

AD-A074 981

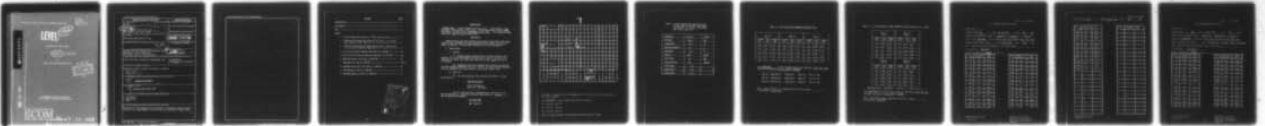
ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2  
19304 GSRS, MISSILE NUMBERS 1115, 1116, 1117, ROUND NUMBERS V-5--ETC(U)  
JUL 79

UNCLASSIFIED

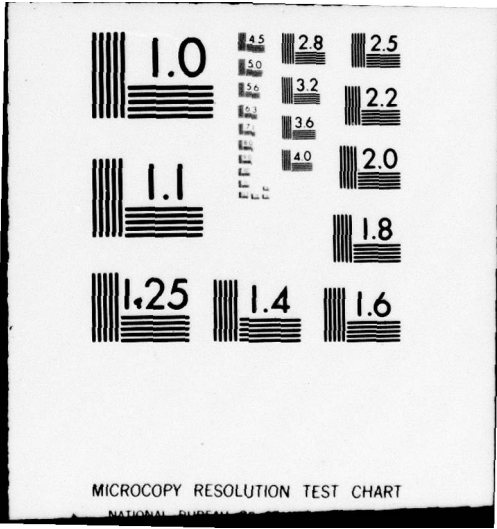
ERADCOM/ASL-DR-1047

NL

| OF |  
AD A  
074981



END  
DATE  
FILMED  
11 -79  
DDC



MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A

ADA074981

LEVEL <sup>42</sup>

METEOROLOGICAL DATA REPORT

19304 GSRS  
Missile Nos. 1115, 1116, 1117  
Round Nos. V-58, V-59, V-60  
30 July 1979

by

White Sands Meteorological Team

RE

FILE COPY

ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR-1047	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19304 GSRS Missile Numbers 1115, 1116, 1117, Round Numbers V-58, V-59, V-60, 3d July 1979.		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) White Sands Meteorological Team		8. CONTRACT OR GRANT NUMBER(s) 16 [REDACTED] 1T6657/D126
9. PERFORMING ORGANIZATION NAME AND ADDRESS 1		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 17 82
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Comd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico		12. REPORT DATE JUL 79
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Comd		15. SECURITY CLASS. (of this report) UNCLASSIFIED
15a. DECLASSIFICATION/DOWNGRADING SCHEDULE		
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited. 12 21		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) 14 BRADCOM/ASL-DR-1047		
18. SUPPLEMENTARY NOTES 9 Meteorological data rept.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19304 GSRS, Missile numbers 1115 thru 1117, Round Numbers V-58 thru V-60, are presented in tabular form.		

slb



CONTENTS	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
MAP-----	2
TABLES	
1. Surface Observation Taken at 1100 MDT at LC-33-----	3
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 1100 MDT-----	4
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 1100 MDT-----	5
4. LC-33 Pilot Balloon Measured Wind Data at 1100 MDT-----	6-7
5. Nick Site Pilot Balloon Measured Wind Data at 1100 MDT-----	8-9
6. SMR-Significant Level Data at 1000 MST-----	10
7. SMR Upper Air Data at 1000 MST-----	11-15
8. SMR MRN Significant Level Data at 1000 MST-----	16
9. SMR Mandatory Levels at 1000 MST-----	17
10. SMR MRN Mandatory Levels at 1000 MST-----	18

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced Justification	<input type="checkbox"/>
By _____	
Distribution/Availability Codes	
Dist	Avail and/or special
A	

## INTRODUCTION

19304DT GSRS, Missile Numbers 1115 thru 1117, Round Numbers V-58 thru V-60, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1100, 1100:03, 1100:06 MDT 30 July 1979. The scheduled launch times were 1100, 1100:02.5, 1100:05 MDT.

