

AD-A074 965

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19304DT 6SRS, MISSILE NUMBER 1066, ROUND NUMBER V-56, 23 JULY 1--ETC(U)
JUL 79

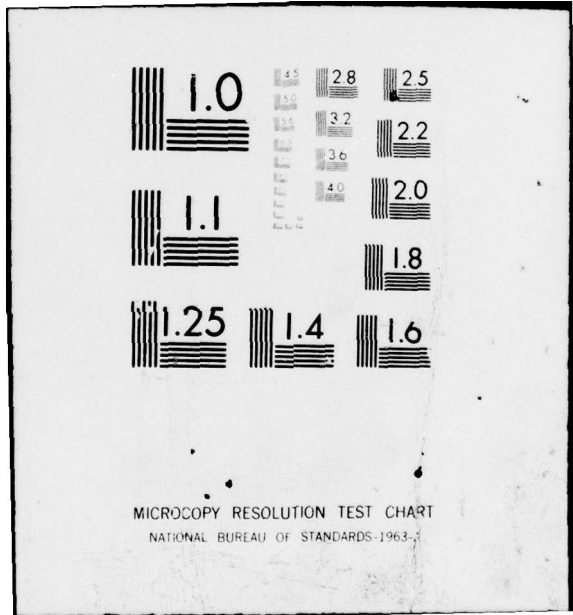
UNCLASSIFIED

ERADCOM/ASL-DR-1045

NL

/ OF |
AD
A074965





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

DR 1045
JULY 1979

AD

LEVEL

12

AD A 074965

METEOROLOGICAL DATA REPORT

19304DT GSRS
Missile No. 1066
Round No. V-56
23 July 1979

by

White Sands Meteorological Team

DDC
RECEIVED
OCT 12 1979
ALBUQUERQUE
E

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

DDC FILE COPY

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

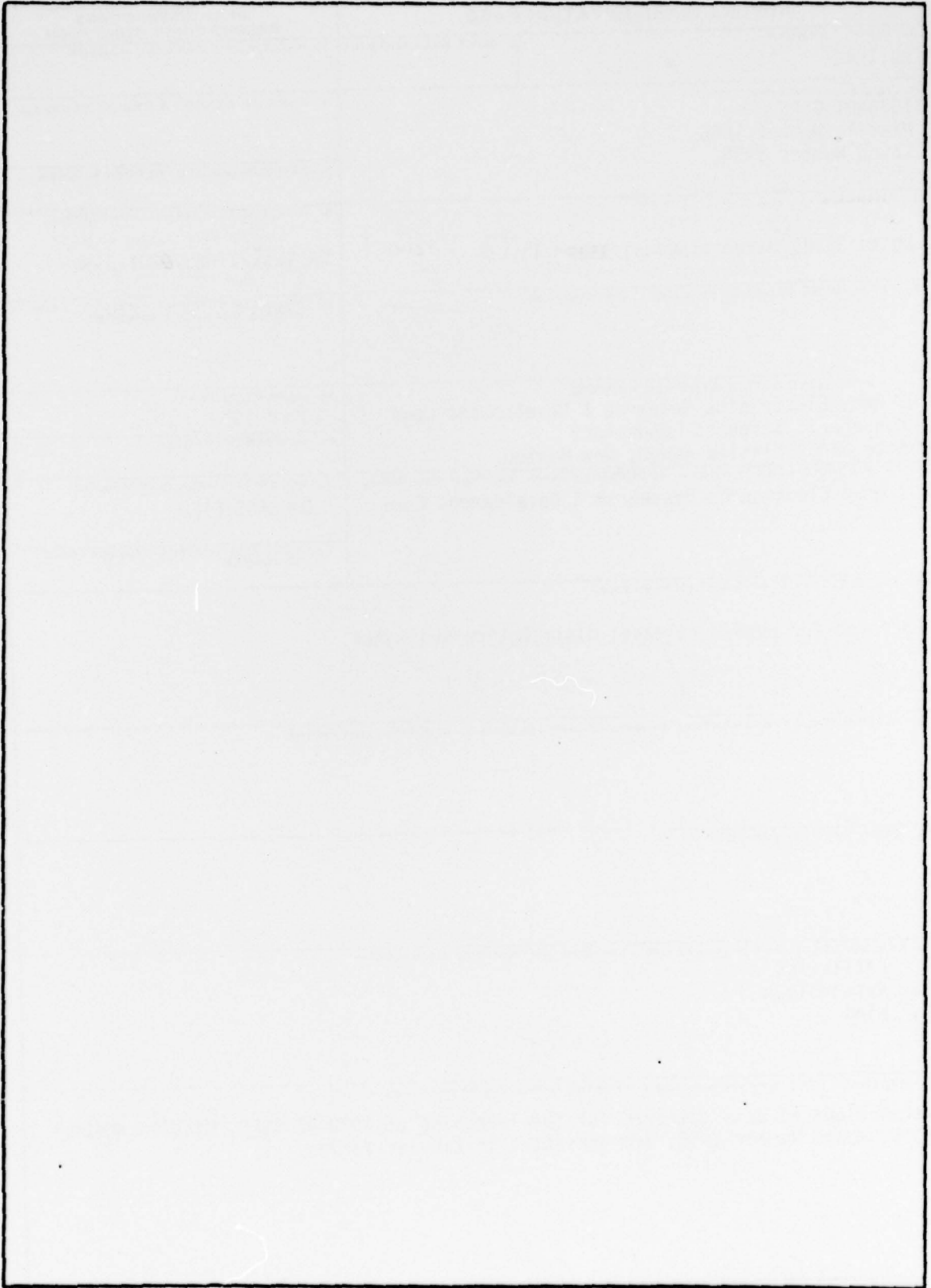
79 10 12 039

DISCLAIMER NOTICE

**THIS DOCUMENT IS BEST QUALITY
PRACTICABLE. THE COPY FURNISHED
TO DDC CONTAINED A SIGNIFICANT
NUMBER OF PAGES WHICH DO NOT
REPRODUCE LEGIBLY.**

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1045	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19304DT GSRS Missile Number 1066 Round Number V-56 23 July 1979.	5. TYPE OF REPORT & PERIOD COVERED	
	6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s) White Sands Meteorological Team data rept.	8. CONTRACT OR GRANT NUMBER(s) DA Task 1T665702D126-02	
9. PERFORMING ORGANIZATION NAME AND ADDRESS 1218	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Comd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico	12. REPORT DATE JULY 1979	
	13. NUMBER OF PAGES	
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. 14/ERADCOM/ASL-DR-1045		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
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 19304DT GSRS, Missile Number 1066, Round Number V-56, are presented in tabular form.		

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)



if

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

CONTENTS	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
MAP-----	2
TABLES	
1. Surface Observation Taken at 1400 MDT at LC-33-----	3
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 1400 MDT-----	4
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 1400 MDT-----	5
4. SMR Significant Level Data at 1300 MST-----	6
5. SMR Upper Air Data at 1300 MST-----	7-11
6. MRN Significant Levels at 1310 MST-----	12
7. SMR Mandatory Levels at 1300 MST-----	13
8. SMR MRN Mandatory Levels at 1300 MST-----	14

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	<input type="checkbox"/>
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or special
A	23 G

INTRODUCTION

19304DT GSRS . Missile Number 1066, Round Number V-56 , was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1400 MDT, 23 July 1979 . The scheduled launch time was 1400 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 (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:

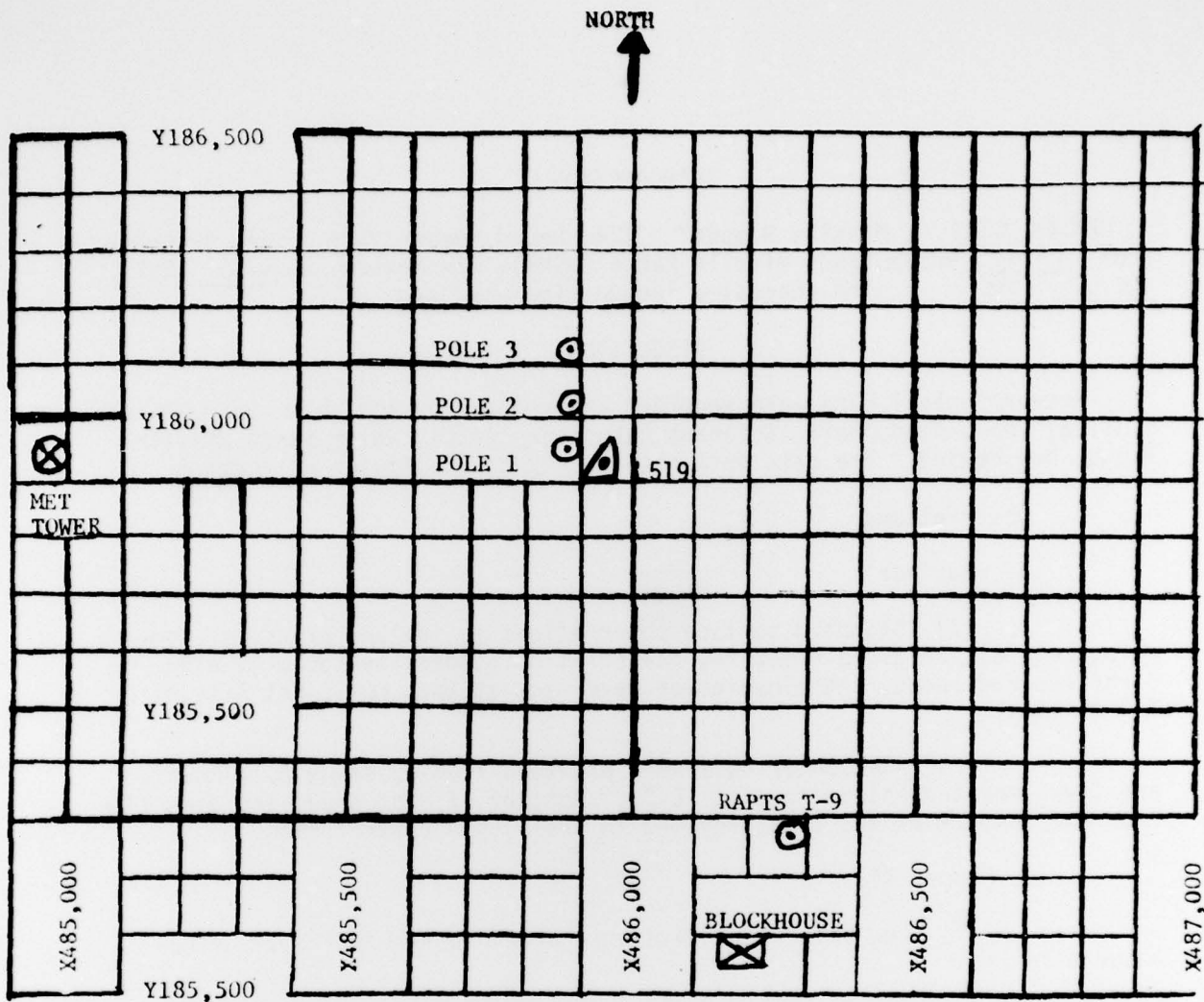
SITE AND ALTITUDE

No Available

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 90,500 feet in 500-foot increments.

SITE AND TIME

SMR 1300 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
23 July 1979 at 1400 MDT, 19304DT GSRS,
Missile No. 1066, Round No. V-56.

ELEVATION	3977.30	FT/MSL
PRESSURE	876.0	MBS
TEMPERATURE	35.0	°C
RELATIVE HUMIDITY	29	%
DEW POINT	14.2	°C
DENSITY	983	GM/M ³
WIND SPEED	03	MPH
WIND DIRECTION	090	DEGREES
CLOUD COVER	2 CB	1 CS

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	220	05.0	-30	235	03.0	-30	247	07.0
-20	237	05.0	-20	251	04.0	-20	230	05.0
-10	221	04.0	-10	263	03.0	-10	228	03.0
0.0	231	05.5	0.0	269	04.5	0.0	235	06.5
+10	229	06.5	+10	251	04.5	+10	246	03.5

Type 19304DT GSRS , Missile No. 1066 , Round No. Y-56 launched
from LC-33 on 23 July 1979 at 1400 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	240	10.5	-30	243	13.0
-20	258	10.5	-20	235	11.5
-10	243	08.0	-10	238	12.0
0.0	264	10.0	0.0	243	10.0
+10	255	09.5	+10	232	09.0
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	260	12.0	-30	287	07.0
-20	252	12.0	-20	293	07.0
-10	242	12.0	-10	270	07.5
0.0	265	10.0	0.0	271	07.0
+10	250	08.0	+10	250	06.0

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

Type 19304DT GSRS, Missile No. 1066, Round No. V-56 launched
