

AD-A074 982 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2  
19702A GSRS, MISSILE NUMBER 340, ROUND NUMBER B-27, 6 AUGUST 19--ETC(U)  
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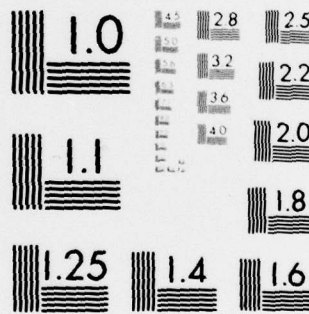
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MICROCOPY RESOLUTION TEST CHART  
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DR 1048

August 1979

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METEOROLOGICAL DATA REPORT

19702A GSRS  
Missile No. 340  
Round No. B-27  
6 August 1979

by

White Sands Meteorological Team

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RECEIVED  
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ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
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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 19702A GSRS, Missile Number 340, Round Number B-27, are presented in tabular form.		

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## INTRODUCTION

19702A GSRS , Missile Number 340 , Round Number B-27 , was launched from LC-33 , White Sands Missile Range (WSMR), New Mexico, at 0900 MDT, 6 August 1979 . The scheduled launch time was 0900 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 pilot observation at:

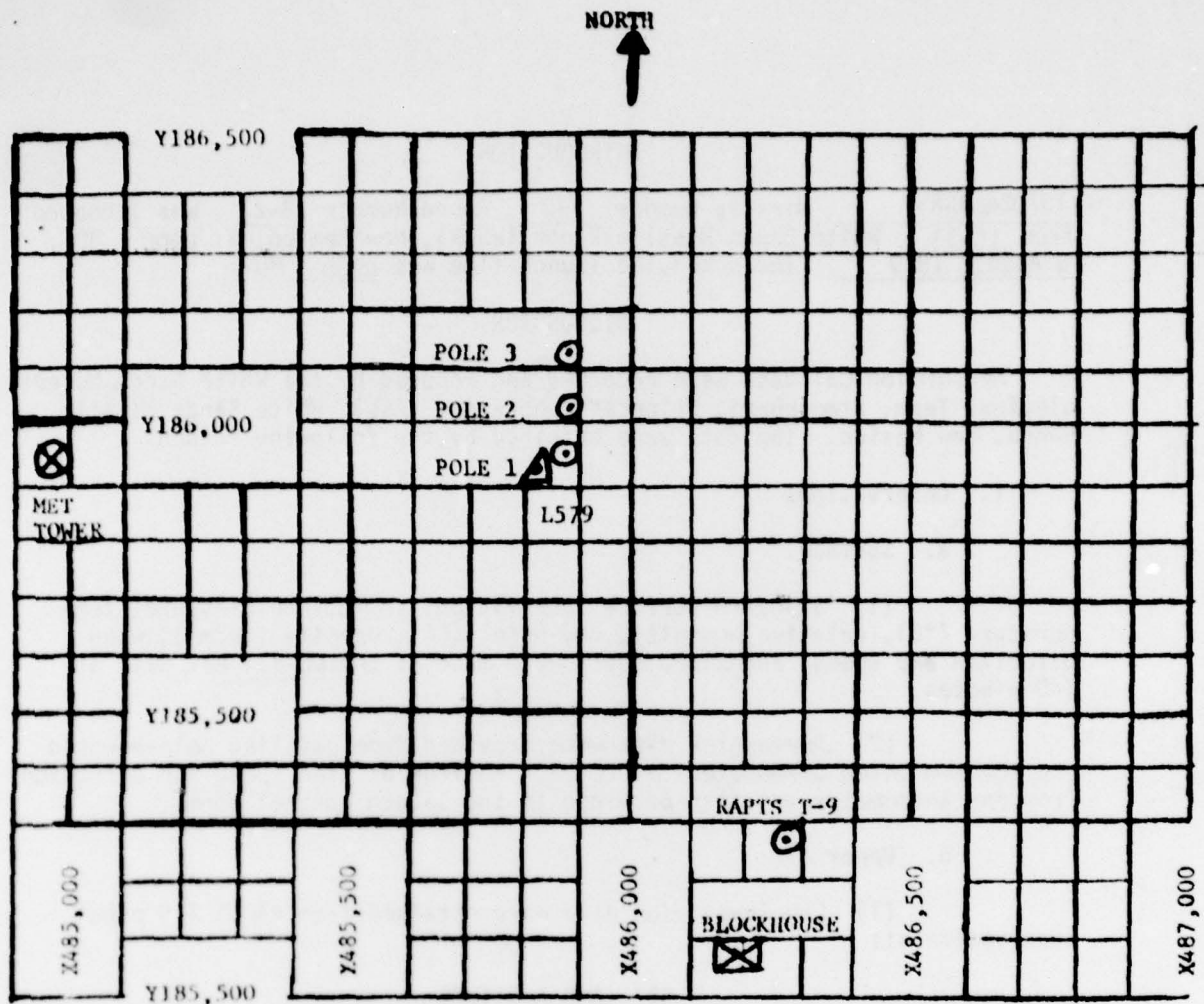
### SITE AND ALTITUDE

LC-33 1020 Meters  
NICK 1080 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 98,000 feet in 500-foot increments.