## 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 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:

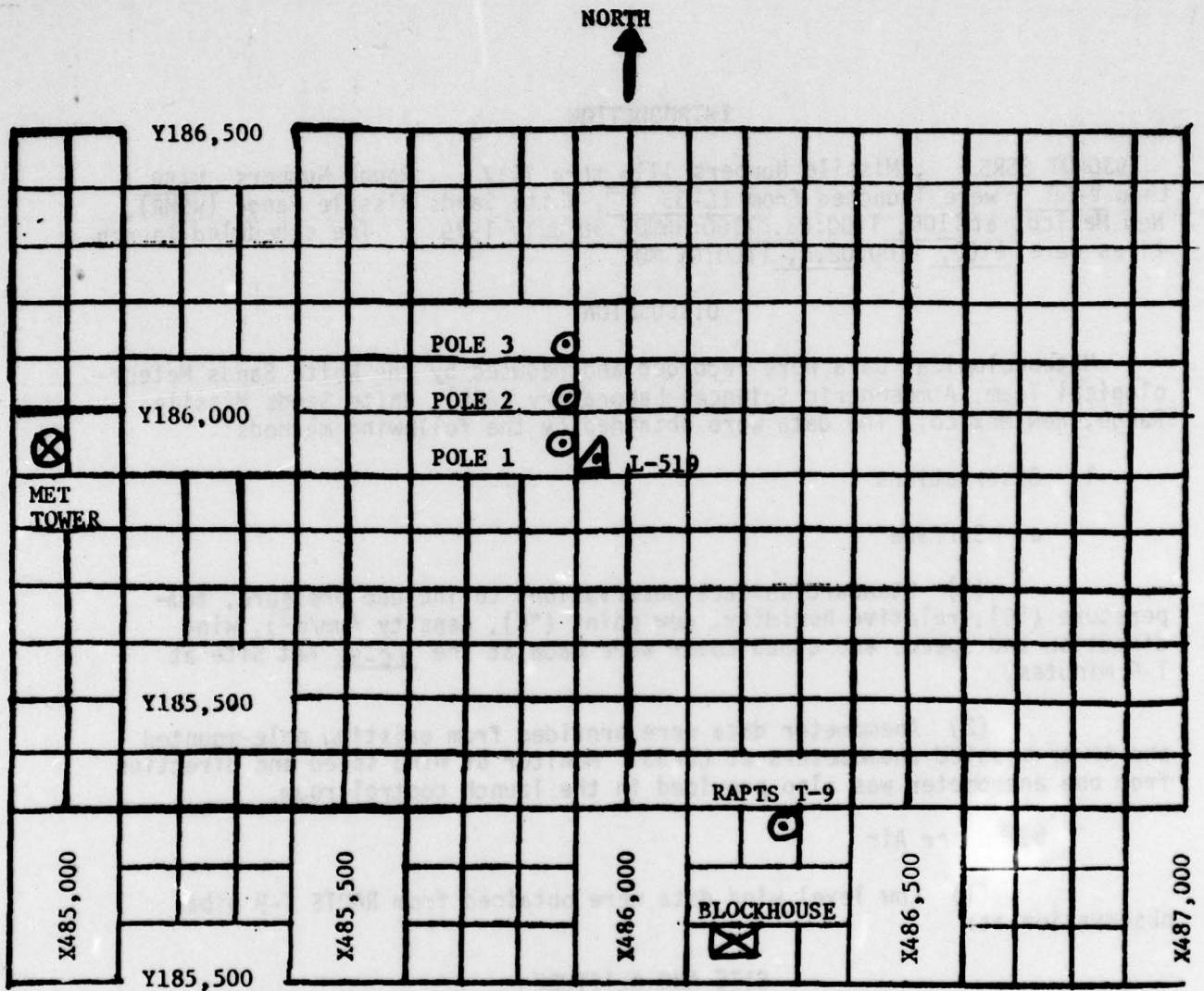
## SITE AND ALTITUDE

LC-33 1080 Meters  
NICK SITE 1020 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 89,000 feet in 500-foot increments.

## SITE AND TIME

SMR 1000 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.

TABLE 1. Surface observations taken at LC-33  
 30 July 1979 at 1100 MDT, 19304 GSRS,  
 Missile Nos. 1115, 1116, 1117, Round  
 Nos. V-58, V-59, V-60.

ELEVATION	3977.30	FT/MSL
PRESSURE	880.9	MBS
TEMPERATURE	28.2	°C
RELATIVE HUMIDITY	46	%
DEW POINT	15.4	°C
DENSITY	1008	GM/M <sup>3</sup>
WIND SPEED	04	MPH
WIND DIRECTION	140	DEGREES
CLOUD COVER	1 SC	
CLOUD COVER	1 AC	
CLOUD COVER	8 AS	

TABLE 2. 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	M	07	-30	143	05	-30	128	09
-20	M	06	-20	133	07	-20	138	10
-10	M	07	-10	136	06	-10	134	10
0.0	M	08	0.0	146	05	0.0	137	09
+10	M	07	+10	153	05	+10	142	08

Type 19304 GSRS \_\_\_\_\_, Missile No. 1115, 1116, 1117, Round Nos. V-58, V-59, V-60, launched from LC-33 on 30 July 1979 at 1100 MDT.