from LC-33 on 23 July 1979 at 1400 MDT.

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

STATION ALTITUDE 3997.30 FEET MSL
 23 JULY 79
 1990 HRS MST
 ASCENSION NO. 252

SIGNIFICANT LEVEL DATA

204000Z 79
 5 15 15

BAROMETRIC CORRECTIONS
 20.15334 FATH DEGS
 106.42307 LON DEGS

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT	
	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		
875.5	3997.3	34.7	15.1	51.0
866.0	4721.4	33.0	7.0	21.0
850.0	4671.6	31.3	7.7	23.0
758.4	8051.9	21.9	6.2	39.0
709.0	10433.9	15.1	-6.3	19.0
619.8	13767.0	6.2	-3	63.0
593.2	14243.5	2.7	-1.6	73.0
575.4	15755.3	2.6	-2.7	68.0
549.0	16997.1	-5	-6.3	65.0
524.6	18189.6	-3.4	-7.5	73.0
516.6	18509.3	-4.0	-11.7	55.0
500.0	19437.7	-3.6	-16.0	38.0
478.0	20601.8	-5.9	-25.2	20.0
400.0	25108.4	-15.7	-24.4	47.0
368.0	27161.5	-20.0	-28.4	29.0
349.4	28422.9	-22.0	-36.2	19.0
337.6	29252.7	-23.4	-40.5	37.0
309.0	31365.7	-27.9	-38.6	34.0
300.0	32081.5	-30.4	-40.3	
250.0	36233.1	-41.0	-50.6	
200.0	41192.9	-53.5		
173.6	44059.6	-60.1		
154.6	46415.9	-65.2		
150.0	47018.5	-67.2		
132.8	49406.2	-73.0		
115.6	52083.7	-74.0		
109.2	53165.9	-71.8		
100.0	54299.4	-71.6		
86.4	57750.3	-71.2		
77.2	59933.0	-64.0		
70.0	61972.5	-63.1		
50.6	66296.3	-63.1		
50.0	68331.5	-59.6		
34.0	76211.8	-53.9		
30.0	79601.0	-48.8		
23.0	83383.0	-48.4		
20.0	86454.7	-44.5		
18.2	90544.1	-44.9		