### SITE AND TIME

SMR 0830 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 observation taken at LC-33  
6 August 1979 at 0900 MDT, 19702A GSRS  
Missile No. 340, Round No. B-27.

ELEVATION	3977.30	FT/MSL
PRESSURE	885.8	MBS
TEMPERATURE	23.2	°C
RELATIVE HUMIDITY	44	%
DEW POINT	10.2	°C
DENSITY	1033	GM/M <sup>3</sup>
WIND SPEED	03	MPH
WIND DIRECTION	100	DEGREES
CLOUD COVER	Clear	

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	147	04	-30	156	02	-30	135	Missing
-20	150	02	-20	155	02	-20	135	Missing
-10	150	02	-10	156	02	-10	135	Missing
0.0	150	02	0.0	162	02	0.0	159	Missing
+10	153	02	+10	168	02	+10	156	Missing

Type 19702 GSRS, Missile No. 340, Round No. B-27 launched from LC-33 on 6 August 1979 at 0900 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.

## PILOT BALLOON MEASURED WIND DATA\*

TABLE 3

RELEASED FROM LC-33 DATE 6 August 1979 TIME 0850 MDT  
 RELEASE POINT COORDINATES (WSTM) X=486,037.24 Y=182,350.16 H=3977.30  
 MISSILE TYPE 19702A GSRS MISSILE NO. 340 Round NO. B-27  
 MISSILE LAUNCHED FROM LC-33 DATE 6 Aug 1979 TIME 0900 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	115	03.0
30	080	01.5
60	CALM	CALM
90	070	04.0
120	095	08.0
150	104	07.5
180	113	06.5
210	128	05.5
240	142	04.5
270	163	04.5
300	183	04.0
330	193	04.0
360	203	03.5

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
390	176	03.5
420	149	03.0
450	159	04.0
480	169	04.5
510	170	05.0
540	171	05.5
57017	172	06.0
600	172	06.0
630	173	06.5
660	172	07.0
690	170	07.0
720	167	07.0
750	170	07.0

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1 Sept 1979

5

replaces DELAS-MS-MT-WS  
forms 46-A & 46-B and all  
other Pibal forms which are  
obsolete.



## PILOT BALLOON MEASURED WIND DATA\*

TABLE 4RELEASED FROM LC-33 DATE 6 August 1979 TIME 0900 MDTRELEASE POINT COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 H= 3977.30MISSILE TYPE 19702A GSRS MISSILE NO. 340 ROUND NO. B-27MISSILE LAUNCHED FROM LC-33 DATE 6 August 1979 TIME 0900 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	100	03.0
30	163	02.0
60	225	01.0
90	145	02.0
120	064	03.0
150	086	04.0
180	107	04.5
210	100	04.5
240	092	04.0
270	119	03.5
300	146	03.0
330	145	03.0
360	144	03.0

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
390	144	04.0
420	143	04.5
450	147	04.5
480	151	04.5
510	158	05.0
540	164	05.0
570	169	05.0
600	174	05.0
630	173	15.5
660	172	06.0
690	176	07.0
720	180	08.0
750	182	08.5

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## PILOT BALLOON MEASURED WIND DATA\*

TABLE 5

RELEASED FROM NICK DATE 6 August 1979 TIME 0850 MDT  
 RELEASE POINT COORDINATES (WSTM) X=470,734.56 Y=255,775.64 H=4126.57  
 MISSILE TYPE 19702A GSR MISSILE NO. 340 ROUND NO. B-27  
 MISSILE LAUNCHED FROM LC-33 DATE 6 August 1979 TIME 0900 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	180	5.0
30	158	3.0
60	135	0.5
90	138	1.0
120	140	1.0
150	147	1.0
180	153	1.0
210	151	1.5
240	149	1.5
270	155	3.5
300	160	5.5
330	163	6.0
360	166	6.5

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
390	166	6.5
420	165	6.0
450	163	5.5
480	161	5.0
510	153	5.0
540	145	5.0
570	148	5.5
600	151	5.5
630	155	5.5
660	159	5.5
690	166	6.0
720	173	6.5
750	170	6.0

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 other Pibal forms which are  
 obsolete.