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

NOTE: Wind directions are referenced to the firing azimuth \_\_\_\_\_  
or true north   true north  .

TABLE 3. 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	015	06	-30	130	06
-20	M	04	-20	115	07
-10	M	04	-10	120	06
0.0	M	04	0.0	110	06
+10	M	03	+10	120	06
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	160	06	-30	135	06
-20	135	06	-20	130	04
-10	135	05	-10	130	04
0.0	123	05	0.0	130	05
+10	130	05	+10	115	05

WTSM Coordinates: X484,982.64 Y185,957.73 H3983.00 (base)

Type 19304 GSRS, Missile Nos. 1115, 1116, 1117, Round Nos. V-58, V-59, V-60,  
launched from LC-33 on 30 July 1979 at 1100 MDT.

NOTE: Wind directions are referenced to the firing azimuth \_\_\_\_\_  
or true north true north.

## PILOT BALLOON MEASURED WIND DATA\*

TABLE 4

RELEASED FROM LC-33 DATE 30 July 1979 TIME 1100 MDT  
 RELEASE POINT COORDINATES (WSTM) X= 486.037.24 Y= 182.350.16 H= 3977.30  
 MISSILE TYPE 19304 GSRS MISSILE NO 1115, 1116, 1117 ROUND NO. V-58, V-59, V-60  
 MISSILE LAUNCHED FROM LC-33 DATE 30 July 1979 TIME 1100 MDT  
 NOTE: WIND DIRECTIONS ARE REFERENCED TO THE FIRING AZIMUTH \_\_\_\_\_

OR TRUE NORTH TRUE NORTHHeights are METERS AGL METERS or FEET AGL

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
SFC	132	06.0
30	130	05.5
60	128	05.5
90	126	04.5
120	123	03.5
150	127	05.5
180	130	06.5
210	133	08.0
240	136	09.5
270	135	09.5
300	133	09.5
330	131	09.5
360	129	09.0

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
390	138	08.0
420	146	07.0
450	154	06.0
480	162	05.0
510	167	05.0
540	172	04.5
570	177	04.0
600	182	03.5
630	186	04.0
660	190	04.0
690	194	04.0
720	198	04.0
750	206	05.0



PILOT BALLOON MEASURED WIND DATA\*

TABLE 5

RELEASED FROM NICK DATE 30 July 1979 TIME 100 MDT

RELEASE POINT COORDINATES (WSIM) X=470,734.56 Y=255,775.64 H=4126.57

MISSILE TYPE 19304 GSRS MISSILE NO. 1115, 1116, 1117 ROUND NO. V-58, V-59, V-60

MISSILE LAUNCHED FROM LC-33 DATE 30 July 1979 TIME 1100, 1100:03, 1100:06 MDT

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

OR TRUE NORTH true north

Heights are METERS AGL METERS or FEET AGL \_\_\_\_\_

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
SFC	330	05.0
30	333	06.5
60	335	08.0
90	337	09.6
120	338	11.1
150	338	12.6
180	339	14.1
210	333	11.3
240	336	12.4
270	338	13.4
300	340	14.5
330	341	15.6
360	324	08.1

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
390	331	08.5
420	336	09.0
450	342	09.6
480	346	10.3
510	338	04.9
540	356	05.1
570	011	05.7
600	022	06.6
630	031	07.7
660	038	08.9
690	065	07.3
720	065	08.5
750	065	09.8



