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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/6 4/2  
19304B GSRS, MISSILE NUMBER 1022, ROUND NUMBER V-22.(U)  
APR 79

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APRIL 1979

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METEOROLOGICAL DATA REPORT

193048 GSRS  
Missile No. 1022  
Round No. V-22

by

WSMR Meteorological Team

DDC  
REFILED  
JUN 28 1979  
RESERVE

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ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

**ECOM**

UNITED STATES ARMY ELECTRONICS COMMAND

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  Meteorological data gathered for the launching of 19304B GSRS, Missile Number 1022, Round V-22, are presented in tabular form.  400 844 TOP		

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## INTRODUCTION

19304B GSRS, Missile Number 1022, Round Number V-22, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0815 MST, 18 April 1979. The scheduled launch time was 0815 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 ( $\text{gm}/\text{m}^3$ ), 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.

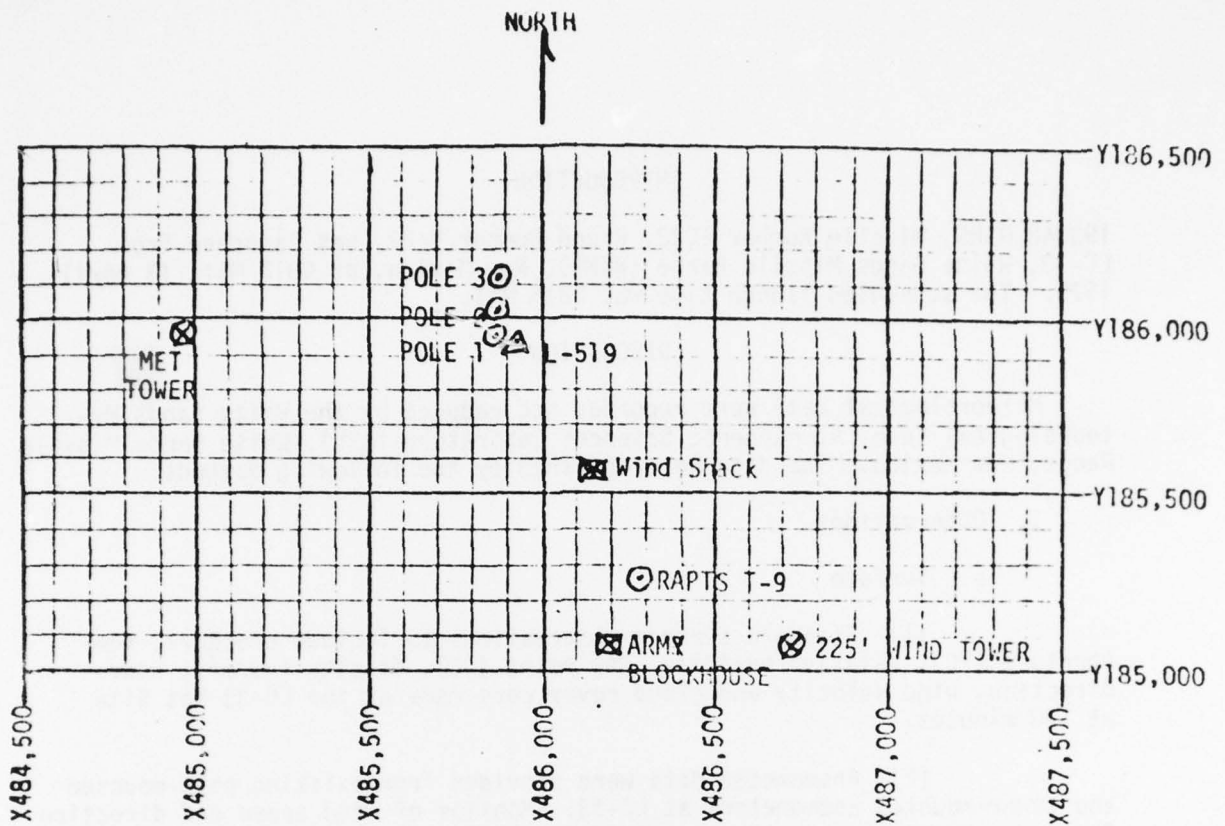
#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at T-0 minutes as follows:

## SITE AND ALTITUDE

LC-33 1 kilometer (50-meter increments)

(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	878.4	MBS
TEMPERATURE	19.8	°C
RELATIVE HUMIDITY	31	%
DEW POINT	2.2	°C
DENSITY	1041	GM/M <sup>3</sup>
WIND SPEED	CALM	MPH
WIND DIRECTION	1	DEGREES
CLOUD COVER	CLEAR	

TABLE I. SURFACE OBSERVATIONS TAKEN AT 0815 LOCAL TIME,  
18 APRIL 1979 AT LC-33, 193048 GSRS (AA),  
MISSILE NO. 1022, POUND NO. V-22.

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	177	10	-30	159	M	-30	180	07
-20	174	08	-20	157	M	-20	180	12
-10	175	08	-10	158	M	-10	180	11
0.0	175	08	0.0	155	M	0.0	180	10
+10	176	07	+10	156	M	+10	180	08

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

TABLE II

TYPE 19304B GSRS MISSILE NO. 1022 POUND NO. V-22

LAUNCHED FROM LC-33 DATE 18 April 1979 TIME 0815 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIPING 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	175	09	-30	168	08
-20	169	09	-20	170	08
-10	162	08	-10	168	08
0.0	177	09	0.0	175	08
+10	171	07	+10	174	07
LEVEL #3 102 ft			LEVEL #4 202 ft		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	177	16	-30	170	33
-20	176	16	-20	168	34
-10	178	16	-10	169	34
0.0	175	16	0.0	170	34
+10	176	16	+10	170	34

WTSM COORDINATES: X484,082.64 Y185,957.73 H3983.00 (base)

TABLE III

TYPE 19304B GSRS MISSILE NO. 1022 ROUND NO. V-22

LAUNCHED FROM LC-33 DATE 18 April 1979 TIME 0815 MST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH \_\_\_\_\_

OR TRUE NORTH TRUE NORTH

PILOT BALLOON MEASURED WIND DATA

HEIGHT METERS	DIR DEG	SPEED MPH
SUR	000	.00
50	184	1.5
100	184	3.0
150	186	5.0
200	193	9.0
250	167	8.5
300	178	11.0
350	185	10.5
400	191	10.5
450	193	11.5
500	200	14.0

HEIGHT METERS	DIR DEG	SPEED MPH
550	192	15.0
600	203	16.0
650	205	14.5
700	222	14.0
750	214	11.0
800	224	9.5
850	234	9.5
900	239	10.5
950	236	8.5
1000	233	10.0
1050		

TABLE IV

RELEASED FROM LC-33 DATE 18 April 1979 TIME 0816 LST

RELEASE POINT COORDINATES (WSTM) X = 486,037.24 Y = 182,350.16 H = 3977.30

MISSILE TYPE 19304B GSRS MISSILE NO. 1022 ROUND NO. V-22

MISSILE LAUNCHED FROM LC-33 DATE 18 April 1979 TIME 0815 LST

NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH \_\_\_\_\_

OR TRUE NORTH TRUE NORTH

GEODETTIC COORDINATES  
 32.4A034 LAT DEG  
 106.42307 LON DEG

SIGNIFICANT LEVEL DATA  
 1080060064  
 S M R

STATION ALTITUDE 3997.30 FEET MSL  
 18 APR. 79 0830 HRS MST  
 ASCENSION NO. 64

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
877.0	3997.3	.9	23.0
850.0	4885.7	-.4	26.0
778.6	7327.7	-3.6	35.0
738.6	8765.9	-3.9	43.0
731.2	9038.5	-11.1	25.0
700.0	10215.1	-17.0	17.0
685.0	10797.1	-17.7	17.0
649.2	12226.8	-20.4	18.0
614.0	13697.0	-23.5	15.0
555.6	16296.0	-28.7	15.0
530.8	17467.1	-29.6	15.0
500.0	18985.8	-30.9	18.0
454.6	21361.0	-36.2	17.0
400.0	24472.3	-42.6	17.0
346.4	27802.5	-48.8	18.0
300.0	31140.5		
281.4	32504.3		
250.0	35148.6		
200.0	39878.1		
187.6	41200.4		
170.6	43170.6		
159.6	44700.9		
150.0	45809.6		
118.2	50765.8		
100.0	54159.7		
95.4	55121.4		
83.0	57829.8		
77.0	59419.3		
73.1	60482.5		
70.0	61342.3		
63.6	63276.4		
50.0	68204.4		
48.8	68714.2		
32.0	77645.9		
30.0	79026.0		
28.4	80219.1		
22.7	85115.9		
20.0	87893.5		
16.3	92431.6		
14.8	94588.9		

