.000017	
70000.0	45.2	-57.9	73.1	571.6	126.4	7.5	1.000016	
70500.0	44.1	-57.8	71.4	571.7	126.5	8.1	1.000016	
71000.0	43.1	-57.7	69.6	571.9	133.7	7.9	1.000015	
71500.0	42.1	-57.6	68.0	572.0	141.1	7.8	1.000015	
72000.0	41.1	-57.4	66.3	572.2	147.4	6.5	1.000015	
72500.0	40.1	-57.3	64.7	572.3	158.1	4.6	1.000014	
73000.0	39.1	-57.2	63.1	572.5	180.2	3.1	1.000014	
73500.0	38.2	-57.1	61.6	572.8	173.4	2.2	1.000014	
74000.0	37.3	-57.0	60.1	572.8	139.7	1.9	1.000013	
74500.0	36.4	-56.9	58.7	573.0	108.1	2.4	1.000013	
75000.0	35.6	-56.7	57.3	573.1	66.1	4.1	1.000013	
75500.0	34.7	-56.6	55.9	573.3	50.1	6.9	1.000012	
76000.0	33.9	-56.5	54.5	573.4	43.6	9.9	1.000012	
76500.0	33.1	-56.4	53.2	573.6	40.4	10.9	1.000012	
77000.0	32.3	-56.3	51.9	573.7	37.7	11.6	1.000012	
77500.0	31.6	-56.1	50.7	573.9	35.3	12.3	1.000011	
78000.0	30.8	-56.0	49.5	574.0	38.1	10.0	1.000011	
78500.0	30.1	-55.9	48.3	574.2	43.0	7.6	1.000011	
79000.0	29.4	-55.6	47.1	574.6	52.4	5.3	1.000010	
79500.0	28.7	-55.2	45.9	575.1	52.5	4.2	1.000010	
80000.0	28.1	-54.8	44.8	575.6	52.7	3.1	1.000010	
80500.0	27.4	-54.4	43.6	576.1	53.2	2.0	1.000010	
81000.0	26.8	-54.1	42.6	576.0	69.7	1.8	1.000009	
81500.0	26.2	-53.7	41.5	577.1	88.7	1.9	1.000009	
82000.0	25.5	-53.3	40.5	577.6	103.7	2.2	1.000009	
82500.0	25.0	-52.9	39.5	578.1	109.9	2.3	1.000009	
83000.0	24.4	-52.6	38.5	578.9	112.8	2.2	1.000009	