## PILOT BALLOON MEASURED WIND DATA\*

TABLE 6

RELEASED FROM NICK DATE 6 August 1979 TIME 0900 MDTRELEASE POINT COORDINATES (WSTM) X=470,734.56 Y=255,775.64 H=4126.57MISSILE TYPE 19702A GSRS MISSILE NO. 340 ROUND NO. B-27MISSILE LAUNCHED FROM LC-33 DATE 6 August 1979 TIME 0900 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	180	5.0
30	171	3.5
60	162	1.5
90	163	3.0
120	163	4.0
150	163	5.0
180	162	6.0
210	165	6.0
240	168	6.0
270	169	6.0
300	169	6.0
330	167	6.0
360	164	6.0

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
390	164	6.0
420	164	5.5
450	156	5.5
480	148	5.0
510	155	5.5
540	162	6.0
570	167	6.5
600	171	6.5
630	174	7.0
660	176	7.0
690	177	7.5
720	178	7.5
750	178	7.5

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1 Sept 1979

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other Pibal forms which are  
obsolete.



STATION ALTITUDE 3997.30 FEET MSL  
 6 AUG. 79 0830 HRS MST  
 ASCENSION 10. 203

SIGNIFICANT LEVEL DATA  
 2180000263  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT PERCENT	REL. HUM. PERCENT
684.9	3997.3	24.8	12.7	47.0
678.0	4222.0	22.6	7.6	38.0
650.0	5144.3	20.2	6.2	40.0
778.8	7611.2	17.2	5.5	46.0
750.2	8556.0	14.2	7.3	63.0
731.4	9359.7	13.2	2.4	48.0
700.0	10567.1	10.3	.3	50.0
667.4	11863.9	6.5	-.0	63.0
658.4	12229.9	5.6	-3.5	52.0
641.0	12949.8	5.4	-12.5	26.0
632.0	13329.6	5.6	-13.3	24.0
614.8	14069.1	4.0	-10.0	35.0
597.8	14816.1	1.8	-4.1	65.0
580.6	15590.3	1.3	-7.2	53.0
500.0	19489.4	-6.8	-15.9	48.0
477.0	20695.2	-8.4	-26.6	21.0
454.4	21929.2	-10.4	-29.0	20.0
425.0	23611.6	-14.2	-21.4	54.0
400.0	25116.3	-17.4	-26.5	38.0
390.2	25726.1	-19.0	-31.2	33.0
325.4	30086.1	-29.4	-37.5	46.0
319.2	30538.0	-29.8	-46.9	17.0
313.4	30968.1	-30.1	-49.5	13.0
300.0	31977.7	-32.3		
250.0	36129.4	-43.0		
235.6	37438.2	-46.0		
225.4	38406.0	-47.1		
200.0	40922.0	-52.7		
179.6	43224.3	-57.3		
150.0	46951.4	-63.0		
129.2	49961.3	-65.8		
109.2	53299.1	-69.7		
100.0	55022.0	-71.5		
82.4	58603.1	-64.3		
79.6	59558.7	-65.8		
70.0	62158.9	-62.1		
64.2	63927.9	-61.3		
59.2	65603.8	-57.7		
50.0	69136.6	-56.3		
40.0	73809.1	-57.4		

STATION ALTITUDE 3997.30 FEET MSL  
6 AUG. 79 0630 HRS MST  
ASCENSION 10. 263

SIGNIFICANT LEVEL DATA  
2180060203  
S M R

GEODETIC COORDINATES  
32.46034 LAT DEG  
106.42307 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
30.0	7990.2	-51.7	
26.0	8293.1	-48.5	
20.0	8874.3	-45.7	
14.4	9595.3	-46.0	
13.0	9825.8	-42.8	