STATION ALTITUDE 3997.30 FEET MSL  
 18 APR. 79 0830 HRS MST  
 ASCENSION NO. 64

UPPER AIR DATA  
 1080060064  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3997.3	877.0	23.2	.9	23.0	1028.0	671.6	.0	.0	1.000257
4000.0	876.9	23.2	.9	23.0	1028.0	671.6	.0	.0	1.000257
4500.0	861.6	21.2	.2	24.7	1017.1	669.3	225.6	1.5	1.000254
5000.0	846.5	19.2	-.5	26.4	1006.0	667.0	225.6	3.0	1.000250
5500.0	831.4	17.5	-1.0	28.3	993.9	665.0	225.6	4.5	1.000247
6000.0	816.6	15.8	-1.7	30.1	982.1	663.1	225.6	6.1	1.000243
6500.0	802.1	14.1	-2.3	31.9	970.4	661.1	225.7	7.5	1.000240
7000.0	787.8	12.4	-3.1	33.8	958.8	659.1	226.1	8.7	1.000236
7500.0	773.7	10.9	-3.6	36.0	946.7	657.3	224.8	9.7	1.000233
8000.0	759.6	9.7	-3.6	38.7	933.4	656.0	220.4	10.5	1.000230
8500.0	745.8	8.5	-3.8	41.5	920.3	654.6	223.5	12.3	1.000227
9000.0	732.2	7.6	-9.9	27.5	907.1	653.3	233.3	17.1	1.000216
9500.0	718.8	7.1	-13.3	21.9	892.6	652.5	241.6	22.8	1.000209
10000.0	705.6	6.5	-15.8	18.5	878.3	651.7	244.3	24.6	1.000204
10500.0	692.6	5.8	-17.3	17.0	864.2	651.0	243.2	23.0	1.000200
11000.0	679.8	4.8	-18.0	17.1	851.3	649.8	239.1	21.4	1.000197
11500.0	667.2	3.4	-19.0	17.5	839.8	648.1	231.9	20.0	1.000194
12000.0	654.8	2.0	-19.9	17.8	828.5	646.4	225.9	19.9	1.000191
12500.0	642.5	1.1	-20.9	17.4	815.7	645.3	222.5	21.1	1.000188
13000.0	630.4	.6	-22.0	16.4	801.7	644.8	219.5	22.4	1.000184
13500.0	618.6	.2	-23.1	15.4	788.0	644.3	217.9	22.8	1.000180
14000.0	606.9	-.7	-24.1	15.0	775.7	643.2	216.6	23.1	1.000177
14500.0	595.3	-2.0	-25.1	15.0	764.4	641.7	215.2	23.4	1.000174
15000.0	584.0	-3.2	-26.1	15.0	753.3	640.2	213.7	23.4	1.000172
15500.0	572.9	-4.4	-27.1	15.0	742.4	638.7	212.3	23.4	1.000169
16000.0	562.0	-5.7	-28.1	15.0	731.6	637.3	212.4	23.4	1.000166
16500.0	551.2	-6.6	-28.9	15.0	720.1	636.2	213.8	23.4	1.000163
17000.0	540.6	-7.1	-29.2	15.0	707.4	635.6	216.5	23.9	1.000160
17500.0	530.1	-7.6	-29.6	15.1	695.1	635.0	220.5	24.9	1.000158
18000.0	519.6	-8.9	-30.0	16.1	684.9	633.4	224.0	27.2	1.000155
18500.0	509.7	-10.2	-30.4	17.0	674.8	631.9	226.7	30.4	1.000153
19000.0	499.7	-11.4	-30.9	18.0	664.9	630.4	226.7	32.1	1.000151
19500.0	489.8	-12.6	-32.0	17.8	654.7	628.9	226.5	33.2	1.000148
20000.0	480.1	-13.8	-33.2	17.6	644.7	627.5	226.6	32.4	1.000146
20500.0	470.6	-15.0	-34.3	17.4	634.8	626.1	228.1	31.0	1.000143
21000.0	461.2	-16.1	-35.4	17.2	625.0	624.6	231.7	28.8	1.000141
21500.0	452.0	-17.3	-36.4	17.0	615.4	623.2	233.5	27.0	1.000139
22000.0	442.8	-18.6	-37.5	17.0	605.8	621.6	234.5	25.4	1.000136
22500.0	433.8	-19.8	-38.5	17.0	596.4	620.1	234.7	24.6	1.000134
23000.0	425.0	-21.1	-39.5	17.0	587.2	618.6	234.6	24.0	1.000132

