

AD-A071 779

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19305A GSRS, MISSILE NUMBER 1032. ROUND NUMBER V-32.(U)
MAY 79

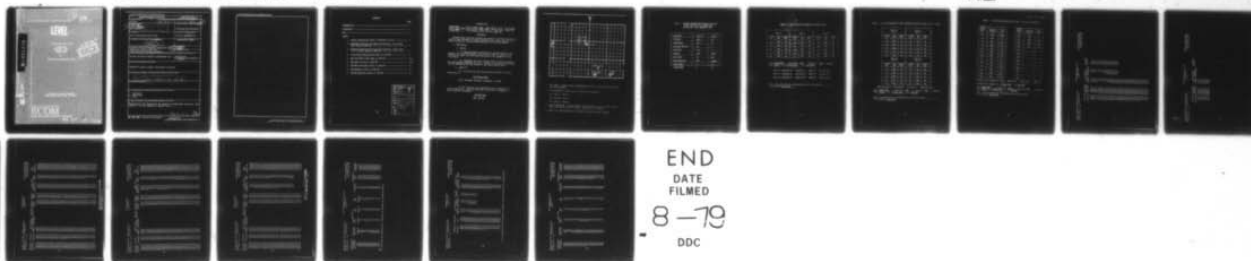
UNCLASSIFIED

ERADCOM/ASL-DR-1020

NL

| OF |
AD
A071779

1



APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

DR 1320
May 1979

AD

LEVEL

METEOROLOGICAL DATA REPORT

19305A GSRS
Missile No. 1092
Round No. V-32
25 May 1979

by

White Sands Meteorological Team

DDO
RECEIVED
JUL 27 1979
C

AD A 071 779

DDG FILE COPY

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

79 07 26 03 6

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1020	2. GOVT ACCESSION NO. (9) Meteorological data rept.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19305A GSRS Missile No. 1032 Number 1032. Round No. V-32 Number V-32.	5. TYPE OF REPORT & PERIOD COVERED	
7. AUTHOR(s) White Sands Meteorological Team	6. PERFORMING ORG. REPORT NUMBER	
9. PERFORMING ORGANIZATION NAME AND ADDRESS (12) 19p.	8. CONTRACT OR GRANT NUMBER(s) DA Task 1T6657-2D126-02	
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Comd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research & Development Comd	12. REPORT DATE May 1979	
	13. NUMBER OF PAGES	
	15. SECURITY CLASS. (of this report) UNCLASSIFIED	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) (14) ERADCOM/ASL-DR-1020		
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 19305A GSRS, Missile No. 1032, Round No. V-32, are presented in tabular form. ↗ 410 663 Gue		

CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
MAP -----	2
TABLES	
1. Surface Observations Taken at 1540 MDT at LC-33 -----	3
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 1541 MDT -----	4
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, Taken at 1541 MDT -----	5
4. Pilot-Balloon-Measured Wind Data at 1541 MDT -----	6
5. SMR Significant Level Data at 1355 MST -----	7-8
6. SMR Upper Air Data at 1355 MST -----	9-13
7. SMR MRN Significant Levels at 1355 MST -----	14
8. SMR Mandatory Levels at 1355 MST -----	15
9. SMR MRN Mandatory Levels at 1355 MST -----	16

Accession For	
NTIS GRA&I	☒
DDC TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or special
A	

INTRODUCTION

19305A GSRS, Missile Number 1032, Round Number V-32, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1540 MDT, 25 May 1979. The scheduled launch time was 1455 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:

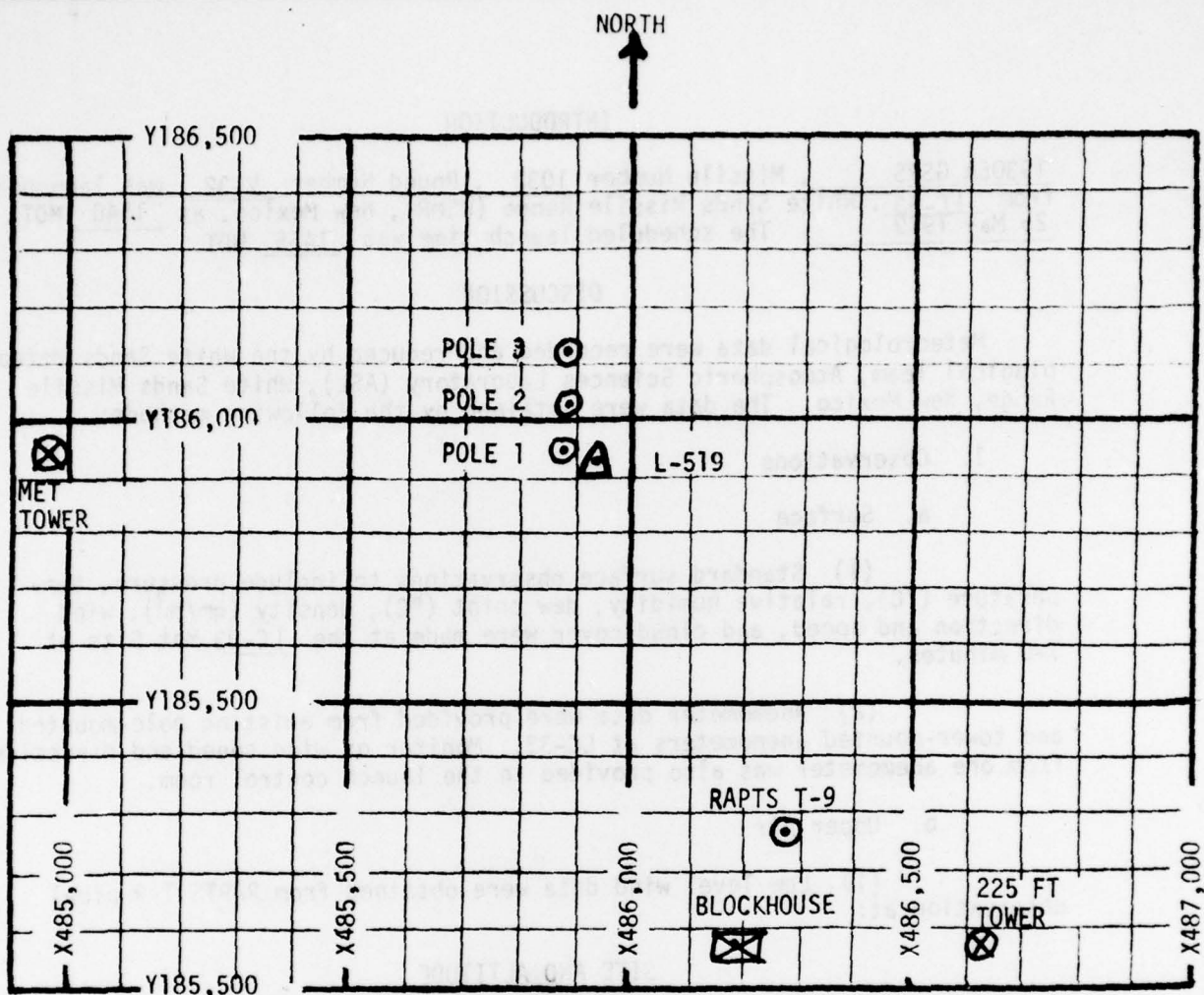
SITE AND ALTITUDE

LC-33 480 meters (30-meter increments) 1541 MDT

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 100,500 feet in 500-foot increments.

SITE AND TIME

SMR 1355 MST



1. MET TOWER - 4 Bendix Model T-120 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. 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

TABLE 1. SURFACE OBSERVATIONS TAKEN AT 1541 MDT,
25 MAY 1979 AT LC-33, 19305A GSRS,
MISSILE NO. 1032, ROUND NO. V-32

ELEVATION	3977.30	FT/MSL
PRESSURE	880.4	MBS
TEMPERATURE	28.0	°C
RELATIVE HUMIDITY	48	%
DEW POINT	15.9	°C
DENSITY	1009	GM/M ³
WIND SPEED	08	MPH
WIND DIRECTION	090	DEGREES
CLOUD COVER	2	Cu
CLOUD COVER	4	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	000	00	-30	125	09	-30	128	03
-20	000	00	-20	128	08	-20	120	02
-10	000	00	-10	125	07	-10	126	01
0.0	000	00	0.0	120	08	0.0	132	02
+10	000	00	+10	095	05	+10	105	02

Type 19305A GSRS, Missile No. 1032, Round No. V-32 launched
from LC-33 on 25 May 1979 at 1541 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	060	04	-30	090	07
-20	075	06	-20	115	06
-10	090	04	-10	107	05
0.0	115	02	0.0	114	05
+10	100	04	+10	114	07
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	000	00	-30	101	06
-20	000	00	-20	092	04
-10	000	00	-10	092	04
0.0	000	00	0.0	088	06
+10	000	00	+10	089	05

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

Type 19305A GSRS, Missile No. 1032, Round No. V-32 launched
from LC-33 on 25 May 1979 at 1541 MDT.