STATION ALTITUDE 3997.30 FEET MSL
 19 MAR. 79 0900 HRS MST
 ASCENSION NO. 48

UPPER AIR DATA
 0780060048
 S M R

GEODETIC COORDINATES
 32.46034 LAT DEG
 106.42307 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(TM)	SPEED KNOTS	INDEX OF REFRACTION
83500.0	23.8	-52.2		37.5	579.1	116.0	2.2	1.000008
84000.0	23.3	-51.8		36.6	579.6	111.1	1.6	1.000008
84500.0	22.7	-51.4		35.7	580.1	65.7	.7	1.000008
85000.0	22.2	-51.1		34.6	580.6	353.4	1.2	1.000008
85500.0	21.7	-50.7		34.0	581.1	335.0	2.5	1.000008
86000.0	21.2	-50.3		33.1	581.5	329.5	4.2	1.000007
86500.0	20.7	-49.9		32.3	582.0	327.2	6.0	1.000007
87000.0	20.2	-49.6		31.5	582.5	325.5	7.8	1.000007
87500.0	19.8	-49.2		30.7	583.0	320.6	9.6	1.000007
88000.0	19.3	-48.8		30.0	583.5	317.2	11.4	1.000007
88500.0	18.9	-48.4		29.3	584.0	314.8	13.3	1.000007
89000.0	18.4	-48.1		28.5	584.5	314.0	12.6	1.000006
89500.0	18.0	-47.7		27.8	585.0	313.2	11.4	1.000006
90000.0	17.6	-47.3		27.2	585.5	312.3	10.2	1.000006
90500.0	17.2	-46.4		26.5	586.7	307.6	8.5	1.000006
91000.0	16.8	-45.4		25.8	587.9	297.0	6.6	1.000006
91500.0	16.5	-44.5		25.1	589.1	279.1	5.1	1.000006
92000.0	16.1	-43.5		24.4	590.3	256.5	5.0	1.000005
92500.0	15.8	-42.6		23.8	591.6	249.5	7.3	1.000005
93000.0	15.4	-41.6		23.2	592.8	245.9	9.6	1.000005
93500.0	15.1	-40.7		22.6	594.0	243.6	11.9	1.000005
94000.0	14.7	-39.7		22.0	595.2	244.2	14.0	1.000005
94500.0	14.4	-38.8		21.4	596.4	244.8	16.0	1.000005
95000.0	14.1	-37.8		20.9	597.6	245.3	18.1	1.000005
95500.0	13.8	-36.9		20.3	598.9	245.9	19.9	1.000005
96000.0	13.5	-35.9		19.8	600.1	246.9	20.6	1.000004
96500.0	13.2	-35.4		19.3	601.6	247.9	21.3	1.000004
97000.0	12.9	-35.8		19.0	600.1	248.9	22.0	1.000004
97500.0	12.6	-36.2		18.6	599.6	249.2	23.1	1.000004
98000.0	12.4	-36.6		18.2	599.1	247.8	25.6	1.000004
98500.0	12.1	-37.0		17.8	598.6	246.7	28.0	1.000004
99000.0	11.8	-37.4		17.5	598.1	245.7	30.5	1.000004
99500.0	11.6	-37.8		17.1	597.5	245.2	32.8	1.000004
100000.0	11.3	-38.1		16.8	597.3	245.8	34.1	1.000004
100500.0	11.1	-38.0		16.4	597.4	240.3	35.4	1.000004
101000.0	10.8	-37.9		16.1	597.5	246.7	36.7	1.000004
101500.0	10.6	-37.8		15.7	597.6			1.000003
102000.0	10.4	-37.8		15.4	597.7			1.000003
102500.0	10.2	-37.7		15.0	597.8			1.000003
103000.0	9.9	-37.6		14.7	597.9			1.000003

STATION ALTITUDE 3997.30 FEET MSL
 19 MAR. 79 0900 HRS MST
 ASCENSION NO. 48

MRN SIGNIFICANT LEVEL DATA
 0780060048
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOCENTRAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA SPEED MPS	N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
3140.	9999.**	9999.**	-9999.**	-9999.**	99	-37.5	9.600+0
3028.	246.	17.	7.	10.	99	-38.1	1.140+1
2921.	248.	11.	4.	10.	99	-35.3	1.330+1
2731.	312.	5.	-4.	4.	99	-47.3	1.760+1
2640.	323.	4.	-4.	3.	99	-49.4	2.000+1
2385.	44.	4.	-3.	-3.	99	-55.9	3.000+1
2061.	150.	4.	3.	-2.	99	-58.4	5.000+1
1884.	204.	2.	2.	1.	99	-57.6	6.620+1
1849.	232.	6.	4.	5.	99	-60.1	7.000+1
1685.	239.	17.	9.	14.	99	-64.9	9.140+1
1629.	236.	19.	10.	15.	99	-61.2	1.000+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET MSL
 19 MAR. 79 0900 HRS MST
 ASCENSION NO. 48