STATION ALTITUDE 3997.30 FEET MSL  
 30 JULY 79 1000 HRS MST  
 ASCENSION NO. 260

SIGNIFICANT LEVEL DATA  
 2110060260  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
880.0 3997.3	27.0 14.4	46.0
850.0 4998.9	23.0 12.9	53.0
700.0 10464.0	12.6 3.6	54.0
591.0 15054.2	2.4 -2.5	70.0
565.8 16208.1	-5 -2.9	84.0
525.0 18166.4	-4.0 -6.9	80.0
500.0 19430.9	-5.6 -7.1	89.0
485.6 20184.0	-7.1 -7.6	95.0
400.0 25073.7	-16.9 -17.5	95.0
370.8 26933.6	-20.9 -23.0	83.0
345.0 28675.8	-24.6 -29.3	65.0
332.2 29577.8	-27.1 -31.2	68.0
300.0 31967.7	-33.2 -41.2	44.0
290.2 32734.2	-34.6 -41.0	52.0
273.0 34130.6	-37.9 -44.8	48.0
264.0 34888.5	-39.7 -49.5	34.0
250.0 36109.1	-42.2	
211.0 39824.2	-50.1	
206.2 40319.7	-50.0	
200.0 40976.0	-50.9	
183.6 42788.0	-56.6	
154.6 46322.2	-63.9	
150.0 46931.7	-64.5	
143.0 47889.5	-66.8	
105.8 53820.7	-72.0	
100.0 54922.5	-69.9	
93.8 56175.0	-71.5	
70.0 61997.5	-63.3	
59.6 65293.6	-59.3	
50.0 68940.0	-57.9	
37.0 75296.3	-52.3	
30.0 79784.7	-52.1	
21.6 86867.0	-49.3	
20.0 88535.5	-49.8	
19.2 89419.6	-49.8	

STATION ALTITUDE 3997.30 FEET MSL  
 30 JULY 79  
 ASCENSION NO. 260

UPPER AIR DATA  
 2110060260  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEMPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES(TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
3997.3	880.0	27.0	14.4	46.0	1014.2	677.3	0	0	1.000295
4000.0	879.9	27.0	14.4	46.0	1014.1	677.3			1.000295
4500.0	864.8	25.0	13.7	49.5	1003.6	675.0			1.000291
5000.0	850.0	23.0	12.9	53.0	993.2	672.7			1.000286
5500.0	835.0	22.0	12.1	53.1	979.1	671.5			1.000280
6000.0	820.3	21.1	11.2	53.2	965.2	670.3			1.000273
6500.0	805.9	20.1	10.3	53.3	951.5	669.2			1.000268
7000.0	791.7	19.2	9.5	53.4	938.0	668.0			1.000262
7500.0	777.7	18.2	8.6	53.5	924.7	666.8			1.000256
8000.0	764.0	17.3	7.8	53.5	911.6	665.7			1.000251
8500.0	750.6	16.3	6.9	53.6	898.7	664.5			1.000245
9000.0	737.4	15.4	6.1	53.7	886.0	663.4			1.000240
9500.0	724.4	14.4	5.2	53.8	873.4	662.2			1.000235
10000.0	711.6	13.5	4.3	53.9	861.1	661.0			1.000230
10500.0	699.1	12.5	3.5	54.1	848.9	659.9			1.000226
11000.0	686.3	11.4	2.9	55.9	836.7	658.5			1.000222
11500.0	673.8	10.3	2.3	57.6	824.7	657.2			1.000218
12000.0	661.5	9.2	1.7	59.4	812.9	655.9			1.000214
12500.0	649.4	8.1	1.0	61.1	801.3	654.6			1.000210
13000.0	637.5	7.0	.4	62.8	789.9	653.2			1.000206
13500.0	625.9	5.9	-.3	64.6	778.6	651.9			1.000203
14000.0	614.4	4.7	-1.0	66.3	767.5	650.6			1.000199
14500.0	603.2	3.6	-1.7	68.1	756.6	649.2			1.000195
15000.0	592.2	2.5	-2.4	69.8	745.9	647.9			1.000192
15500.0	581.1	1.3	-2.6	75.4	735.3	646.4			1.000187
16000.0	570.3	.0	-2.8	81.5	724.8	645.0			1.000183
16500.0	559.5	-1.0	-3.5	83.4	714.0	643.7			1.000179
17000.0	548.9	-1.9	-4.5	82.4	702.9	642.6			1.000175
17500.0	538.5	-2.8	-5.5	81.4	692.0	641.5			1.000171
18000.0	528.8	-3.7	-6.6	80.3	681.3	640.3			1.000168
18500.0	518.3	-4.4	-7.0	82.4	670.1	639.5			1.000166
19000.0	508.4	-5.1	-7.0	85.9	658.8	638.7			1.000163
19500.0	498.7	-5.7	-7.2	89.6	647.9	637.9			1.000161
20000.0	489.1	-6.7	-7.6	93.5	637.8	636.7			1.000157
20500.0	479.6	-7.7	-8.4	95.0	627.8	635.5			1.000154
21000.0	470.1	-8.7	-9.4	95.0	617.9	634.3			1.000151
21500.0	460.9	-9.7	-10.4	95.0	608.2	633.0			1.000147
22000.0	451.9	-10.7	-11.4	95.0	598.6	631.8			1.000144
22500.0	443.0	-11.7	-12.4	95.0	589.2	630.5			1.000141
23000.0	434.3	-12.7	-13.4	95.0	579.9	629.3			1.000141