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

TABLE 4. PILOT-BALLOON-MEASURED WIND DATA (30-METER INCREMENTS)

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
SFC	Calm	Calm
30	176	6.0
60	187	8.0
90	204	6.0
120	123	3.5
150	083	4.0
180	142	4.0
210	174	8.5
240	153	8.5
270	173	9.0
300	178	9.0
330	178	10.5
360	186	10.0

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
390	192	5.5
420	132	6.0
450	160	7.0
480	141	7.5
510		
540		
570		
600		
630		
660		
690		
720		
750		

Release Point Coordinates (WSTM): X486,037.24 Y486,037.24 H3977.30

Released from LC-33 on 25 May 1979 at 1541 MDT.

Type 19305A GSRS, Missile No. 1032, Round No. V-32 launched from LC-33 on 25 May 1979 at 1540 MDT.

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

STATION ALTITUDE 3997.30 FEET MSL
25 MAY 79 1355 HRS MST
ASCENSION NO. 150

SIGNIFICANT LEVEL DATA
1450060150
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

PRESSURE GEOMETRIC MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
878.1 3997.3	25.0 8.1	34.0
850.0 4928.3	21.0 8.6	45.0
810.2 6282.5	16.9 7.8	55.0
770.2 7692.1	12.6 8.1	74.0
760.4 8046.0	12.9 8.3	52.0
721.8 9470.2	9.3 1.2	57.0
700.0 10309.6	7.1 1.4	67.0
684.2 10925.8	5.5 .9	72.0
665.4 11673.4	4.0 -4.4	54.0
636.6 12851.9	1.5 -1.4	81.0
583.4 15142.4	-4.0 -8.8	69.0
570.5 15722.4	-4.3 -20.4	27.0
549.2 16700.9	-5.0 -21.9	25.0
500.0 19106.4	-10.8 -21.4	41.0
429.8 22869.7	-19.5 -25.1	61.0
400.0 24614.9	-23.0 -31.1	47.0
379.8 25857.6	-25.8 -37.2	33.0
352.4 27630.6	-29.3 -45.0	20.0
326.2 29428.4	-34.3 -49.3	20.0
300.0 31335.9	-39.5	
260.2 34484.4	-48.1	
250.0 35349.5	-49.7	
222.4 37837.1	-55.6	
212.2 38913.0	-57.5	
207.2 39315.9	-56.0	
200.0 40057.3	-55.9	
183.4 41860.5	-59.2	
174.4 42901.5	-58.5	
161.4 44497.5	-61.0	
150.0 45998.2	-61.0	
137.0 47841.2	-54.3	
133.2 48411.5	-62.2	
125.8 49580.4	-60.7	
100.0 54273.3	-62.4	
87.0 57101.5	-63.7	
75.8 59912.9	-60.6	
70.0 61553.8	-59.4	
65.2 63017.9	-60.7	
60.0 64739.0	-57.5	
53.0 67218.4	-59.0	

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

SIGNIFICANT LEVEL DATA
1450060150
S M R

STATION ALTITUDE 3997.30 FEET MSL
25 MAY 79 1355 HRS MST
ASCENSION NO. 150

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
50.0 68532.4	-56.7		
39.0 73771.0	-54.0		
34.6 76338.1	-49.4		
30.0 79433.5	-48.9		
21.9 86317.2	-46.0		
20.0 88332.2	-42.3		
13.0 98048.2	-39.0		
11.6 100557.3	-35.5		