STATION ALTITUDE 3997.30 FEET MSL  
 6 AUG. 79 0830 HRS MST  
 ASCENSION NO. 203

UPPER AIR DATA  
 2180000200  
 S M R

GEODETIC COORDINATES  
 32.40034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TRUE)	WIND SPEED KNOTS	INDEX OF REFRACTION
3997.3	884.9	24.8	12.7	47.0	1028.1	674.6		.0	1.000292
4000.0	884.8	24.8	12.7	46.9	1028.1	674.5			1.000292
4500.0	859.5	21.9	7.2	38.6	1022.1	670.6			1.000272
5000.0	834.3	20.6	6.4	39.7	1008.9	669.1			1.000267
5500.0	839.3	19.8	6.1	40.9	994.0	668.2			1.000263
6000.0	824.6	19.2	6.0	42.1	978.5	667.5			1.000260
6500.0	810.1	18.6	5.8	43.3	963.3	666.8			1.000258
7000.0	795.9	17.9	5.7	44.5	948.3	666.1			1.000252
7500.0	781.9	17.3	5.5	45.7	933.6	665.4			1.000249
8000.0	768.0	16.1	6.3	52.3	920.7	664.1			1.000249
8500.0	754.4	14.6	7.1	60.5	908.5	662.6			1.000249
9000.0	741.0	13.7	5.0	55.7	895.8	661.3			1.000240
9500.0	727.7	12.9	2.2	48.2	885.0	660.1			1.000230
10000.0	714.6	11.7	1.3	49.1	870.9	658.6			1.000226
10500.0	701.7	10.5	.5	49.9	859.0	657.2			1.000221
11000.0	688.9	9.0	.3	54.3	847.6	655.6			1.000219
11500.0	676.4	7.6	.2	59.4	836.5	653.9			1.000216
12000.0	664.0	6.2	-1.3	58.9	825.6	652.1			1.000211
12500.0	651.8	5.5	-6.3	42.2	813.0	651.1			1.000200
13000.0	639.8	5.4	-12.6	25.7	799.0	650.7			1.000189
13500.0	628.0	5.2	-12.4	26.5	784.8	650.5			1.000186
14000.0	616.4	4.1	-10.3	34.0	773.0	649.3			1.000166
14500.0	604.9	2.7	-4.8	52.3	762.0	648.7			1.000169
15000.0	593.7	1.7	-4.8	62.1	750.5	648.2			1.000183
15500.0	582.6	1.4	-6.8	54.4	737.6	648.1			1.000179
16000.0	571.6	.4	-8.1	52.5	726.1	645.1			1.000175
16500.0	560.7	-.6	-9.2	51.8	715.2	643.6			1.000171
17000.0	550.1	-1.6	-10.4	51.2	704.4	643.6			1.000168
17500.0	539.6	-2.7	-11.5	50.6	693.8	641.3			1.000164
18000.0	529.4	-3.7	-12.6	49.9	683.3	640.0			1.000161
18500.0	519.3	-4.7	-13.7	49.3	672.0	638.7			1.000158
19000.0	509.5	-5.8	-14.8	48.6	662.9	637.5			1.000155
19500.0	499.8	-6.8	-16.0	47.8	652.9	636.2			1.000150
20000.0	490.1	-7.5	-19.8	36.6	642.1	635.3			1.000145
20500.0	480.7	-8.1	-24.5	25.4	631.4	634.4			1.000142
21000.0	471.3	-8.9	-27.3	20.8	621.0	633.5			1.000139
21500.0	462.1	-9.7	-28.2	21.3	610.8	632.5			1.000137
22000.0	453.1	-10.6	-28.4	21.4	600.8	631.5			1.000136
22500.0	444.2	-11.7	-25.2	31.5	591.5	630.1			1.000135
23000.0	435.5	-12.8	-23.1	41.6	582.2	628.8			1.000135