UPPER AIR DATA
 2040000252
 S M R

STATION ALTITUDE 3997.30 FEET MSL
 23 JULY 79 1300 HRS MST
 ASCENSION NO. 252

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TAU)	SPEED KNOTS	
3997.3	875.5	34.7	15.1	31.0	983.4	660.1	90.0	4.1	1.000288
4000.0	875.4	34.7	15.0	30.9	983.4	660.1	90.0	4.1	1.000288
4500.0	850.8	32.4	17.8	21.6	976.7	682.6	62.9	2.9	1.000261
5000.0	840.2	30.9	7.7	23.5	964.9	681.0	66.9	1.8	1.000258
5500.0	831.8	29.6	7.7	25.4	952.7	679.4	14.7	1.0	1.000256
6000.0	817.5	28.2	7.6	27.3	940.6	677.9	344.4	.5	1.000253
6500.0	803.5	26.8	7.4	29.3	928.8	676.3	19.5	1.3	1.000250
7000.0	789.8	25.4	7.1	31.2	917.2	674.8	49.8	3.0	1.000247
7500.0	776.3	24.0	6.8	33.1	905.7	673.2	20.5	3.1	1.000244
8000.0	763.0	22.6	6.4	35.0	894.5	671.6	11.0	2.8	1.000241
8500.0	749.5	21.1	4.7	34.1	883.7	669.7	1.9	2.0	1.000234
9000.0	736.6	19.6	1.6	30.2	873.5	667.7	343.2	1.4	1.000225
9500.0	723.6	18.0	-1.5	26.3	863.3	665.7	299.7	1.2	1.000217
10000.0	710.9	16.5	-5.1	22.4	853.2	663.7	201.1	1.8	1.000209
10500.0	698.3	14.9	-7.9	19.9	842.9	661.9	261.5	2.7	1.000203
11000.0	685.7	13.6	-5.3	26.5	831.2	660.4	265.4	3.8	1.000204
11500.0	673.3	12.3	-3.5	33.1	819.6	659.0	271.1	3.6	1.000205
12000.0	661.1	10.9	-2.2	39.7	808.3	657.6	279.7	3.1	1.000204
12500.0	649.1	9.6	-1.4	46.3	797.5	656.1	273.5	2.4	1.000204
13000.0	637.4	8.2	-0.8	52.9	786.4	654.6	262.7	2.0	1.000203
13500.0	625.9	6.9	-0.4	59.5	775.7	653.1	250.3	2.6	1.000201
14000.0	614.4	5.5	-0.5	65.0	765.4	651.5	238.9	3.5	1.000199
14500.0	603.1	4.0	-1.1	69.2	755.3	649.7	261.1	4.9	1.000196
15000.0	591.9	2.7	-1.7	72.7	745.6	648.1	261.9	6.5	1.000193
15500.0	580.9	2.6	-2.4	62.6	731.4	646.0	262.9	7.8	1.000189
16000.0	570.1	2.0	-3.4	57.4	719.6	644.2	263.0	7.9	1.000184
16500.0	559.4	.7	-4.8	56.2	709.5	642.7	277.3	7.6	1.000180
17000.0	549.0	-0.5	-6.3	46.8	699.6	641.1	292.4	7.8	1.000175
17500.0	538.6	-1.7	-6.6	37.0	689.9	642.7	323.9	7.6	1.000173
18000.0	528.4	-2.9	-7.3	29.3	679.5	641.2	323.0	6.7	1.000170
18500.0	518.4	-3.9	-10.7	21.6	669.3	639.9	340.5	5.4	1.000163
19000.0	508.5	-3.9	-13.6	14.6	656.9	639.8	1.9	3.7	1.000158
19500.0	498.8	-3.9	-16.4	10.4	644.6	639.6	29.3	2.1	1.000152
20000.0	489.2	-4.8	-19.9	20.3	634.6	638.3	92.2	1.4	1.000148
20500.0	479.9	-5.7	-24.2	21.6	624.7	637.3	173.4	1.3	1.000144
21000.0	470.5	-6.8	-24.7	28.4	614.9	636.1	173.9	1.7	1.000141
21500.0	461.3	-7.9	-24.2	25.4	605.3	634.6	223.1	1.8	1.000139
22000.0	452.2	-8.9	-23.9	22.4	595.9	633.2	237.9	2.5	1.000138
22500.0	443.4	-10.0	-23.6	31.4	587.7	632.2	223.6	2.8	1.000136
23000.0	434.9	-11.1	-23.7	34.4	577.6	630.9	203.6	3.6	1.000134