STATION ALTITUDE 3997.30 FEET MSL
25 MAY 79 1355 HRS MST
ASCENSION NO. 150

UPPER AIR DATA
1450060150
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
3997.3	878.1	25.0	34.0	1021.2	674.3	0	0	1.000274
4000.0	878.0	25.0	34.0	1021.2	674.2	151.8	0	1.000274
4500.0	862.8	22.8	39.9	1010.5	671.4	151.8	1.4	1.000273
5000.0	847.8	20.8	45.5	999.8	669.0	151.8	2.8	1.000272
5500.0	833.0	19.3	49.2	987.4	667.9	151.8	4.2	1.000269
6000.0	818.3	17.8	52.9	975.1	666.1	151.8	5.6	1.000266
6500.0	803.9	16.2	57.9	962.9	664.4	149.8	6.4	1.000263
7000.0	789.6	14.7	64.7	950.6	662.7	147.2	6.9	1.000261
7500.0	775.5	13.2	71.4	938.6	661.0	158.9	7.5	1.000259
8000.0	761.7	12.9	54.9	924.0	660.2	170.5	8.3	1.000244
8500.0	747.9	11.8	53.6	911.1	658.8	180.7	9.4	1.000238
9000.0	734.4	10.5	55.3	898.7	657.3	168.2	10.7	1.000233
9500.0	721.2	9.2	57.3	886.5	655.8	193.5	12.0	1.000229
10000.0	708.0	7.9	63.3	874.4	654.3	199.8	13.8	1.000227
10500.0	695.1	6.6	68.5	862.4	652.8	204.7	15.8	1.000225
11000.0	682.3	5.4	70.2	850.5	651.3	205.3	16.5	1.000220
11500.0	669.7	4.3	58.2	838.4	649.9	205.5	17.0	1.000211
12000.0	657.3	3.3	61.5	826.0	648.0	201.5	15.5	1.000208
12500.0	645.1	2.2	72.9	813.5	647.5	195.7	14.2	1.000207
13000.0	633.0	1.1	90.2	801.4	646.2	185.8	13.6	1.000205
13500.0	621.1	-1.1	77.5	789.6	644.7	177.1	13.7	1.000200
14000.0	609.4	-1.3	75.0	778.7	643.2	171.0	14.2	1.000195
14500.0	597.9	-2.5	72.4	767.6	641.7	173.1	14.0	1.000190
15000.0	586.6	-3.7	69.7	756.7	640.2	175.1	13.6	1.000186
15500.0	575.4	-4.2	43.1	744.3	639.3	187.3	14.3	1.000176
16000.0	564.4	-4.5	26.4	731.3	638.8	194.5	15.5	1.000169
16500.0	553.6	-4.9	25.4	718.3	638.4	199.8	17.1	1.000166
17000.0	542.9	-5.7	30.3	706.7	637.3	200.7	17.2	1.000163
17500.0	532.4	-6.9	33.6	696.1	635.9	201.2	17.0	1.000161
18000.0	522.1	-8.1	37.0	685.7	634.5	201.2	16.6	1.000159
18500.0	512.0	-9.3	40.3	675.5	633.0	202.9	16.6	1.000157
19000.0	502.1	-10.5	43.1	665.5	631.0	205.8	16.9	1.000154
19500.0	492.2	-11.7	45.7	655.2	630.2	208.0	16.4	1.000152
20000.0	482.4	-12.9	48.4	645.1	629.0	205.1	15.8	1.000150
20500.0	472.8	-14.0	51.1	635.1	627.4	202.0	15.7	1.000147
21000.0	463.4	-15.2	53.7	625.2	626.0	201.2	15.8	1.000145
21500.0	454.1	-16.3	56.4	615.5	624.0	203.7	16.0	1.000142
22000.0	445.1	-17.5	59.0	606.0	623.1	209.0	16.2	1.000140
22500.0	436.2	-18.6	60.0	596.7	621.7	213.7	16.5	1.000138
23000.0	427.5	-19.8		587.3	620.3	220.2	17.1	1.000135