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

STATION ALTITUDE 3497.30 FEET MSL  
 6 AUG. 79 0630 HRS MST  
 ASCENSION NO. 203

UPPER AIR DATA  
 2180000203  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (T+)	SPEED KNOTS	INDEX OF REFRACTION:
43500.0	426.9	-13.9	51.7	573.2	627.5	406.2	2.0	1.000134
44000.0	418.4	-15.0	49.9	564.2	626.2	25.5	2.3	1.000131
44500.0	410.1	-16.1	44.6	555.3	624.8	57.3	1.9	1.000128
45000.0	401.9	-17.2	39.2	546.6	623.5	88.4	2.2	1.000125
45500.0	393.8	-18.4	34.9	538.3	621.9	109.1	2.7	1.000123
46000.0	385.8	-19.7	33.8	529.9	620.4	110.4	3.3	1.000121
46500.0	377.8	-20.8	35.3	521.5	618.9	121.9	4.0	1.000119
47000.0	370.0	-22.0	36.8	513.1	617.5	123.9	4.1	1.000117
47500.0	362.4	-23.2	38.3	505.0	616.0	127.2	4.0	1.000115
48000.0	354.9	-24.4	39.8	497.0	614.5	144.2	3.2	1.000113
48500.0	347.6	-25.6	41.3	489.1	613.0	163.4	2.2	1.000111
49000.0	340.5	-26.8	42.8	481.3	611.6	238.5	.7	1.000109
49500.0	333.4	-28.0	44.3	473.7	610.1	343.4	2.1	1.000107
50000.0	326.6	-29.2	45.7	466.2	608.6	2.7	4.7	1.000105
50500.0	319.7	-29.8	19.4	457.6	607.8	14.0	6.0	1.000103
51000.0	313.0	-30.2	44.8	448.7	607.3	23.4	7.1	1.000100
51500.0	306.3	-31.2	6.2**	441.1	605.9	23.5	7.3	1.000098
52000.0	299.8	-32.3	42.8	433.7	604.6	23.2	7.5	1.000097
52500.0	293.3	-33.6	44.3	426.6	602.9	28.7	8.4	1.000095
53000.0	286.9	-34.9	19.4	419.6	601.3	32.6	9.1	1.000093
53500.0	280.7	-35.2	44.8	412.7	599.7	34.8	9.0	1.000092
54000.0	274.6	-37.5	40.5	405.9	598.0	34.1	8.4	1.000090
54500.0	268.6	-38.8	39.2	399.2	596.4	28.2	6.9	1.000089
55000.0	262.7	-40.1	39.2	392.7	594.8	28.7	5.6	1.000087
55500.0	257.0	-41.4	38.0	385.3	593.1	31.9	4.9	1.000086
56000.0	251.4	-42.7	38.0	380.0	591.4	36.6	4.6	1.000085
56500.0	245.8	-43.8	37.3	373.5	589.9	40.0	4.7	1.000083
57000.0	240.3	-45.0	36.6	366.9	588.4	45.6	5.3	1.000082
57500.0	234.9	-46.1	360.4	360.4	587.1	50.8	6.3	1.000080
58000.0	229.6	-46.6	353.2	353.2	586.3	57.0	8.0	1.000079
58500.0	224.4	-47.3	346.2	346.2	585.5	61.6	10.0	1.000077
59000.0	219.3	-48.4	339.9	339.9	584.1	64.2	11.7	1.000076
59500.0	214.2	-49.5	333.7	333.7	582.6	68.2	13.3	1.000074
40000.0	209.3	-50.6	327.6	327.6	581.2	68.4	14.2	1.000073
40500.0	204.5	-51.7	321.7	321.7	579.8	70.4	15.0	1.000072
41000.0	199.8	-52.7	315.8	315.8	578.4	72.0	16.1	1.000070
41500.0	195.1	-53.8	309.9	309.9	577.0	73.3	17.3	1.000069
42000.0	190.6	-54.8	304.0	304.0	575.7	77.7	19.4	1.000068
42500.0	186.1	-55.8	298.3	298.3	574.3	81.0	21.8	1.000066
43000.0	181.7	-56.8	292.7	292.7	573.0	83.4	23.2	1.000065

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

GEODETIC COORDINATES  
32.46034 LAT DEG  
106.42307 LONG DEG

UPPER AIR DATA  
2180000200  
S M R

STATION ALTITUDE 3997.30 FEET MSL  
6 AUG 79 0830 HRS MST  
ASCENSION NO. 203

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION WIND DEGREES (TIN)	SPEED WIND KNOTS	INDEX OF REFRACTION
43500.0	177.4	-57.7		286.9	571.8	86.7	24.5	1.000064
44000.0	173.1	-58.5		281.0	570.8	89.0	25.4	1.000063
44500.0	169.0	-59.3		275.2	569.8	89.0	26.3	1.000061
45000.0	164.9	-60.0		269.6	568.8	89.0	26.8	1.000060
45500.0	161.0	-60.8		264.0	567.7	89.1	27.3	1.000059
46000.0	157.1	-61.5		258.6	566.7	89.9	27.2	1.000058
46500.0	153.3	-62.3		253.3	565.7	91.7	26.8	1.000056
47000.0	149.6	-63.0		248.1	564.7	93.0	27.0	1.000055
47500.0	146.0	-63.5		242.0	564.1	93.9	27.9	1.000054
48000.0	142.4	-64.0		237.2	563.4	97.9	28.6	1.000053
48500.0	138.9	-64.4		231.9	562.8	99.7	29.1	1.000052
49000.0	135.5	-64.9		226.7	562.2	101.9	29.5	1.000050
49500.0	132.2	-65.4		221.6	561.6	104.5	29.9	1.000049
50000.0	128.9	-65.8		216.7	560.9	107.5	30.0	1.000048
50500.0	125.7	-66.4		211.9	560.1	111.8	29.1	1.000047
51000.0	122.6	-67.0		207.2	559.3	116.4	28.4	1.000046
51500.0	119.6	-67.6		202.6	558.5	119.9	26.8	1.000045
52000.0	116.6	-68.2		198.2	557.7	117.1	25.2	1.000044
52500.0	113.7	-68.8		193.8	557.0	114.0	24.0	1.000043
53000.0	110.9	-69.4		189.5	556.2	110.9	23.1	1.000042
53500.0	108.1	-69.9		185.3	555.4	108.4	22.0	1.000041
54000.0	105.4	-70.4		181.1	554.7	108.5	20.4	1.000040
54500.0	102.7	-71.0		176.9	554.0	108.5	19.0	1.000039
55000.0	100.1	-71.5		172.9	553.2	109.0	19.2	1.000039
55500.0	97.6	-70.6		167.9	554.4	105.1	19.5	1.000037
56000.0	95.2	-69.7		163.0	555.7	102.7	20.3	1.000036
56500.0	92.8	-68.7		158.2	557.0	100.2	21.4	1.000035
57000.0	90.5	-67.8		153.5	558.3	98.2	22.3	1.000034
57500.0	88.3	-66.9		149.0	559.0	90.7	22.7	1.000033
58000.0	86.1	-65.9		144.7	560.0	95.2	23.1	1.000032
58500.0	83.9	-65.0		140.4	562.1	92.4	23.0	1.000031
59000.0	81.8	-64.6		136.7	562.6	89.4	23.0	1.000030
59500.0	79.8	-63.7		134.0	561.2	80.0	23.5	1.000030
60000.0	77.9	-63.2		130.5	561.8	82.5	24.4	1.000029
60500.0	76.0	-64.5		126.8	562.8	80.1	25.5	1.000028
61000.0	74.1	-63.7		123.3	563.7	84.0	27.6	1.000027
61500.0	72.3	-63.0		119.9	564.7	87.4	30.2	1.000027
62000.0	70.6	-62.3		116.6	565.7	90.0	31.4	1.000026
62500.0	68.8	-61.9		113.5	566.2	93.9	31.8	1.000025
63000.0	67.2	-61.7		110.7	568.5	95.9	32.4	1.000025