STATION ALTITUDE 3997.30 FEET MSL  
 18 APR. 79 0830 HRS MST  
 ASCENSION NO. 64

UPPER AIR DATA  
 1080060064  
 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	DIRECTION DEGREES (TH)	WIND DATA SPEED KNOTS	INDFX OF REFRACTION
23500.0	416.3	-22.3	-40.6	17.0	578.1	617.1	236.7	24.2	1.000130
24000.0	407.8	-23.5	-41.6	17.0	569.1	615.6	239.0	24.5	1.000128
24500.0	399.5	-24.8	-42.6	17.0	560.3	614.0	238.8	25.2	1.000126
25000.0	391.1	-25.9	-43.6	17.2	551.1	612.6	238.5	25.9	1.000124
25500.0	382.9	-27.1	-44.5	17.3	542.2	611.1	238.6	25.8	1.000121
26000.0	374.9	-28.3	-45.4	17.5	533.3	609.6	235.0	25.8	1.000119
26500.0	367.0	-29.5	-46.3	17.6	524.7	608.2	234.9	25.7	1.000117
27000.0	359.3	-30.7	-47.2	17.7	516.2	606.7	234.7	25.7	1.000115
27500.0	351.8	-31.8	-48.2	17.9	507.8	605.2	234.4	26.3	1.000114
28000.0	344.3	-33.0	-49.5	17.2**	499.5	603.7	234.1	26.9	1.000112
28500.0	336.8	-34.3	-52.0	14.5**	491.2	602.1	234.3	26.7	1.000110
29000.0	329.5	-35.5	-54.8	11.8**	483.1	600.6	234.6	26.5	1.000108
29500.0	322.4	-36.7	-57.9	9.0**	475.1	599.0	235.4	25.7	1.000106
30000.0	315.4	-38.0	-61.7	6.3**	467.2	597.4	236.4	24.8	1.000104
30500.0	308.5	-39.2	-66.8	3.5**	459.5	595.9	236.8	25.1	1.000102
31000.0	301.9	-40.5	-77.7	.8**	451.9	594.3	236.9	25.9	1.000101
31500.0	295.2	-41.7			444.2	592.7	237.3	27.1	1.000099
32000.0	288.6	-42.9			436.6	591.2	237.7	28.6	1.000097
32500.0	282.2	-44.0			429.1	589.7	238.2	30.0	1.000096
33000.0	275.8	-45.0			421.3	588.4	238.6	31.4	1.000094
33500.0	269.6	-46.0			413.5	587.1	239.2	32.8	1.000092
34000.0	263.5	-47.0			405.9	585.9	239.9	34.0	1.000090
34500.0	257.5	-47.9			398.4	584.6	240.8	35.2	1.000089
35000.0	251.7	-48.9			391.0	583.4	242.0	36.2	1.000087
35500.0	245.9	-49.8			383.6	582.2	243.3	37.5	1.000085
36000.0	240.2	-50.7			376.2	581.0	244.5	39.1	1.000084
36500.0	234.6	-51.7			368.9	579.8	245.5	40.3	1.000082
37000.0	229.1	-52.6			361.8	578.6	246.5	41.4	1.000081
37500.0	223.7	-53.5			354.8	577.4	247.1	42.3	1.000079
38000.0	218.5	-54.4			348.0	576.2	247.5	43.3	1.000078
38500.0	213.4	-55.3			341.3	575.0	248.3	43.1	1.000076
39000.0	208.5	-56.2			334.7	573.8	249.1	43.0	1.000075
39500.0	203.6	-57.1			328.3	572.6	249.8	42.5	1.000073
40000.0	199.8	-58.0			322.0	571.4	250.5	42.0	1.000072
40500.0	194.1	-59.0			315.7	570.1	250.7	42.1	1.000070
41000.0	189.4	-60.0			309.6	568.8	250.3	42.9	1.000069
41500.0	184.9	-59.8			301.9	569.1	250.1	43.6	1.000067
42000.0	180.5	-58.7			293.2	570.5	250.9	43.2	1.000065
42500.0	176.2	-57.6			284.8	571.9	251.7	42.9	1.000063
43000.0	172.0	-56.6			276.7	573.3	251.9	41.7	1.000062