STATION ALTITUDE 3997.30 FEET MSL  
 30 JULY 79  
 ASCENSION NO. 260

UPPER AIR DATA  
 2110060260  
 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 DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	425.8	-13.7	95.0	570.8	628.0	254.1	6.0	1.000138
24000.0	417.4	-14.7	95.0	561.8	626.8	245.1	6.6	1.000136
24500.0	409.2	-15.8	95.0	552.9	625.5	236.1	7.3	1.000133
25000.0	401.2	-16.8	95.0	544.3	624.3	234.9	8.1	1.000130
25500.0	393.1	-17.8	92.2	535.6	622.9	234.8	8.8	1.000127
26000.0	385.2	-18.9	89.0	527.1	621.6	246.2	9.5	1.000125
26500.0	377.4	-20.0	85.8	516.7	620.2	256.6	10.5	1.000122
27000.0	369.8	-21.0	82.3	510.5	618.9	259.9	11.2	1.000119
27500.0	362.2	-22.1	77.1	502.2	617.5	262.0	11.9	1.000117
28000.0	354.8	-23.2	72.0	494.1	616.2	264.1	11.6	1.000114
28500.0	347.5	-24.2	66.8	486.0	614.8	260.4	11.2	1.000112
29000.0	340.3	-25.5	66.1	478.5	613.2	267.4	11.6	1.000110
29500.0	333.3	-26.9	67.7	471.2	611.5	267.8	12.4	1.000108
30000.0	326.3	-28.2	63.8	463.8	609.9	268.1	13.2	1.000106
30500.0	319.4	-29.5	58.7	456.4	608.3	268.4	14.2	1.000104
31000.0	312.6	-30.7	53.7	449.1	606.7	270.9	14.3	1.000102
31500.0	306.0	-32.0	48.7	442.0	605.0	274.6	14.0	1.000100
32000.0	299.6	-33.3	44.3	435.0	603.5	272.4	14.3	1.000098
32500.0	293.2	-34.2	49.6	427.3	602.3	264.7	15.5	1.000096
33000.0	286.8	-35.2	51.2	419.9	601.0	255.0	17.0	1.000095
33500.0	280.6	-36.4	49.8	412.9	599.5	243.6	19.5	1.000093
34000.0	274.6	-37.6	48.4	406.0	598.0	238.4	21.3	1.000091
34500.0	268.6	-38.8	41.2	399.2	596.5	236.9	22.1	1.000089
35000.0	262.7	-39.9	30.9**	392.3	595.0	239.2	20.6	1.000088
35500.0	256.9	-41.0	17.0**	385.4	593.7	245.1	17.8	1.000086
36000.0	251.2	-42.0	3.0**	378.6	592.3	252.8	14.7	1.000084
36500.0	245.6	-43.0		371.8	591.0	264.2	11.7	1.000083
37000.0	240.0	-44.1		365.1	589.6	287.1	10.8	1.000081
37500.0	234.6	-45.2		358.5	588.2	310.3	12.5	1.000080
38000.0	229.3	-46.2		352.0	586.9	323.2	15.1	1.000078
38500.0	224.1	-47.3		345.7	585.5	330.2	17.9	1.000077
39000.0	219.1	-48.3		339.5	584.1	333.7	19.5	1.000076
39500.0	214.1	-49.4		333.4	582.7	334.7	19.0	1.000074
40000.0	209.3	-50.1		326.8	581.9	336.7	19.0	1.000073
40500.0	204.5	-50.2		319.6	581.6	342.5	20.8	1.000071
41000.0	199.8	-51.0		313.2	580.7	347.4	22.7	1.000070
41500.0	195.1	-52.5		308.1	578.6	352.5	24.8	1.000069
42000.0	190.6	-54.1		303.1	576.6	356.8	27.1	1.000068
42500.0	186.1	-55.7		296.2	574.5	.7	28.5	1.000066
43000.0	181.7	-57.0		292.9	572.7	4.4	29.6	1.000065