STATION ALTITUDE 3997.30 FEET MSL
 23 JULY 79
 ASCENSION NO. 252

UPPER AIR DATA
 204000Z52
 5 M R

GEODETTIC COORDINATES
 32.46034 LAT DEG
 166.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND M/SEC	WIND DIRECTION DEGREES (T)	WIND SPEED KNOTS	INDEX OF REFRACTION
23500.0	420.3	-12.2	37.4	563.0	629.0	199.5	4.8	1.000132
24000.0	417.9	-13.3	40.4	559.0	620.3	202.5	5.4	1.000130
24500.0	409.7	-14.4	43.4	551.2	620.9	203.2	5.9	1.000128
25000.0	401.7	-15.5	46.4	542.0	620.0	209.3	6.4	1.000126
25500.0	393.7	-16.5	47.0	534.0	624.0	209.0	7.0	1.000123
26000.0	385.8	-17.6	47.0	525.4	623.0	204.1	7.3	1.000121
26500.0	378.0	-18.6	47.0	517.0	621.7	199.0	7.7	1.000119
27000.0	370.4	-19.7	47.0	508.0	620.5	197.0	8.2	1.000117
27500.0	362.9	-20.5	41.4	500.2	619.3	190.0	8.7	1.000114
28000.0	355.5	-21.3	33.0	481.0	618.3	194.7	9.3	1.000112
28500.0	348.3	-22.1	25.3	463.2	617.3	193.1	9.9	1.000109
29000.0	341.2	-23.0	21.1	444.9	616.3	191.5	10.4	1.000107
29500.0	334.1	-23.9	20.9	426.9	615.1	188.8	10.9	1.000105
30000.0	327.2	-25.0	24.7	409.2	613.8	185.5	11.3	1.000103
30500.0	320.4	-26.1	23.4	391.6	612.5	181.4	11.7	1.000102
31000.0	313.8	-27.1	32.2	374.2	611.1	176.5	12.2	1.000100
31500.0	307.2	-28.4	35.4	357.2	609.6	172.9	12.6	1.000099
32000.0	300.8	-30.2	36.8	341.2	607.3	170.0	12.5	1.000097
32500.0	294.3	-31.5	33.7	324.2	605.0	171.1	12.0	1.000096
33000.0	288.0	-32.8	36.3	307.3	604.0	176.7	10.9	1.000094
33500.0	281.7	-34.1	35.0	290.4	602.4	163.4	10.0	1.000092
34000.0	275.7	-35.3	33.6	273.7	600.8	191.1	9.4	1.000091
34500.0	269.7	-36.6	35.2	257.1	599.2	197.2	9.0	1.000089
35000.0	263.9	-37.9	34.9	240.7	597.6	199.4	8.4	1.000088
35500.0	258.2	-39.1	34.5	224.5	596.0	201.9	8.0	1.000086
36000.0	252.6	-40.4	34.2	208.4	594.4	204.0	8.0	1.000085
36500.0	247.0	-41.7	32.2**	192.4	592.7	209.8	8.1	1.000083
37000.0	241.4	-43.0	28.7**	176.4	591.1	207.7	8.5	1.000082
37500.0	235.9	-44.2	25.2**	160.4	589.4	208.3	9.0	1.000080
38000.0	230.0	-45.5	21.7**	144.4	587.0	208.5	10.1	1.000079
38500.0	224.4	-46.8	18.2**	128.4	585.1	208.7	11.2	1.000077
39000.0	220.3	-48.1	14.7**	112.4	583.4	211.0	12.2	1.000076
39500.0	215.3	-49.4	11.2**	96.4	581.8	212.9	13.1	1.000075
40000.0	210.4	-50.7	7.7**	80.4	581.1	213.1	13.9	1.000073
40500.0	205.6	-52.0	4.2**	64.4	579.4	213.2	14.7	1.000072
41000.0	200.9	-53.2	.7**	48.4	577.7	212.1	14.8	1.000071
41500.0	196.2	-54.4		32.4	576.0	210.9	14.8	1.000070
42000.0	191.6	-55.5		16.4	574.4	214.3	14.3	1.000068
42500.0	187.1	-56.6		0.4	572.8	217.4	13.7	1.000067
43000.0	182.6	-57.7			571.0	220.0	13.6	1.000066