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

STATION ALTITUDE 3997.30 FEET MSL  
 18 APR. 79 0830 HRS MST  
 ASCENSION NO. 64

UPPER AIR DATA  
 1080060064  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDX OF REFRACTION
							DIRECTION DEGREES(TN)	SPEED KNOTS	
43500.0	167.9	-56.0	-56.0	269.5	574.0	251.8	40.0	1.000060	
44000.0	164.0	-55.8	-55.8	262.9	574.3	251.0	39.4	1.000059	
44500.0	160.1	-55.6	-55.6	256.4	574.6	249.4	39.6	1.000057	
45000.0	156.4	-55.8	-55.8	250.6	574.4	248.0	39.9	1.000056	
45500.0	152.7	-56.3	-56.3	245.2	573.8	246.9	40.4	1.000055	
46000.0	149.1	-56.8	-56.8	240.0	573.0	245.9	40.6	1.000053	
46500.0	145.5	-57.6	-57.6	235.1	572.0	245.3	38.1	1.000052	
47000.0	142.0	-58.4	-58.4	230.3	571.0	244.6	35.6	1.000051	
47500.0	138.6	-59.1	-59.1	225.5	569.9	245.2	32.8	1.000050	
48000.0	135.2	-59.9	-59.9	220.9	568.9	246.3	30.0	1.000049	
48500.0	132.0	-60.7	-60.7	216.4	567.9	246.7	29.6	1.000048	
49000.0	128.8	-61.5	-61.5	212.0	566.8	246.3	31.5	1.000047	
49500.0	125.7	-62.2	-62.2	207.6	565.8	245.9	33.5	1.000046	
50000.0	122.7	-63.0	-63.0	203.4	564.7	245.4	35.8	1.000045	
50500.0	119.7	-63.8	-63.8	199.2	563.7	244.9	38.0	1.000044	
51000.0	116.8	-64.0	-64.0	194.7	563.3	244.1	39.2	1.000043	
51500.0	114.0	-63.7	-63.7	189.6	563.6	243.5	41.0	1.000042	
52000.0	111.2	-63.4	-63.4	184.7	564.2	243.4	44.1	1.000041	
52500.0	108.5	-63.1	-63.1	180.0	564.7	245.5	44.6	1.000040	
53000.0	105.9	-62.8	-62.8	175.3	565.1	248.9	43.9	1.000039	
53500.0	103.3	-62.4	-62.4	170.8	565.5	253.7	39.5	1.000038	
54000.0	100.8	-62.1	-62.1	166.4	566.0	259.0	36.3	1.000037	
54500.0	98.3	-61.9	-61.9	162.2	566.2	263.6	34.4	1.000036	
55000.0	96.0	-61.7	-61.7	158.1	565.4	267.9	32.8	1.000035	
55500.0	93.6	-62.5	-62.5	154.8	565.5	269.1	30.7	1.000034	
56000.0	91.3	-63.5	-63.5	151.7	564.1	270.2	28.6	1.000034	
56500.0	89.1	-64.4	-64.4	148.7	562.6	263.3	24.2	1.000033	
57000.0	86.9	-65.4	-65.4	145.8	561.5	253.7	20.3	1.000032	
57500.0	84.8	-66.4	-66.4	142.9	560.1	242.1	19.2	1.000032	
58000.0	82.7	-67.4	-67.4	140.0	558.9	230.1	19.1	1.000031	
58500.0	80.6	-67.7	-67.7	136.8	558.4	225.5	20.5	1.000030	
59000.0	78.6	-68.1	-68.1	133.6	557.9	226.8	22.6	1.000030	
59500.0	76.7	-68.0	-68.0	130.2	558.0	230.0	24.9	1.000029	
60000.0	74.8	-65.3	-65.3	125.4	561.7	239.6	28.7	1.000028	
60500.0	73.0	-62.8	-62.8	120.9	565.0	246.8	33.1	1.000027	
61000.0	71.2	-63.3	-63.3	118.2	564.4	254.4	33.9	1.000026	
61500.0	69.5	-63.8	-63.8	115.6	563.7	262.1	34.5	1.000026	
62000.0	67.8	-64.3	-64.3	113.0	563.0	265.0	30.8	1.000025	
62500.0	66.1	-64.8	-64.8	110.5	562.3	265.3	24.3	1.000025	
63000.0	64.5	-65.3	-65.3	108.1	561.6	262.7	20.0	1.000024	