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

STATION ALTITUDE 3997.30 FEET MSL  
 30 JULY 79 1000 HRS MST  
 ASCENSION NO. 260

UPPER AIR DATA  
 2110060260  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES TEMPERATURE DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	177.4	-58.1		287.3	571.3	6.8	29.7	1.000064
44000.0	173.1	-59.1		281.7	570.0	7.9	28.6	1.000063
44500.0	168.9	-60.1		276.3	568.6	8.4	27.0	1.000062
45000.0	164.9	-61.2		270.9	567.2	6.5	24.2	1.000060
45500.0	160.9	-62.2		265.7	565.8	4.1	21.4	1.000059
46000.0	157.0	-63.2		260.6	564.4	3.8	19.6	1.000058
46500.0	153.2	-64.1		255.3	563.3	3.3	17.8	1.000057
47000.0	149.5	-64.7		249.8	562.5	3.6	17.2	1.000056
47500.0	145.8	-65.9		245.0	560.9	4.3	17.0	1.000055
48000.0	142.2	-66.9		240.2	559.5	3.2	17.8	1.000053
48500.0	138.6	-67.3		234.7	558.9	.2	20.5	1.000052
49000.0	135.2	-67.8		229.3	558.3	358.3	23.0	1.000051
49500.0	131.8	-68.2		224.0	557.7	2.3	23.6	1.000050
50000.0	128.5	-68.7		218.8	557.1	6.2	24.2	1.000049
50500.0	125.2	-69.1		213.8	556.5	13.4	22.9	1.000048
51000.0	122.1	-69.5		208.9	555.9	23.4	21.2	1.000047
51500.0	119.0	-70.0		204.1	555.3	32.0	19.9	1.000045
52000.0	116.1	-70.4		199.4	554.7	36.6	18.1	1.000044
52500.0	113.1	-70.8		194.8	554.1	42.1	16.6	1.000043
53000.0	110.3	-71.3		190.3	553.5	43.4	14.7	1.000042
53500.0	107.5	-71.7		186.0	552.9	44.6	12.8	1.000041
54000.0	104.8	-71.7		181.2	553.0	45.9	10.9	1.000040
54500.0	102.2	-70.7		175.8	554.3	47.3	9.2	1.000039
55000.0	99.6	-70.0		170.8	555.3	49.2	7.5	1.000038
55500.0	97.1	-70.6		167.0	554.4	57.4	7.0	1.000037
56000.0	94.6	-71.3		163.3	553.5	67.6	7.0	1.000036
56500.0	92.3	-71.0		159.1	553.8	76.0	7.3	1.000035
57000.0	90.0	-70.3		154.6	554.8	79.4	7.5	1.000034
57500.0	87.8	-69.6		150.2	555.8	82.6	7.8	1.000033
58000.0	85.6	-68.9		146.0	556.7	83.4	7.6	1.000033
58500.0	83.5	-68.2		141.9	557.7	83.1	7.1	1.000032
59000.0	81.4	-67.5		137.9	558.6	82.6	6.7	1.000031
59500.0	79.4	-66.8		134.0	559.6	79.2	8.1	1.000030
60000.0	77.4	-66.1		130.2	560.6	76.7	9.4	1.000029
60500.0	75.5	-65.4		126.6	561.5	75.1	11.3	1.000028
61000.0	73.6	-64.7		123.0	562.5	74.3	13.9	1.000027
61500.0	71.8	-64.0		119.5	563.4	73.7	16.5	1.000027
62000.0	70.0	-63.3		116.2	564.4	73.9	18.3	1.000026
62500.0	68.3	-62.7		113.1	565.2	74.3	19.7	1.000025
63000.0	66.7	-62.1		110.0	566.0	74.6	21.0	1.000024