UPPER AIR DATA  
 2180000263  
 S M R

STATION ALTITUDE 397.30 FEET MSL  
 6 AUG. 79 0630 HRS MST  
 ASCENSION NO. 203

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION OF WIND DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
03500.0	65.6	-61.5	107.9	566.8	95.9	95.9	32.4	1.000024
04000.0	64.0	-61.1	105.1	567.2	94.9	94.9	32.4	1.000023
04500.0	62.4	-60.1	102.1	568.7	95.0	95.0	32.2	1.000023
05000.0	61.0	-59.0	99.2	570.1	96.1	96.1	31.8	1.000022
05500.0	59.5	-57.9	96.3	571.5	100.0	100.0	31.5	1.000021
06000.0	58.1	-57.5	93.9	572.0	103.9	103.9	29.6	1.000021
06500.0	56.7	-57.3	91.6	572.3	107.8	107.8	27.6	1.000020
07000.0	55.4	-57.1	89.3	572.6	111.4	111.4	25.7	1.000020
07500.0	54.1	-56.9	87.1	572.8	112.6	112.6	24.0	1.000019
08000.0	52.8	-56.8	85.0	573.1	114.0	114.0	22.2	1.000019
08500.0	51.5	-56.6	82.9	573.4	114.6	114.6	21.1	1.000018
09000.0	50.3	-56.4	80.9	573.6	114.5	114.5	20.6	1.000018
09500.0	49.1	-56.4	79.0	573.6	114.4	114.4	20.0	1.000018
70000.0	48.0	-56.5	77.2	573.4	113.4	113.4	19.7	1.000017
70500.0	46.8	-56.6	75.4	573.3	112.3	112.3	19.4	1.000017
71000.0	45.7	-56.7	73.6	573.1	110.9	110.9	19.1	1.000016
71500.0	44.7	-56.9	71.9	573.0	108.7	108.7	19.0	1.000016
72000.0	43.6	-57.0	70.3	572.8	106.5	106.5	18.8	1.000016
72500.0	42.6	-57.1	68.7	572.9	101.0	101.0	19.0	1.000015
73000.0	41.6	-57.2	67.1	572.5	94.5	94.5	19.6	1.000015
73500.0	40.6	-57.3	65.5	572.3	87.4	87.4	20.5	1.000015
74000.0	39.6	-57.2	64.0	572.5	79.2	79.2	21.8	1.000014
74500.0	38.7	-56.8	62.3	573.1	71.0	71.0	23.5	1.000014
75000.0	37.8	-56.3	60.7	573.7	64.2	64.2	25.7	1.000014
75500.0	36.9	-55.8	59.2	574.3	60.3	60.3	28.8	1.000013
76000.0	36.1	-55.3	57.7	574.9	60.2	60.2	31.9	1.000013
76500.0	35.2	-54.9	56.2	575.6	67.1	67.1	34.8	1.000013
77000.0	34.4	-54.4	54.8	576.2	69.7	69.7	36.2	1.000012
77500.0	33.6	-53.9	53.4	576.8	72.0	72.0	37.6	1.000012
78000.0	32.8	-53.5	52.0	577.4	73.9	73.9	38.8	1.000012
78500.0	32.1	-53.0	50.7	578.0	74.4	74.4	38.4	1.000011
79000.0	31.3	-52.5	49.4	578.6	74.9	74.9	38.0	1.000011
79500.0	30.6	-52.1	46.2	579.2	75.0	75.0	37.7	1.000011
80000.0	29.9	-51.6	47.0	579.9	77.4	77.4	37.6	1.000010
80500.0	29.2	-51.1	45.8	580.6	79.2	79.2	37.6	1.000010
81000.0	28.5	-50.6	44.6	581.2	80.0	80.0	37.8	1.000010
81500.0	27.9	-50.0	43.5	581.9	81.0	81.0	38.6	1.000010
82000.0	27.2	-49.5	42.4	582.6	81.5	81.5	39.4	1.000009
82500.0	26.6	-49.0	41.3	583.2	82.0	82.0	40.3	1.000009
83000.0	26.0	-48.5	40.3	583.9	84.0	84.0	41.4	1.000009