STATION ALTITUDE 3997.30 FEET MSL
25 MAY 79 1355 HRS MST
ASCENSION NO. 130

UPPER AIR DATA
1450060150
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 DATA DIRECTION (TN) DEGREES	SPEED KNOTS	INDEX OF REFRACTION
23500.0	418.8	-20.8	-27.2	55.9	577.7	619.1	224.0	17.8	1.000133
24000.0	410.3	-21.8	-28.9	51.9	568.2	617.8	226.8	18.0	1.000130
24500.0	401.9	-22.8	-30.7	47.9	558.9	616.0	230.1	18.2	1.000127
25000.0	393.6	-23.9	-32.9	42.7	549.9	613.2	233.8	18.4	1.000125
25500.0	385.3	-25.0	-35.4	37.0	541.0	613.8	229.5	19.7	1.000122
26000.0	377.5	-26.1	-37.8	32.0	532.2	612.4	224.2	21.5	1.000120
26500.0	369.0	-27.1	-39.9	28.3	523.2	611.2	220.4	23.6	1.000118
27000.0	361.9	-28.1	-42.0	24.6	514.3	610.0	219.5	24.7	1.000115
27500.0	354.3	-29.0	-44.4	21.0	505.6	608.7	221.1	24.9	1.000113
28000.0	346.9	-30.3	-45.9	20.0	497.6	607.1	221.7	24.9	1.000111
28500.0	339.3	-31.7	-47.1	20.0	489.8	605.4	221.6	24.8	1.000110
29000.0	332.3	-33.1	-48.3	20.0	482.2	603.6	219.3	24.6	1.000108
29500.0	325.2	-34.5	-49.8	19.2**	474.6	601.9	216.1	24.4	1.000106
30000.0	318.1	-35.9	-53.6	14.0**	467.0	600.1	213.7	24.5	1.000104
30500.0	311.2	-37.2	-58.5	8.8**	459.5	598.4	211.4	24.7	1.000102
31000.0	304.5	-38.6	-66.3	3.5**	452.2	596.7	211.3	24.3	1.000101
31500.0	297.8	-39.9			444.8	594.9	211.0	23.8	1.000099
32000.0	291.1	-41.3			437.5	593.2	208.0	23.0	1.000097
32500.0	284.6	-42.7			430.2	591.4	203.2	22.5	1.000096
33000.0	278.3	-44.0			423.1	589.7	204.1	22.9	1.000094
33500.0	272.0	-45.4			416.1	587.9	203.2	23.4	1.000093
34000.0	266.0	-46.8			409.3	586.1	203.1	23.7	1.000091
34500.0	260.0	-48.1			402.5	584.4	202.0	23.9	1.000090
35000.0	254.1	-49.1			395.0	583.2	198.1	23.8	1.000088
35500.0	248.2	-50.1			387.0	581.9	193.4	23.9	1.000086
36000.0	242.5	-51.3			380.7	580.3	187.4	24.6	1.000085
36500.0	236.8	-52.5			374.0	578.7	184.1	25.2	1.000083
37000.0	231.3	-53.7			367.3	577.1	184.2	25.4	1.000082
37500.0	226.0	-55.0			360.8	575.4	187.0	25.2	1.000080
38000.0	220.7	-56.1			354.1	574.0	194.9	24.8	1.000079
38500.0	215.3	-56.9			347.2	572.8	200.0	24.9	1.000077
39000.0	210.4	-57.0			339.0	572.0	203.3	25.2	1.000075
39500.0	205.4	-56.0			329.5	574.1	205.4	25.9	1.000073
40000.0	200.3	-55.9			321.0	574.2	209.4	26.7	1.000072
40500.0	195.8	-56.7			315.1	573.1	209.4	28.2	1.000070
41000.0	191.1	-57.6			309.0	571.9	212.2	29.9	1.000069
41500.0	186.6	-58.5			302.9	570.7	210.2	30.9	1.000067
42000.0	182.2	-59.1			296.5	570.0	220.5	31.6	1.000066
42500.0	177.8	-58.8			289.0	570.4	223.8	34.3	1.000064
43000.0	173.6	-58.7			281.9	570.6	230.7	36.2	1.000063

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

STATION ALTITUDE 3997.30 FEET MSL
25 MAY 79
ASCENSION NO. 150

UPPER AIR DATA
1450060150
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	169.4	-59.4		276.1	569.5	234.3	42.4	1.000061
44000.0	165.3	-60.2		270.5	568.5	236.9	46.6	1.000060
44500.0	161.4	-61.0		265.0	567.4	239.8	48.4	1.000059
45000.0	157.5	-61.0		258.6	567.4	243.9	46.5	1.000058
45500.0	153.7	-61.0		252.4	567.4	248.2	44.1	1.000056
46000.0	150.0	-61.0		246.3	567.4	252.4	39.7	1.000055
46500.0	146.3	-61.9		241.3	566.2	257.2	35.5	1.000054
47000.0	142.8	-62.3		236.5	565.0	255.6	30.9	1.000053
47500.0	139.3	-63.7		231.7	563.8	253.9	26.4	1.000052
48000.0	135.9	-63.7		226.1	563.8	249.8	24.3	1.000050
48500.0	132.6	-62.1		218.9	560.0	245.0	22.5	1.000049
49000.0	129.4	-61.4		213.0	560.8	248.2	19.1	1.000047
49500.0	126.3	-60.8		207.2	567.7	257.5	15.4	1.000046
50000.0	123.2	-60.9		202.2	567.0	260.3	12.9	1.000045
50500.0	120.3	-61.0		197.5	567.4	271.1	11.4	1.000044
51000.0	117.4	-61.2		192.9	567.1	272.1	10.3	1.000043
51500.0	114.5	-61.4		188.4	566.9	254.6	10.7	1.000042
52000.0	111.9	-61.6		184.0	566.7	259.8	11.9	1.000041
52500.0	109.1	-61.8		179.7	566.4	243.0	12.6	1.000040
53000.0	106.4	-61.9		175.5	566.2	247.1	13.3	1.000039
53500.0	103.9	-62.1		171.4	565.9	255.2	14.2	1.000038
54000.0	101.3	-62.3		167.4	565.7	267.4	15.6	1.000037
54500.0	98.9	-62.5		163.5	565.4	270.0	16.4	1.000036
55000.0	96.5	-62.7		159.7	565.1	283.7	14.7	1.000036
55500.0	94.1	-63.0		156.0	564.8	293.3	13.2	1.000035
56000.0	91.8	-63.2		152.4	564.5	300.3	11.5	1.000034
56500.0	89.6	-63.4		148.9	564.2	323.1	10.5	1.000033
57000.0	87.4	-63.7		145.4	563.9	332.4	10.4	1.000032
57500.0	85.3	-63.3		141.6	564.4	333.4	10.5	1.000032
58000.0	83.3	-62.7		137.8	565.1	333.5	10.5	1.000031
58500.0	81.2	-62.2		134.1	565.9	327.4	10.4	1.000030
59000.0	79.3	-61.6		130.5	566.0	321.2	10.4	1.000029
59500.0	77.3	-61.1		127.0	567.4	321.3	9.6	1.000028
60000.0	75.3	-60.5		123.7	568.1	323.9	8.4	1.000028
60500.0	73.7	-60.2		120.5	568.5	330.0	7.3	1.000027
61000.0	71.9	-59.8		117.4	569.0	322.0	6.6	1.000026
61500.0	70.2	-59.4		114.4	569.5	312.3	6.1	1.000025
62000.0	68.5	-59.8		111.8	569.0	302.1	6.2	1.000025
62500.0	66.9	-60.2		109.4	568.5	293.3	6.7	1.000024
63000.0	65.3	-60.7		107.0	567.9	267.1	7.3	1.000024