MANDATORY LEVELS
 0780060048
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4782.	6.9	-6.1	39.	9999.0	9999.0XX	
800.0	6423.	6.8	-6.7	37.	9999.0	9999.0XX	
750.0	8149.	2.6	-10.2	38.	9999.0	9999.0XX	
700.0	9965.	-1.8	-14.2	38.	215.4	22.2	
650.0	11891.	-3.6	-21.5	23.	225.2	33.7	
600.0	13954.	-6.8	-27.4	17.	231.3	39.1	
550.0	16160.	-11.1	-25.7	29.	223.0	41.5	
500.0	18541.	-16.9	-23.6	50.	224.4	44.8	
450.0	21104.	-23.3	-28.1	64.	232.3	49.3	
400.0	23890.	-29.9	-36.0	50.	229.8	52.1	
350.0	26973.	-36.9	-43.3	51.	230.6	51.3	
300.0	30409.	-45.8	-50.9	50.	236.2	53.2	
250.0	34293.	-56.7			245.0	54.5	
200.0	36910.	-57.7			239.5	58.3	
175.0	41707.	-52.7			241.2	55.2	
150.0	44980.	-52.5			241.9	62.0	
125.0	48832.	-54.6			245.5	42.7	
100.0	53461.	-61.2			236.4	36.2	
80.0	57950.	-62.5			236.9	30.3	
70.0	60670.	-60.1			231.8	12.0	
60.0	63961.	-57.9			115.3	8.5	
50.0	67620.	-58.4			149.7	7.2	
40.0	72245.	-57.3			158.0	4.6	
30.0	78232.	-55.9			43.4	7.5	
25.0	82064.	-53.0			109.2	2.3	
20.0	86824.	-49.4			323.4	8.5	
15.0	93107.	-40.5			243.5	12.0	
10.0	102292.	-37.6					

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

STATION ALTITUDE 3997.30 FEET MSL
 19 MAR. 79 0900 HRS MST
 ASCENSION NO. 48

MRN MANDATORY LEVELS
 0780060048
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA		E-W MPS	DEW PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	N-S MPS			AIR DEG C		
3116.	9999.**	9999.**	-9999.**	-9999.**	99	-37.6	1.000+1	
2538.	244.	6.	3.	0.	99	-40.5	1.500+1	
2646.	323.	4.	-4.	3.	99	-49.4	2.000+1	
2501.	109.	1.	0.	-1.	99	-53.0	2.500+1	
2385.	43.	4.	-3.	-3.	99	-55.9	3.000+1	
2202.	156.	2.	2.	-1.	99	-57.3	4.000+1	
2061.	150.	4.	3.	-2.	99	-58.4	5.000+1	
1946.	115.	4.	2.	-4.	99	-57.9	6.000+1	
1849.	232.	6.	4.	5.	99	-60.1	7.000+1	
1767.	237.	10.	9.	13.	99	-62.5	8.000+1	
1629.	236.	19.	10.	16.	99	-61.2	1.000+2	
1488.	245.	22.	9.	20.	99	-54.6	1.250+2	
1371.	242.	32.	15.	28.	99	-52.5	1.500+2	
1271.	241.	28.	14.	25.	99	-52.7	1.750+2	
1186.	240.	30.	15.	26.	99	-57.7	2.000+2	
1045.	245.	28.	12.	25.	99	-56.7	2.500+2	
927.	236.	27.	15.	23.	05	-45.8	3.000+2	
822.	231.	26.	17.	20.	06	-36.9	3.500+2	
728.	230.	27.	17.	20.	06	-29.9	4.000+2	
643.	232.	25.	16.	20.	05	-23.3	4.500+2	
565.	224.	23.	16.	19.	07	-16.9	5.000+2	
493.	223.	21.	16.	15.	15	-11.1	5.500+2	
425.	231.	20.	13.	16.	21	-6.8	6.000+2	
362.	225.	17.	12.	12.	18	-3.6	6.500+2	
304.	215.	11.	9.	7.	12	-1.8	7.000+2	
248.	9999.**	9999.**	-9999.**	-9999.**	13	2.6	7.500+2	
196.	9999.**	9999.**	-9999.**	-9999.**	14	6.8	8.000+2	
146.	9999.**	9999.**	-9999.**	-9999.**	13	6.9	8.500+2	

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.