STATION ALTITUDE 3497.30 FEET MSL  
 6 AUG. 79 0630 HRS MST  
 ASCENSION NO. 263

UPPER AIR DATA  
 248000200  
 S M R

GEODETIC COORDINATES  
 32.46034 LAT DEG  
 106.42307 LONG 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 DIRECTION DEGREES (T)	SPEED KNOTS	INDEX OF REFRACTION
03500.0	25.4	-48.3			39.4	584.2	65.0	42.6	1.000009
04000.0	24.8	-48.0			38.4	584.6	67.0	43.3	1.000009
04500.0	24.3	-47.8			37.5	584.9	69.0	43.0	1.000008
05000.0	23.7	-47.5			36.6	585.2	91.6	42.8	1.000008
05500.0	23.2	-47.3			35.8	585.5	92.7	40.9	1.000008
06000.0	22.7	-47.0			34.9	585.8	93.0	37.3	1.000008
06500.0	22.2	-46.8			34.1	586.1	93.3	33.8	1.000008
07000.0	21.7	-46.5			33.3	586.4	95.0	30.9	1.000007
07500.0	21.2	-46.3			32.5	586.8	97.0	28.3	1.000007
08000.0	20.7	-46.1			31.7	587.1	100.7	25.8	1.000007
08500.0	20.2	-45.8			31.0	587.4	101.4	25.1	1.000007
09000.0	19.8	-45.7			30.3	587.5	101.7	24.7	1.000007
09500.0	19.3	-45.7			29.6	587.5	101.9	24.2	1.000007
90000.0	18.9	-45.8			28.9	587.5	100.2	22.9	1.000006
90500.0	18.5	-45.8			28.3	587.5	98.3	21.6	1.000006
91000.0	18.1	-45.8			27.7	587.4	96.7	20.8	1.000006
91500.0	17.6	-45.8			27.0	587.4	96.4	21.5	1.000006
92000.0	17.3	-45.8			26.4	587.4	96.2	22.1	1.000006
92500.0	16.9	-45.9			25.8	587.3	96.0	23.4	1.000006
93000.0	16.5	-45.9			25.3	587.3	95.7	25.4	1.000006
93500.0	16.1	-45.9			24.7	587.3	95.5	27.5	1.000005
94000.0	15.8	-45.9			24.2	587.3	95.0	31.0	1.000005
94500.0	15.4	-45.9			23.6	587.2	94.3	35.6	1.000005
95000.0	15.1	-46.0			23.1	587.2	93.9	40.2	1.000005
95500.0	14.7	-46.0			22.6	587.2	92.0	43.7	1.000005
96000.0	14.4	-46.0			22.1	587.2	91.2	46.8	1.000005
96500.0	14.1	-45.3			21.5	586.1	89.9	49.9	1.000005
97000.0	13.8	-44.6			21.0	585.0			1.000005
97500.0	13.5	-43.9			20.4	583.9			1.000005
98000.0	13.2	-43.2			19.9	582.8			1.000004

STATION ALTITUDE 3497.30 FLEET MSL  
 6 AUG. 79 0830 HRS MST  
 ASCENSION NO. 263

MRN SIGNIFICANT LEVEL DATA  
 2180000203  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LOIN DEG

GEOCENTRAL ALTITUDE METERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA		E-W MPS	U-W PT DEF DEG C	TEMPERATURE		PRESSURE MILLIBARS
			N-S MPS	N-S MPS			AIR DEG C	AIR DEG C	
2979.	999.**	9999.**	-9999.**	-9999.**	99	99	-42.8	-42.8	1.300+1
2911.	91.	24.	1.	-24.	99	99	-46.0	-46.0	1.440+1
2092.	102.	13.	3.	-13.	99	99	-45.7	-45.7	2.000+1
2518.	64.	21.	-2.	-21.	99	99	-48.5	-48.5	2.600+1
2425.	77.	19.	-4.	-19.	99	99	-51.7	-51.7	3.000+1
2241.	83.	11.	-1.	-11.	99	99	-57.4	-57.4	4.000+1
2099.	114.	10.	4.	-10.	99	99	-56.3	-56.3	5.000+1
1992.	101.	16.	3.	-16.	99	99	-57.7	-57.7	5.920+1
1942.	95.	17.	1.	-17.	99	99	-61.3	-61.3	6.420+1
1888.	92.	16.	0.	-16.	99	99	-62.1	-62.1	7.000+1
1809.	86.	12.	-1.	-12.	99	99	-65.8	-65.8	7.960+1
1788.	90.	12.	0.	-12.	99	99	-64.3	-64.3	8.240+1
1672.	107.	10.	3.	-9.	99	99	-71.5	-71.5	1.000+2