STATION ALTITUDE 997.30 FEET MSL
25 MAY 79 1355 HRS MST
ASCENSION NO. 100

UPPER AIR DATA
1450060150
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES(TN)	INDEX OF REFRACTION
03500.0	63.7	-59.8		104.0	569.0	297.0	1.000023
04000.0	62.2	-58.9		101.1	570.3	308.9	1.000023
04500.0	60.7	-57.9		98.3	571.5	320.7	1.000022
05000.0	59.3	-57.7		95.8	571.9	329.0	1.000021
05500.0	57.8	-57.9		93.6	571.5	334.7	1.000021
06000.0	56.5	-58.2		91.5	571.1	350.7	1.000020
06500.0	55.1	-58.5		89.5	570.7	21.4	1.000020
07000.0	53.8	-58.8		87.5	570.4	41.0	1.000019
07500.0	52.5	-58.7		85.3	570.6	57.7	1.000019
08000.0	51.3	-57.7		82.9	571.8	71.8	1.000018
08500.0	50.1	-56.8		80.6	573.1	79.9	1.000018
09000.0	48.9	-56.5		78.6	573.5	90.9	1.000018
09500.0	47.8	-56.2		76.7	573.8	110.0	1.000017
10000.0	46.6	-55.9		74.6	574.2	114.1	1.000017
10500.0	45.5	-55.7		73.0	574.5	117.0	1.000016
11000.0	44.3	-55.4		71.2	574.8	110.7	1.000016
11500.0	43.4	-55.2		69.4	575.2	113.3	1.000015
12000.0	42.4	-54.9		67.7	575.5	110.0	1.000015
12500.0	41.4	-54.7		66.0	575.9	99.0	1.000015
13000.0	40.5	-54.4		64.4	576.2	80.3	1.000014
13500.0	39.5	-54.1		62.8	576.5	70.2	1.000014
14000.0	38.6	-53.6		61.2	577.3	73.4	1.000014
14500.0	37.7	-52.7		59.6	576.4	71.0	1.000013
15000.0	36.8	-51.8		58.0	574.6	65.0	1.000013
15500.0	36.0	-50.9		56.4	580.8	50.0	1.000013
16000.0	35.1	-50.0		54.9	582.0	54.4	1.000012
16500.0	34.3	-49.4		53.5	582.8	54.1	1.000012
17000.0	33.6	-49.3		52.2	582.9	54.2	1.000012
17500.0	32.8	-49.2		51.0	583.0	54.4	1.000011
18000.0	32.0	-49.1		49.8	583.1	57.5	1.000011
18500.0	31.3	-49.1		48.7	583.2	62.1	1.000011
19000.0	30.6	-49.0		47.8	583.3	69.2	1.000011
19500.0	29.9	-48.9		46.5	583.4	76.0	1.000010
20000.0	29.2	-48.7		45.4	583.7	82.6	1.000010
20500.0	28.6	-48.5		44.3	584.0	80.3	1.000010
21000.0	27.9	-48.2		43.3	584.3	90.4	1.000010
21500.0	27.3	-48.0		42.2	584.5	92.3	1.000009
22000.0	26.7	-47.8		41.2	584.8	93.7	1.000009
22500.0	26.1	-47.6		40.3	585.1	92.4	1.000009
23000.0	25.5	-47.4		39.3	585.3	91.2	1.000009