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

STATION ALTITUDE 3997.30 FEET MSL
 23 JULY 79 1300 HRS MST
 ASCENSION 110. 252

UPPER AIR DATA
 204000Z
 5 M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY ALTITUDE METER	SPEED OF SOUND KNOTS	WIND DIRECTION (DEGREES TRUE)	WIND SPEED KNOTS	INDEX OF REFRACTION
43500.0	170.3	-59.9		289.9	570.3	227.0	13.9	1.000035
44000.0	174.1	-60.0		284.5	568.0	223.1	13.7	1.000035
44500.0	159.9	-61.1		279.0	567.4	220.0	12.6	1.000032
45000.0	165.8	-62.1		273.0	565.9	212.4	12.1	1.000031
45500.0	151.7	-63.2		265.4	564.5	204.9	11.0	1.000030
46000.0	157.8	-64.3		263.2	563.0	195.0	10.1	1.000029
46500.0	153.9	-65.5		258.2	561.4	195.9	9.8	1.000028
47000.0	150.1	-67.1		253.9	559.2	200.7	9.8	1.000027
47500.0	145.4	-68.4		249.0	557.5	203.0	10.1	1.000025
48000.0	142.7	-69.6		244.2	555.8	203.2	10.7	1.000024
48500.0	137.1	-70.8		239.5	554.2	212.0	11.3	1.000023
49000.0	135.6	-72.0		234.8	552.5	224.8	11.1	1.000022
49500.0	132.2	-73.0		230.1	551.1	237.5	11.4	1.000021
50000.0	128.8	-73.2		224.4	550.9	204.0	11.1	1.000020
50500.0	125.5	-73.4		219.7	550.8	227.0	10.7	1.000019
51000.0	122.3	-73.6		215.0	550.3	213.9	10.3	1.000018
51500.0	119.2	-73.8		208.2	550.1	193.1	10.6	1.000017
52000.0	116.1	-74.0		203.1	549.3	173.0	11.9	1.000015
52500.0	113.1	-73.2		197.1	550.9	177.9	12.1	1.000014
53000.0	110.3	-72.2		191.1	552.3	177.9	12.3	1.000013
53500.0	107.3	-71.8		185.9	552.9	171.0	11.5	1.000011
54000.0	104.7	-71.7		181.1	552.9	161.9	10.7	1.000010
54500.0	102.1	-71.6		176.0	553.0	148.4	10.0	1.000009
55000.0	99.5	-71.5		171.9	553.1	123.1	9.5	1.000007
55500.0	97.0	-71.5		167.0	553.0	100.1	10.9	1.000006
56000.0	94.5	-71.4		163.2	553.0	94.9	12.9	1.000005
56500.0	92.1	-71.4		159.0	553.4	63.0	14.7	1.000003
57000.0	89.9	-71.3		155.0	553.5	65.8	16.5	1.000003
57500.0	87.5	-71.2		151.0	553.0	93.3	17.2	1.000004
58000.0	85.3	-70.4		146.0	554.7	103.4	18.3	1.000003
58500.0	83.2	-69.3		141.0	556.9	110.7	19.2	1.000002
59000.0	81.1	-67.2		137.2	559.1	116.5	18.7	1.000001
59500.0	79.1	-65.0		132.8	561.3	128.0	18.5	1.000000
60000.0	77.2	-64.0		128.0	563.7	130.5	17.3	1.000000
60500.0	75.4	-63.0		123.1	566.0	130.5	16.9	1.000000
61000.0	73.4	-62.0		118.1	568.0	135.0	16.4	1.000000
61500.0	71.7	-61.0		113.0	569.5	134.0	16.3	1.000000
62000.0	69.9	-60.1		108.1	571.0	134.0	16.3	1.000000
62500.0	68.2	-60.1		103.1	571.0	134.0	16.3	1.000000
63000.0	66.5	-60.1		98.1	571.0	134.0	16.3	1.000000