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

STATION ALTITUDE 3997.30 FEET MSL  
 6 AUG 79 0630 HRS MST  
 ASCENSION NO. 263

MANDATORY LEVELS  
 21800.0200  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LONG DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	WIND DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS
850.0	5141.	20.2	6.2	40.	9999.0	9999.0XX
800.0	6851.	18.1	5.7	44.	9999.0	9999.0XX
750.0	8656.	14.2	7.2	63.	194.8	5.0
700.0	10557.	10.3	.3	50.	118.6	4.2
650.0	12562.	5.5	-7.1	40.	105.9	7.8
600.0	14701.	2.1	-4.6	61.	150.0	13.4
550.0	16994.	-1.6	-10.4	51.	141.5	13.5
500.0	19462.	-6.8	-15.9	48.	162.9	5.3
450.0	22141.	-11.0	-27.1	25.	100.1	4.7
400.0	25074.	-17.4	-28.3	38.	93.8	2.3
350.0	28306.	-25.2	-34.8	41.	159.0	2.8
300.0	31923.	-32.3			22.8	7.5
250.0	36049.	-43.0			37.4	4.6
200.0	40882.	-52.7			71.9	16.0
175.0	43674.	-58.2			89.4	25.1
150.0	46823.	-63.0			93.5	26.9
125.0	50475.	-66.6			112.7	29.0
100.0	54850.	-71.5			106.8	19.2
80.0	59250.	-65.6			86.6	23.4
70.0	61944.	-62.1			91.5	31.5
60.0	65088.	-58.3			99.0	31.6
50.0	68874.	-56.3			114.5	20.4
40.0	73513.	-57.4			83.4	21.2
30.0	79556.	-51.7			76.9	37.7
25.0	83471.	-48.1			66.8	43.3
20.0	88323.	-45.7			101.5	24.9
15.0	94607.	-46.0			93.8	40.5

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

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

STATION ALTITUDE 3997.30 FEET MSL  
 6 AUG 79 0830 HRS MST  
 ASCENSION NO. 263

MRN MANDATORY RECEIVED  
 21800602bb  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA		E-W MPS	DEW PT DEF JEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	N-S MPS			AIR DEG C		
2864.	94.	21.	1.	-21.	99	-46.0	1.500+1	
2692.	102.	13.	3.	-13.	99	-45.7	2.000+1	
2544.	87.	22.	-1.	-22.	99	-48.1	2.500+1	
2425.	77.	19.	-4.	-19.	99	-51.7	3.000+1	
2441.	83.	11.	-1.	-11.	99	-57.4	4.000+1	
2099.	114.	11.	4.	-10.	99	-56.3	5.000+1	
1984.	100.	16.	3.	-16.	99	-58.3	6.000+1	
1888.	91.	16.	0.	-16.	99	-62.1	7.000+1	
1600.	87.	12.	-1.	-12.	99	-65.6	8.000+1	
1672.	107.	10.	3.	-7.	99	-71.5	1.000+2	
1538.	113.	13.	6.	-14.	99	-66.6	1.250+2	
1427.	93.	14.	1.	-14.	99	-63.0	1.500+2	
1331.	89.	13.	-0.	-13.	99	-58.2	1.750+2	
1246.	72.	6.	-3.	-6.	99	-52.7	2.000+2	
1099.	37.	2.	-2.	-1.	99	-43.0	2.500+2	
973.	23.	4.	-4.	-1.	99	-32.3	3.000+2	
863.	159.	1.	1.	-1.	09	-25.2	3.500+2	
764.	94.	1.	0.	-1.	11	-17.4	4.000+2	
675.	100.	2.	0.	-2.	16	-11.0	4.500+2	
593.	163.	3.	3.	-1.	09	-6.8	5.000+2	
518.	142.	7.	5.	-4.	07	2.1	5.500+2	
448.	150.	7.	6.	-3.	13	5.5	6.000+2	
383.	106.	4.	1.	-4.	10	10.3	7.000+2	
322.	119.	2.	1.	-2.	07	14.2	7.500+2	
264.	.195.	3.	3.	1.	12	18.1	8.000+2	
209.	9999.**	9999.**	-9999.**	-9999.**	14	20.2	8.500+2	
157.	9999.**	9999.**	-9999.**	-9999.**				

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