STATION ALTITUDE 3997.30 FEET MSL  
 30 JULY 79 1000 HRS MST  
 ASCENSION NO. 260

UPPER AIR DATA  
 2110060260  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
6350.0	65.1	-61.5		107.1	566.8	75.7	21.2	1.000024
6400.0	63.5	-60.9		104.2	567.6	76.7	21.4	1.000023
6450.0	62.0	-60.3		101.4	568.4	78.0	21.6	1.000023
6500.0	60.5	-59.7		98.7	569.2	79.7	22.1	1.000022
6550.0	59.0	-59.2		96.1	569.8	81.3	22.5	1.000021
6600.0	57.6	-59.0		93.7	570.1	83.5	22.9	1.000021
6650.0	56.2	-58.8		91.4	570.3	86.1	23.4	1.000020
6700.0	54.9	-58.6		89.2	570.6	88.5	23.9	1.000020
6750.0	53.6	-58.5		87.0	570.9	91.2	24.6	1.000019
6800.0	52.3	-58.3		84.8	571.1	93.8	25.3	1.000019
6850.0	51.1	-58.1		82.7	571.3	96.0	26.0	1.000018
6900.0	49.9	-57.8		80.7	571.6	97.9	26.7	1.000018
6950.0	48.7	-57.4		78.6	572.2	99.7	27.4	1.000018
7000.0	47.6	-57.0		76.6	572.8	101.2	27.5	1.000017
7050.0	46.4	-56.5		74.7	573.4	102.6	27.4	1.000017
7100.0	45.4	-56.1		72.8	574.0	104.3	27.3	1.000016
7150.0	44.3	-55.6		70.9	574.6	107.2	27.3	1.000016
7200.0	43.3	-55.2		69.1	575.1	110.0	27.3	1.000015
7250.0	42.2	-54.8		67.4	575.7	111.9	27.2	1.000015
7300.0	41.3	-54.3		65.7	576.3	113.0	26.7	1.000015
7350.0	40.3	-53.9		64.0	576.9	114.2	26.3	1.000014
7400.0	39.3	-53.4		62.4	577.5	111.1	24.4	1.000014
7450.0	38.4	-53.0		60.8	578.0	106.7	22.4	1.000014
7500.0	37.5	-52.6		59.3	578.6	101.6	20.8	1.000013
7550.0	36.6	-52.3		57.8	579.0	96.5	19.9	1.000013
7600.0	35.8	-52.3		56.5	579.0	91.0	19.2	1.000013
7650.0	35.0	-52.2		55.2	579.0	86.6	19.5	1.000012
7700.0	34.2	-52.2		53.9	579.1	84.4	21.1	1.000012
7750.0	33.4	-52.2		52.6	579.1	82.5	22.6	1.000012
7800.0	32.6	-52.2		51.4	579.1	81.4	24.4	1.000011
7850.0	31.9	-52.2		50.2	579.1	80.9	26.3	1.000011
7900.0	31.1	-52.1		49.1	579.2	80.5	28.3	1.000011
7950.0	30.4	-52.1		47.9	579.2	81.3	29.6	1.000011
8000.0	29.7	-52.0		46.8	579.3	82.5	30.8	1.000010
8050.0	29.0	-51.8		45.7	579.6	83.7	31.9	1.000010
8100.0	28.4	-51.6		44.6	579.8	84.9	32.7	1.000010
8150.0	27.7	-51.4		43.5	580.1	86.1	33.4	1.000010
8200.0	27.1	-51.2		42.5	580.4	87.2	34.1	1.000009
8250.0	26.4	-51.0		41.5	580.6	87.8	34.5	1.000009
8300.0	25.8	-50.8		40.5	580.9	88.4	34.9	1.000009

STATION ALTITUDE 3997.30 FEET MSL  
 30 JULY 79  
 ASCENSION NO. 260

UPPER AIR DATA  
 2110060260  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
83500.0	25.3	-50.6			39.5	581.1	88.8	35.3	1.000009
84000.0	24.7	-50.4			38.6	581.4	86.0	35.7	1.000009
84500.0	24.1	-50.2			37.7	581.7	83.3	36.1	1.000008
85000.0	23.6	-50.0			36.8	581.9	80.7	36.6	1.000008
85500.0	23.0	-49.8			35.9	582.2	78.7	37.9	1.000008
86000.0	22.5	-49.6			35.0	582.4	76.9	39.3	1.000008
86500.0	22.0	-49.4			34.2	582.7	75.2	40.6	1.000008
87000.0	21.5	-49.3			33.4	582.8			1.000007
87500.0	21.0	-49.5			32.7	582.6			1.000007
88000.0	20.5	-49.6			32.0	582.4			1.000007
88500.0	20.0	-49.8			31.2	582.2			1.000007
89000.0	19.6	-49.8			30.5	582.2			1.000007

STATION ALTITUDE 3997.30 FEET MSL  
 30 JULY 79  
 ASCENSION NO. 260

MRN SIGNIFICANT LEVEL DATA  
 2110060260  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA SPEED MPS	WIND DATA N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
2713.	9999.**	9999.**	-9999.**	-9999.**	99	-49.8	1.920+1
2686.	9999.**	9999.**	-9999.**	-9999.**	99	-49.8	2.000+1
2635.	9999.**	9999.**	-9999.**	-9999.**	99	-49.3	2.160+1
2421.	82.	16.	-2.	-15.	99	-52.1	3.000+1
2266.	99.	10.	2.	-10.	99	-52.3	3.700+1
2093.	98.	14.	2.	-14.	99	-57.9	5.000+1
1983.	81.	11.	-2.	-11.	99	-59.3	5.960+1
1883.	74.	9.	-3.	-9.	99	-63.3	7.000+1
1707.	71.	4.	-1.	-3.	99	-71.5	9.380+1
1669.	49.	4.	-3.	-3.	99	-69.9	1.000+2