UPPER AIR DATA
 2040000000
 5 M M

STATION ALTITUDE 397.30 FEET MSL
 23 JULY 79
 1300 HRS MST
 ASCENSION NO. 202

GEODETIC COORDINATES
 32.42034 LAT DEG
 106.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED SOUND KNOTS	SPEED OF WIND DIRECTION DEGREES (TRUE)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	64.9	-63.1		107.7	564.9		62.6	1.000024
64000.0	63.4	-63.1		105.1	564.0		62.2	1.000023
64500.0	61.8	-63.1		102.5	564.0		62.0	1.000023
65000.0	60.3	-63.1		100.0	564.0		61.7	1.000022
65500.0	58.8	-63.1		97.8	564.0		61.9	1.000022
66000.0	57.4	-63.1		95.2	564.0		61.0	1.000021
66500.0	56.0	-62.0		92.0	565.0		62.2	1.000021
67000.0	54.7	-62.1		90.3	565.9		61.9	1.000020
67500.0	53.4	-61.4		87.8	566.9		61.5	1.000019
68000.0	52.1	-60.7		85.4	567.0		60.3	1.000019
68500.0	50.8	-60.1		83.1	568.7		60.5	1.000018
69000.0	49.6	-59.5		80.9	569.5		60.5	1.000018
69500.0	48.4	-59.1		78.6	569.9		60.8	1.000018
70000.0	47.3	-58.8		76.6	569.4		60.5	1.000017
70500.0	46.2	-58.4		74.9	570.9		60.3	1.000017
71000.0	45.1	-58.1		73.0	571.3		62.0	1.000016
71500.0	44.0	-57.7		71.2	571.5		62.0	1.000016
72000.0	43.0	-57.4		69.4	572.5		61.6	1.000015
72500.0	42.0	-57.0		67.6	572.7		62.5	1.000015
73000.0	41.0	-56.7		65.9	573.2		62.2	1.000015
73500.0	40.0	-56.3		64.3	573.7		62.9	1.000015
74000.0	39.1	-56.0		62.7	574.1		61.5	1.000014
74500.0	38.1	-55.6		61.1	574.6		60.1	1.000014
75000.0	37.2	-55.2		59.5	575.1		60.5	1.000013
75500.0	36.4	-54.9		58.1	575.5		60.9	1.000013
76000.0	35.5	-54.5		56.6	575.0		60.4	1.000013
76500.0	34.7	-54.2		55.2	575.5		61.2	1.000012
77000.0	33.9	-53.7		53.9	577.1		61.0	1.000012
77500.0	33.1	-52.8		52.5	576.3		60.9	1.000012
78000.0	32.3	-51.8		50.9	579.0		62.0	1.000011
78500.0	31.6	-50.9		49.5	580.0		60.1	1.000011
79000.0	30.9	-49.9		48.1	582.0		60.9	1.000011
79500.0	30.1	-49.0		46.9	583.5		62.0	1.000010
80000.0	29.5	-48.8		45.7	583.0		63.0	1.000010
80500.0	28.8	-48.7		44.7	583.0		62.7	1.000010
81000.0	28.3	-48.7		43.7	582.0		63.4	1.000010
81500.0	27.5	-48.7		42.7	583.7		64.1	1.000009
82000.0	26.9	-48.6		41.7	583.7		64.9	1.000009
82500.0	26.3	-48.0		40.7	583.5		60.1	1.000009
83000.0	25.7	-48.6		39.0	583.0		60.5	1.000009

STATION ALTITUDE 397.30 FEET MSL
 23 JULY 79 1300 HRS MST
 ASCENSION NO. 252

UPPER AIR DATA
 2040000202
 S M R

GEOMETRIC ALTITUDE 397.30 FEET MSL
 23 JULY 79 1300 HRS MST
 ASCENSION NO. 252

ULODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY G/CM ³ METER	SPEED OF SOUND M/SEC	WIND DIRECTION DEGREES (T)	WIND SPEED KNOTS	INDEX OF REFRACTION
03500.0	25.1	-48.5		36.9	565.9	96.1	34.8	1.000009
04000.0	24.5	-48.5		38.0	583.9	97.6	36.4	1.000008
04500.0	24.0	-48.5		37.1	564.0	97.6	38.0	1.000008
05000.0	23.4	-48.4		36.3	584.0	97.6	36.7	1.000008
05500.0	22.9	-48.3		35.4	584.2	98.1	38.1	1.000008
06000.0	22.4	-47.6		34.9	585.1	93.6	37.5	1.000008
06500.0	21.9	-47.0		33.7	585.9	95.2	37.2	1.000007
07000.0	21.4	-46.3		32.6	586.7	95.7	37.6	1.000007
07500.0	20.9	-45.7		32.0	587.5	95.2	38.0	1.000007
08000.0	20.4	-45.1		31.2	588.3			1.000007
08500.0	20.0	-44.5		30.4	589.1			1.000007
09000.0	19.5	-44.5		29.7	589.0			1.000007
09500.0	19.1	-44.7		29.1	588.8			1.000006
00000.0	18.7	-44.8		28.5	588.7			1.000006
00500.0	18.2	-44.9		27.8	588.6			1.000006

STATION ALTITUDE 3997.30 FEET MSL
 23 JULY 79
 ASCENSION: NO. 202
 1300 HRS MST

MRN SIGNIFICANT LEVEL DATA

2040000202
 S M R

GEODETTIC COORDINATES
 32.48034 LAT DEG
 106.42307 LONG DEG

GEOCENTRAL ALTITUDE METERS	DIRECTION DEG (TN)	WIND DATA			D-W PT DE DEG C	TEMPERATURE	
		SPEED MPS	N-S MPS	E-W MPS		AIR DEG C	PRESSURE MILLIBARS
2747.	9999.**	9999.**	-9999.**	-9999.**	99	-44.9	1.820+1
2083.	9999.**	9999.**	-9999.**	-9999.**	99	-44.5	2.000+1
2591.	96.	20.	3.	-19.	99	-46.4	2.300+1
2416.	97.	18.	2.	-18.	99	-46.8	3.000+1
2335.	94.	18.	1.	-18.	99	-53.9	3.400+1
2090.	97.	13.	2.	-13.	99	-54.6	5.000+1
2013.	92.	9.	0.	-9.	99	-63.1	5.000+1
1882.	104.	5.	1.	-5.	99	-63.1	7.000+1
1826.	101.	9.	5.	-7.	99	-64.0	7.720+1
1755.	99.	9.	1.	-9.	99	-71.2	8.440+1
1665.	128.	5.	3.	-4.	99	-71.6	1.000+2