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GEODETIC COORDINATES  
 32.44034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GV/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
63500.0	62.9	-65.2		105.4	561.8	256.3	18.1	1.000023
64000.0	61.4	-64.4		102.4	562.9	248.8	17.6	1.000023
64500.0	59.9	-63.5		99.6	564.0	242.0	19.3	1.000022
65000.0	58.5	-62.7		96.8	565.2	239.1	20.7	1.000022
65500.0	57.1	-61.9		94.1	566.3	248.3	20.3	1.000021
66000.0	55.7	-61.0		91.4	567.4	257.6	20.5	1.000020
66500.0	54.3	-60.2		88.9	568.5	274.4	19.1	1.000020
67000.0	53.0	-59.3		86.4	569.7	293.5	19.4	1.000019
67500.0	51.7	-58.5		84.0	570.8	308.4	19.0	1.000019
68000.0	50.5	-57.6		81.6	571.9	322.8	16.5	1.000018
68500.0	49.3	-56.1		79.1	573.9	340.9	15.2	1.000018
69000.0	48.1	-55.3		77.0	575.1	354.1	13.6	1.000017
69500.0	47.0	-55.2		75.1	575.2	9.4	12.8	1.000017
70000.0	45.9	-55.1		73.4	575.3	21.9	11.7	1.000016
70500.0	44.9	-55.0		71.6	575.4	32.6	9.3	1.000016
71000.0	43.8	-54.9		69.9	575.5	49.6	7.4	1.000016
71500.0	42.8	-54.8		68.3	575.6	71.8	4.4	1.000015
72000.0	41.8	-54.7		66.6	575.7	131.3	3.2	1.000015
72500.0	40.8	-54.7		65.1	575.8	164.4	5.0	1.000014
73000.0	39.9	-54.6		63.5	576.0	167.8	6.3	1.000014
73500.0	38.9	-54.5		62.0	576.1	170.1	7.6	1.000014
74000.0	38.0	-54.4		60.5	576.2	171.2	8.9	1.000013
74500.0	37.1	-54.3		59.1	576.3	172.0	10.2	1.000013
75000.0	36.3	-54.2		57.7	576.4	177.2	11.9	1.000013
75500.0	35.4	-54.2		56.3	576.5	190.2	15.2	1.000013
76000.0	34.6	-54.1		55.0	576.6	198.2	19.0	1.000012
76500.0	33.8	-54.0		53.7	576.7	210.1	20.7	1.000012
77000.0	33.0	-53.9		52.4	576.8	222.8	22.6	1.000012
77500.0	32.2	-53.8		51.2	577.0	233.6	24.9	1.000011
78000.0	31.5	-53.1		49.8	577.9	245.9	25.9	1.000011
78500.0	30.7	-52.1		48.4	579.3	256.8	27.9	1.000011
79000.0	30.0	-51.1		47.1	580.6	264.5	28.9	1.000010
79500.0	29.4	-49.0		45.6	583.3	270.8	29.0	1.000010
80000.0	28.7	-46.8		44.2	586.1	277.1	29.5	1.000010
80500.0	28.0	-46.1		43.0	587.0	280.6	27.2	1.000010
81000.0	27.4	-45.4		42.1	586.6	284.5	24.5	1.000009
81500.0	26.8	-46.9		41.2	586.1	289.2	21.9	1.000009
82000.0	26.2	-47.1		40.3	585.7	288.7	20.4	1.000009
82500.0	25.6	-47.5		39.5	585.2	286.4	19.1	1.000009
83000.0	25.0	-47.8		38.7	584.6	283.8	17.8	1.000009