STATION ALTITUDE 3997.30 FEET MSL
 25 MAY 79 1355 HRS MST
 ASCENSION NO. 150

UPPER AIR DATA
 1450060150
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES C	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
83500.0	24.9	-47.2		38.4	565.0	91.1	15.3	1.000009
84000.0	24.5	-47.0		37.5	565.9	94.6	15.0	1.000008
84500.0	23.8	-46.8		36.6	565.2	93.2	14.7	1.000008
85000.0	23.5	-46.6		35.8	566.4	101.6	14.3	1.000008
85500.0	22.7	-46.3		34.9	566.7	104.1	13.3	1.000008
86000.0	22.2	-46.1		34.1	587.0	107.0	12.3	1.000008
86500.0	21.7	-45.7		33.3	587.6	110.4	11.4	1.000007
87000.0	21.2	-44.7		32.4	586.8	117.8	11.1	1.000007
87500.0	20.8	-43.8		31.5	590.0	125.5	11.1	1.000007
88000.0	20.5	-42.9		30.7	591.1	133.0	11.3	1.000007
88500.0	19.9	-42.2		29.9	592.0	138.3	11.1	1.000007
89000.0	19.4	-42.1		29.5	592.2	142.9	10.7	1.000007
89500.0	19.0	-41.9		28.6	592.4	147.8	10.4	1.000006
90000.0	18.6	-41.7		28.0	592.8	149.6	10.0	1.000006
90500.0	18.2	-41.6		27.3	592.9	145.5	9.3	1.000006
91000.0	17.8	-41.4		26.7	593.1	138.5	8.7	1.000006
91500.0	17.4	-41.2		26.1	593.3	128.7	8.3	1.000006
92000.0	17.0	-41.1		25.5	593.5	115.7	8.4	1.000006
92500.0	16.6	-40.9		24.9	593.7	103.8	9.0	1.000006
93000.0	16.3	-40.7		24.4	593.9	93.3	9.9	1.000005
93500.0	15.9	-40.5		23.8	594.2	93.0	10.6	1.000005
94000.0	15.6	-40.4		23.3	594.4	90.8	9.4	1.000005
94500.0	15.2	-40.2		22.8	594.6	91.6	8.8	1.000005
95000.0	14.9	-40.0		22.2	594.8	93.2	8.6	1.000005
95500.0	14.6	-39.9		21.7	595.0	96.6	9.5	1.000005
96000.0	14.2	-39.7		21.2	595.2	99.4	10.4	1.000005
96500.0	13.9	-39.5		20.8	595.5	101.7	11.4	1.000005
97000.0	13.6	-39.4		20.3	595.7	98.6	12.5	1.000005
97500.0	13.3	-39.2		19.8	595.9	91.1	13.7	1.000004
98000.0	13.0	-39.0		19.4	596.1	88.7	15.1	1.000004
98500.0	12.7	-38.4		18.9	596.9			1.000004
99000.0	12.5	-37.7		18.5	597.8			1.000004
99500.0	12.2	-37.1		18.0	598.8			1.000004
100000.0	11.9	-36.4		17.6	599.3			1.000004
100500.0	11.7	-35.7		17.1	600.3			1.000004

THIS PAGE IS BEST QUALITY FRAGILE
 FROM COPY FURNISHED TO DDC

STATION ALTITUDE 3997.30 FEET MSL
 25 MAY 79 1355 HRS MST
 ASCENSION NO. 156

MRN SIGNIFICANT LEVEL DATA
 1450060156
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		DEW PT DEG C	TEMPERATURE		PRESSURE MILLIBARS
			N-S MPS	E-W MPS		AIR DEG C		
3052.	9999.**	9999.**	-9999.**	-9999.**	99	-35.5	1.160+1	
2973.	86.	8.	-1.	-8.	99	-39.0	1.300+1	
2680.	137.	6.	4.	-4.	99	-42.3	2.000+1	
2619.	109.	6.	2.	-0.	99	-46.0	2.190+1	
2411.	75.	6.	-2.	-0.	99	-48.9	3.000+1	
2317.	54.	10.	-6.	-0.	99	-49.4	3.460+1	
2240.	75.	5.	-1.	-5.	99	-54.0	3.900+1	
2081.	80.	5.	-1.	-5.	99	-56.7	5.000+1	
2044.	52.	5.	-3.	-4.	99	-59.0	5.300+1	
1960.	325.	4.	-3.	2.	99	-57.5	6.000+1	
1914.	287.	4.	-1.	4.	99	-60.7	6.520+1	
1870.	311.	3.	-2.	2.	99	-59.4	7.000+1	
1820.	325.	4.	-4.	3.	99	-60.6	7.580+1	
1735.	333.	5.	-5.	2.	99	-63.7	8.700+1	
1649.	273.	9.	-0.	9.	99	-62.4	1.000+2	