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

STATION ALTITUDE 3997.30 FEET MSL  
 30 JULY 79  
 ASCENSION NO. 260

MANDATORY LEVELS  
 2110060260  
 S M R

GEODETTIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4995.	23.0	12.9	53.	9999.0	9999.0XX
800.0	6722.	19.8	10.0	53.	9999.0	9999.0XX
750.0	8538.	16.3	6.9	54.	268.4	11.9
700.0	10454.	12.6	3.6	54.	289.7	8.1
650.0	12481.	8.1	1.1	61.	16.1	11.0
600.0	14634.	3.3	-1.9	69.	38.6	14.9
550.0	16930.	-1.8	-4.4	82.	341.7	8.1
500.0	19403.	-5.6	-7.1	89.	346.9	2.7
450.0	22092.	-10.9	-11.6	95.	262.2	3.8
400.0	25031.	-16.9	-17.5	95.	234.9	8.2
350.0	28278.	-23.9	-28.0	69.	265.6	11.3
300.0	31903.	-33.2	-41.2	44.	273.1	14.2
250.0	36029.	-42.2			254.5	14.1
200.0	40876.	-50.9			347.0	22.5
175.0	43673.	-58.6			7.4	29.1
150.0	46803.	-64.5			3.5	17.2
125.0	50409.	-69.1			14.0	22.7
100.0	54751.	-69.9			48.7	7.8
80.0	59114.	-67.0			80.5	7.5
70.0	61783.	-63.3			73.9	18.2
60.0	64920.	-59.5			80.1	22.2
50.0	68679.	-57.9			97.5	26.6
40.0	73339.	-53.7			114.1	26.1
30.0	79441.	-52.1			81.9	30.2
25.0	83328.	-50.5			87.9	35.4
20.0	88118.	-49.8				

\*\* 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 3997.30 FEET MSL  
 30 JULY 79  
 ASCENSION NO. 260

MRN MANDATORY LEVELS  
 2110060260  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
2686.	9999.**	9999.**	-9999.**	-9999.**	99	-49.8	2.000+1
2540.	88.	18.	-1.	-18.	99	-50.5	2.500+1
2421.	82.	16.	-2.	-15.	99	-52.1	3.000+1
2235.	114.	13.	5.	-12.	99	-53.7	4.000+1
2093.	98.	14.	2.	-14.	99	-57.9	5.000+1
1979.	80.	11.	-2.	-11.	99	-59.5	6.000+1
1883.	74.	9.	-3.	-9.	99	-63.3	7.000+1
1802.	81.	4.	-1.	-4.	99	-67.0	8.000+1
1669.	49.	4.	-3.	-3.	99	-69.9	1.000+2
1536.	14.	12.	-11.	-3.	99	-69.1	1.250+2
1427.	4.	9.	-9.	-1.	99	-64.5	1.500+2
1331.	7.	15.	-15.	-2.	99	-58.6	1.750+2
1246.	347.	12.	-11.	3.	99	-50.9	2.000+2
1098.	255.	7.	2.	7.	99	-42.2	2.500+2
972.	273.	7.	-0.	7.	08	-33.2	3.000+2
862.	266.	6.	0.	6.	04	-23.9	3.500+2
763.	235.	4.	2.	3.	01	-16.9	4.000+2
673.	262.	2.	0.	2.	01	-10.9	4.500+2
591.	347.	1.	-1.	0.	02	-5.6	5.000+2
516.	342.	4.	-4.	1.	03	-1.8	5.500+2
446.	39.	8.	-6.	-5.	05	3.3	6.000+2
380.	16.	6.	-5.	-2.	07	8.1	6.500+2
319.	290.	4.	-1.	4.	09	12.6	7.000+2
260.	268.	6.	0.	6.	09	16.3	7.500+2
205.	9999.**	9999.**	-9999.**	-9999.**	10	19.8	8.000+2
152.	9999.**	9999.**	-9999.**	-9999.**	10	23.0	8.500+2

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