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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 DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
83500.0	24.4	-48.2		37.6	584.3	279.9	17.5	1.00000A
84000.0	23.9	-48.5		37.0	583.9	275.8	17.6	1.00000A
84500.0	23.3	-48.9		36.3	583.4	271.7	17.8	1.00000A
85000.0	22.6	-49.2		35.5	583.0	268.1	17.7	1.00000A
85500.0	22.3	-48.6		34.6	583.7	264.8	17.6	1.00000A
86000.0	21.8	-47.8		33.7	584.9	261.4	17.4	1.000007
86500.0	21.3	-46.9		32.8	586.0	260.0	17.6	1.000007
87000.0	20.8	-46.0		32.0	587.1	259.9	17.8	1.000007
87500.0	20.4	-45.2		31.1	588.2	259.8	18.0	1.000007
88000.0	19.9	-44.5		30.3	589.1	259.7	17.2	1.000007
88500.0	19.5	-44.5		29.6	589.1	259.4	15.5	1.000007
89000.0	19.0	-44.5		29.0	589.2	259.1	13.8	1.000006
89500.0	18.6	-44.4		28.3	589.2	255.9	12.8	1.000006
90000.0	18.2	-44.4		27.7	589.2	248.7	12.9	1.000006
90500.0	17.8	-44.4		27.1	589.2	241.7	13.2	1.000006
91000.0	17.4	-44.4		26.5	589.3	236.8	14.4	1.000006
91500.0	17.0	-44.3		25.9	589.3	236.2	17.2	1.000006
92000.0	16.6	-44.3		25.3	589.3	235.7		1.000006
92500.0	16.3	-44.2		24.7	589.5			1.000005
93000.0	15.9	-43.5		24.1	590.4			1.000005
93500.0	15.5	-42.8		23.5	591.3			1.000005
94000.0	15.2	-42.1		22.9	592.1			1.000005
94500.0	14.9	-41.4		22.3	593.0			1.000005

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MRN SIGNIFICANT LEVEL DATA  
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GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		DEW PT DFP DEG C	TEMPERATURE		PRESSURE MILLIBARS
			N-S MPS	E-W MPS		AIR DEG C		
2869.	9999.**	9999.**	-9999.**	-9999.**	99	-41.3	1.480+1	
2804.	9999.**	9999.**	-9999.**	-9999.**	99	-44.3	1.630+1	
2666.	260.	9.	2.	9.	99	-44.5	2.000+1	
2503.	267.	9.	0.	9.	99	-49.3	2.270+1	
2435.	279.	15.	-2.	15.	99	-45.9	2.440+1	
2398.	265.	15.	1.	15.	99	-51.0	3.000+1	
2357.	237.	13.	7.	11.	99	-53.8	3.200+1	
2087.	346.	7.	-7.	2.	99	-55.3	4.880+1	
2071.	330.	8.	-7.	4.	99	-57.3	5.000+1	
1922.	259.	10.	2.	10.	99	-65.6	6.360+1	
1863.	260.	18.	3.	17.	99	-63.6	7.000+1	
1837.	246.	17.	7.	15.	99	-62.8	7.310+1	
1805.	228.	13.	8.	9.	99	-68.4	7.700+1	
1760.	232.	10.	6.	8.	99	-67.3	8.300+1	
1675.	268.	17.	1.	17.	99	-61.7	9.540+1	
1646.	260.	18.	3.	18.	99	-62.0	1.000+2	