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

STATION ALTITUDE 3997.30 FEET MSL
 25 MAY 79 1355 HRS MST
 ASCENSION NO. 150

MANDATORY LEVELS
 1450000150
 S M R

GEODETIC COORDINATES
 32.46034 LAT DEG
 106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(IN)	SPEED KNOTS
850.0	4925.	21.0	8.6	45.	151.8	2.6
800.0	6632.	15.8	8.0	60.	149.1	6.6
750.0	8418.	11.9	2.8	53.	179.3	9.2
700.0	10299.	7.1	1.4	67.	202.9	15.0
650.0	12285.	2.7	-2.6	68.	198.8	14.7
600.0	14394.	-2.2	-6.4	75.	172.3	14.1
550.0	16648.	-5.0	-21.9	25.	200.4	17.3
500.0	19090.	-10.8	-21.4	41.	206.4	16.9
450.0	21707.	-16.9	-23.7	55.	205.3	16.1
400.0	24574.	-23.0	-31.1	47.	230.8	18.2
350.0	27741.	-29.7	-45.4	20.	221.7	24.9
300.0	31274.	-39.5			211.5	24.0
250.0	35272.	-49.7			195.5	23.8
200.0	39961.	-55.9			206.9	26.8
175.0	42722.	-58.5			229.0	36.7
150.0	45874.	-61.0			252.2	39.9
125.0	49569.	-60.7			262.2	14.1
100.0	54106.	-62.4			272.1	16.5
80.0	58614.	-61.8			324.0	10.4
70.0	61342.	-59.4			311.8	6.1
60.0	64507.	-57.5			324.5	7.1
50.0	68274.	-56.7			79.8	9.7
40.0	72942.	-54.3			81.5	9.0
30.0	79093.	-48.9			74.0	11.8
25.0	83037.	-47.2			90.4	15.4
20.0	87916.	-42.3			136.4	11.3
15.0	94329.	-40.1			92.1	6.5

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

STATION ALTITUDE 3997.30 FEET MSL
 25 MAY 79 1355 HRS MST
 ASCENSION NO. 150

MRN MANDATORY LEVELS
 1450060150
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECEMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		L-W MPS	DEW PT DEP DEG C	TEMPERATURE		PRESSURE MILLIBARS
			N-S MPS				AIR DEG C		
2875.	92.	4.	0.		-4.	99	-40.1		1.500+1
2080.	136.	6.	4.		-4.	99	-42.3		2.000+1
2531.	90.	8.	0.		-8.	99	-47.2		2.500+1
2411.	75.	6.	-2.		-6.	99	-48.9		3.000+1
2223.	81.	5.	-1.		-5.	99	-54.3		4.000+1
2081.	80.	5.	-1.		-5.	99	-56.7		5.000+1
1965.	324.	4.	-3.		2.	99	-57.5		6.000+1
1870.	312.	3.	-2.		2.	99	-59.4		7.000+1
1787.	324.	5.	-4.		3.	99	-61.8		8.000+1
1649.	272.	8.	-0.		8.	99	-62.4		1.000+2
1511.	262.	7.	1.		7.	99	-60.7		1.250+2
1398.	252.	21.	6.		20.	99	-61.0		1.500+2
1302.	229.	19.	12.		14.	99	-58.5		1.750+2
1218.	207.	14.	12.		6.	99	-55.9		2.000+2
1075.	195.	12.	12.		3.	99	-49.7		2.500+2
953.	211.	12.	11.		6.	99	-39.5		3.000+2
840.	222.	13.	10.		9.	10	-29.7		3.500+2
749.	231.	9.	6.		7.	08	-23.0		4.000+2
662.	205.	8.	7.		4.	07	-16.9		4.500+2
582.	206.	9.	8.		4.	11	-10.8		5.000+2
507.	200.	9.	8.		3.	17	-5.0		5.500+2
439.	172.	7.	7.		-1.	04	-2.2		6.000+2
374.	199.	8.	7.		2.	05	2.7		6.500+2
314.	203.	8.	7.		3.	06	7.1		7.000+2
257.	179.	5.	5.		-0.	09	11.9		7.500+2
202.	149.	3.	3.		-2.	08	15.8		8.000+2
150.	152.	1.	1.		-1.	12	21.0		8.500+2