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

STATION ALTITUDE 997.30 FEET MSL
 23 JULY 79 1300 HRS MST
 ASCENSION NO. 252

MANDATORY LEVELS
 2000000252
 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	4868.	31.3	7.7	23.	74.6	4.1
800.0	6636.	26.4	7.3	30.	22.9	1.6
750.0	8486.	21.2	4.7	34.	2.2	2.0
700.0	10424.	15.1	-3.3	19.	260.7	2.6
650.0	12452.	9.7	-1.4	40.	274.1	2.4
600.0	14622.	3.6	-1.5	70.	261.7	3.3
550.0	16929.	-4	-6.1	65.	290.7	7.8
500.0	19410.	-3.8	-19.0	36.	21.8	4.4
450.0	22113.	-9.2	-23.9	29.	233.7	2.6
400.0	25060.	-15.7	-24.4	47.	209.4	9.5
350.0	28329.	-21.9	-35.9	27.	193.6	9.7
300.0	31997.	-30.4	-40.3	37.	170.3	12.5
250.0	36158.	-41.0	-50.9	34.	205.8	8.0
200.0	41002.	-53.5			211.9	14.8
175.0	43781.	-59.7			229.6	14.0
150.0	46891.	-67.2			200.0	9.8
125.0	50430.	-73.4			226.8	10.7
100.0	54728.	-71.6			129.7	9.5
80.0	59074.	-66.3			122.4	16.6
70.0	61759.	-63.1			104.8	10.3
60.0	64870.	-63.1			96.3	13.8
50.0	65571.	-59.6			96.7	23.0
40.0	73186.	-56.3			93.0	32.6
30.0	79259.	-49.8			97.6	35.8
25.0	83182.	-48.5			96.1	34.9
20.0	88038.	-44.5				

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

STATION ALTITUDE 3997.30 FEET MSL
 23 JULY 79
 ASCENSION NO. 452

MPN MANDATORY LEVELS
 204006252
 5 M R

GEODETIC COORDINATES
 32.46034 LAT DEG
 106.42307 LON DEG

GEOCENTRAL ALTITUDE DECA METERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		Dew PT Dew DEG C	TEMPERATURE		PRESSURE MILLIBARS
			N-S MPS	E-W MPS		AIR DEG C		
2050.	9999.**	9999.**	-9999.**	-9999.**	99	-44.5	2.000+1	
2030.	98.	18.	3.	-10.	99	-48.5	2.500+1	
2410.	98.	18.	2.	-10.	99	-48.8	3.000+1	
2451.	93.	17.	1.	-17.	99	-56.3	4.000+1	
2090.	97.	13.	1.	-10.	99	-59.6	5.000+1	
1977.	98.	7.	1.	-7.	99	-63.1	6.000+1	
1082.	105.	5.	1.	-5.	99	-63.1	7.000+1	
1501.	122.	10.	5.	-0.	99	-66.3	8.000+1	
1000.	130.	5.	2.	-4.	99	-71.6	1.000+2	
1557.	227.	5.	4.	4.	99	-73.4	1.250+2	
1429.	201.	5.	5.	2.	99	-67.2	1.500+2	
1334.	230.	7.	5.	0.	99	-59.7	1.750+2	
1450.	212.	6.	6.	4.	99	-53.5	2.000+2	
1102.	206.	4.	4.	2.	10	-41.0	2.500+2	
975.	170.	0.	6.	-1.	10	-30.4	3.000+2	
663.	194.	5.	5.	1.	14	-21.9	3.500+2	
764.	209.	3.	3.	2.	09	-15.7	4.000+2	
674.	234.	1.	1.	1.	10	-9.2	4.500+2	
592.	22.	1.	-1.	-0.	12	-3.8	5.000+2	
510.	291.	4.	-1.	4.	06	-0.4	5.500+2	
440.	262.	3.	0.	3.	05	3.6	6.000+2	
500.	274.	1.	-0.	1.	11	9.7	6.500+2	
318.	261.	1.	0.	1.	25	15.1	7.000+2	
459.	2.	1.	-1.	-0.	10	21.2	7.500+2	
202.	23.	1.	-1.	-0.	19	26.4	8.000+2	
140.	73.	1.	-0.	-1.	24	31.3	8.500+2	

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