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

STATION ALTITUDE 3997.30 FEET MSL  
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MANDATORY LEVELS  
 10800600004  
 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	4832.	19.6	-1.4	26.	225.6	2.7
800.0	6575.	13.9	-2.4	32.	225.9	7.7
750.0	8343.	8.9	-3.7	41.	221.7	11.6
700.0	10205.	6.2	-17.0	17.	243.8	23.9
650.0	12181.	1.4	-20.3	18.	224.6	20.4
600.0	14285.	-1.5	-24.7	15.	215.8	23.3
550.0	16535.	-6.6	-28.9	15.	213.9	23.4
500.0	18959.	-11.4	-30.9	18.	226.8	32.0
450.0	21579.	-17.6	-36.7	17.	233.7	26.7
400.0	24432.	-24.7	-42.6	17.	238.8	25.2
350.0	27572.	-32.1	-48.4	18.	234.3	26.4
300.0	31079.	-40.8			237.0	26.0
250.0	35072.	-49.2			242.3	36.5
200.0	39782.	-57.8			250.3	42.1
175.0	42531.	-57.3			251.9	42.8
150.0	45747.	-56.6			246.2	40.8
125.0	49490.	-62.4			245.8	34.0
100.0	53993.	-62.0			260.1	35.8
80.0	58453.	-67.8			225.9	21.1
70.0	61132.	-63.6			259.2	34.2
60.0	64222.	-63.6			243.0	19.0
50.0	67949.	-57.3			328.6	15.9
40.0	72625.	-54.6			167.1	6.0
30.0	78689.	-51.0			264.3	28.9
25.0	82645.	-47.8			283.9	17.9
20.0	87481.	-44.5			259.7	17.7
15.0	93317.	-41.7				

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

STATION ALTITUDE 3997.30 FEET MSL  
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MRN MANDATORY LEVELS  
 1080060064  
 S M R

STATION ALTITUDE 3997.30 FEET MSL  
 18 APR. 79 0830 HRS MST  
 ASCENSION NO. 64

MRN MANDATORY LEVELS  
 1080060064  
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STATION ALTITUDE 3997.30 FEET MSL  
 18 APR. 79 0830 HRS MST  
 ASCENSION NO. 64

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		E-W MPS	Dew PT DEG C	TEMPERATURE		PRESSURE MILLIHARS
			N-S MPS	N-S MPS			AIR DEG C	PT DEP DEG C	
2860.	9999.**	9999.**	-9999.**	-9999.**	-9999.**	99	-41.7	1.500+1	
2666.	260.	9.	2.	9.	9.	99	-44.5	2.000+1	
2519.	284.	9.	-2.	9.	9.	99	-47.8	2.500+1	
2398.	264.	15.	1.	15.	15.	99	-51.0	3.000+1	
2214.	167.	3.	3.	-1.	-1.	99	-54.6	4.000+1	
2071.	329.	8.	-7.	4.	4.	99	-57.3	5.000+1	
1957.	243.	10.	4.	9.	9.	99	-63.6	6.000+1	
1863.	259.	18.	3.	17.	17.	99	-63.6	7.000+1	
1782.	226.	11.	8.	8.	8.	99	-67.8	8.000+1	
1646.	260.	18.	3.	18.	18.	99	-62.0	1.000+2	
1508.	246.	17.	7.	16.	16.	99	-62.4	1.250+2	
1394.	246.	21.	6.	19.	19.	99	-56.6	1.500+2	
1296.	252.	22.	7.	21.	21.	99	-57.3	1.750+2	
1213.	250.	22.	7.	20.	20.	99	-57.8	2.000+2	
1069.	242.	19.	9.	17.	17.	99	-49.2	2.500+2	
947.	237.	13.	7.	11.	11.	99	-40.8	3.000+2	
840.	234.	14.	8.	11.	11.	16	-32.1	3.500+2	
745.	239.	13.	7.	11.	11.	18	-24.7	4.000+2	
658.	234.	14.	6.	11.	11.	19	-17.6	4.500+2	
578.	227.	16.	11.	12.	12.	20	-11.4	5.000+2	
504.	214.	12.	10.	7.	7.	22	-6.6	5.500+2	
435.	216.	12.	10.	7.	7.	23	-1.5	6.000+2	
371.	225.	10.	7.	7.	7.	22	1.4	6.500+2	
311.	244.	12.	5.	11.	11.	23	6.2	7.000+2	
254.	222.	6.	4.	4.	4.	13	8.9	7.500+2	
200.	226.	4.	3.	3.	3.	16	13.9	8.000+2	
149.	226.	1.	1.	1.	1.	20	19.6	8.500+2	

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